

OFFICE - ASSISTANT



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LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013



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Foreword

The National Vocational & Technical Training Commission (NAVTTTC) developed a National Skills Strategy (NSS) after extensive research and consultation with experts and stakeholders including policy makers and representatives from Industry, Academia and the Provincial Government departments dealing with technical and vocational training. The strategy aims at establishing a regime that facilitates competency-based and demand-driven training and assessment.

NAVTTTC has developed competency-based training programs with the technical support of TVET Reform Support Programme (TVET-RSP), which is funded by the European Union, the Kingdom of the Netherlands, the Federal Republic of Germany and the Royal Norwegian Embassy. The Programme has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) and is being implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in close collaboration with NAVTTTC. These vocational training programs have been approved by the National Curriculum Review Committee (having representation from all over the country from TEVTAs and industry) for implementation in Public and Private Training institutions.

The purpose of developing competency-based training programs is to equip the learners with modern skills and knowledge for each of the trades to meet the requirements of local as well as international markets. These training programs include competency standards, qualification, curriculum, assessment material and teaching & learning material that will aid in implementation of competency-based and demand driven training in the country.

This Teaching and Learning Material is part of the competency based training program exclusively developed to support the implementation of CBT curricula. This Material is intended for the use of learners undertaking training in *National Vocational Certificate Level-2 in Information Technology (Office Assistant)* under the guidance of experts and appropriate trainers. This Teaching and Learning Material has been designed in consultation with industry, academia and researchers to ensure that the material is relevant and current.

On behalf of the Federal Government/NAVTTTC, I wish to express my sincere appreciation and gratitude to all subject matter experts, industry representatives and TVET-RSP experts who have diligently contributed in producing this valuable Teaching and Learning Material.

Executive Director
National Vocational & Technical Training Commission
(NAVTTTC)

Introduction

An Office Assistant performs simple and routine tasks to carry out different office related functions in an organization. Major responsibilities include creation of documents using computer applications, maintaining record about human resources, accounting transactions and inventory etc.

The National Vocational & Technical Training Commission (NAVTTTC) has developed a national qualification entitled, “*National Vocational Certificate Level-2 in Information Technology (Office Assistant)*”. Relevant industry and employers were consulted in the design and validation processes in order to come up with a national qualification that fulfills the requirements of the sector in general and the occupation in particular.

This Teaching and Learning Material (TLM) is developed based on competency standards and curriculum of the Computer Operator national qualification. It carries a learning volume of 50 credits and includes eight learning modules which are as under:

- Module 1: Duties and Rights at the Workplace
- Module 2: Computer Skills
- Module 3: Databases
- Module 4: Business Functional Process Area (Accounts-Bookkeeping)
- Module 5: Business Functional Process Area (Inventory Control-Store keeping)
- Module 6: Business Functional Process Area (Human Resource Management)
- Module 7: Business Functional Process Area (Administration)
- Module 8: Project

This TLM provides support for more effective training and productive learning. Each of the learning modules contains learning outcomes and information regarding learning elements in the form of knowledge, skills and attitudes. At the end of every learning module are Frequently Asked Questions (FAQs) and Test Yourself which will help learners in self-assessment before proceeding to modular or final assessment.

Table of Contents

Module	Learning Unit	Title	Page
1	Duties and Rights at the Work Place		1
	1	Ethics and Professional Conduct	3
	2	Planning of the Business Process Activities	6
	3	Awareness to Rights	10
		Summary of Module	13
		Frequently Asked Questions (FAQs)	14
		Test Yourself	15
		Answer Key	17
2	Computer Skills		19
	1	Configure Graphical User Interface Enabled System Software	21
	2	Configure Peripheral Devices	35
	3	Business Writing	41
		Summary of Module	53
		Frequently Asked Questions (FAQs)	54
		Test Yourself	56
		Answer Key	58
3	Database		59
	1	Record Keeping	61
	2	Data Relationships	69
		Summary of Module	72
		Frequently Asked Questions (FAQs)	73
		Test Yourself	74
		Answer Key	75
4	Business Functional Process Area (Account - Bookkeeping)		77
	1	Accounting and Bookkeeping Terminologies	79
	2	Introduction to Accounts Reporting	85
	3	Spread Sheet Computation	109
		Summary of Module	128
		Frequently Asked Questions (FAQs)	129
		Test Yourself	131
		Answer Key	133
5	Business Functional Process Area (Inventory Control-Store Keeping)		135
	1	Basic Terminologies of Store Keeping	137
	2	Data Management	142

	3	Stock Entries	156
		Summary of Module	157
		Frequently Asked Questions (FAQs)	158
		Test Yourself	160
		Answer Key	162
6	Business Functional Process Area (HRM)		163
	1	Familiarity with HRM	165
	2	HRM Record Keeping	172
		Summary of Module	185
		Frequently Asked Questions (FAQs)	186
		Test Yourself	188
		Answer Key	190
7	Business Functional Process Area (Administration)		191
	1	Administrative Skills	193
	2	Preparing a Presentation	201
		Summary of Module	211
		Frequently Asked Questions (FAQs)	212
		Test Yourself	213
		Answer Key	215
8	Project		217
	1	Project	219
		Summary of Module	226
		Frequently Asked Questions (FAQs)	227
		Test Yourself	229
		Answer Key	232

Module 1: Duties and Rights at the Work Place

Learning Outcomes

After completion of this learning module, you will be able to describe and practice:

- Understand and perform the mandatory standard for Responsibility, Respect, Fairness and Honesty.
- Identify tasks, their scheduling, define milestones, and learn optimal utilization of resources.
- Recognize the aspirational requirements of human rights in employment context.
- Understand the legal right granted to an author, composer, publisher, production, or any other artist's work.
- Understand that unauthorized use or reproduction of copyright or patented material is illegal.
- Understand that they can't give the design made for and sold to one client to the others.

Learning Unit 1: Ethics and Professional Conduct

Overview

In this learning unit, you will be able to introduce the four values that serve as the foundation for decision making and guidance to the action of the employees, these are: responsibility, respect, fairness, and honesty. You will be able to identify and practice the mandatory standards for these four values.

1. Duty to take Ownership and Act for the Decisions/Actions

Responsibility

Responsibility is to take ownership for the decisions we make or fail to make, the actions we take or fail to take, and the consequences of those decisions and actions. The responsibility involves two types of standards working in a work place which are as under:

Responsibility

The state or fact of having a duty to deal with something or of having control over someone.

1. Aspirational Standards

In working in an organization, the following aspirational standards need to be followed:

- Take decisions and perform actions in the best interests of the society, are not a risk for public safety, and beneficial for the environment.
- Accept only those assignments that are consistent with your background, experience, skills, and qualifications so that you can fulfill the assignment with professional conduct.
- Always fulfill the commitments that you undertake, you should do what you say you will do.
- Take responsibility and make corrections instantly, if you make errors or omissions and as you come to know that the errors or omissions were caused by others, communicate them to the appropriate person as soon they are discovered.
- Protect proprietary or confidential information shared with you.

2. Mandatory Standards

Requirement standards that all the employees must fulfill include the following:

- Be aware and maintain the policies, rules, regulations and laws that control your work, professional behavior, and volunteer activities.
- Report unethical or illegal behavior to appropriate management and, if necessary, to those affected by the manner.
- Bring violations against these standards to the attention of the aggregate body for resolution.
- File only complaints should be files which are validated by facts.

- Follow disciplinary action against an individual who violates rules and regulations.

2. Respect

Respect refers to show a high regard for ourselves, others, and the resources assigned to us. Resources entrusted to us may include people, money, reputation, the safety of others, and natural or environmental resources. An environment of respect creates trust, confidence, and performance excellence by raising mutual cooperation. Respect involves two types of standards:

1. Aspirational Standards

- Be aware of the rules and traditions of others and avoid engaging in behaviors they might consider disrespectful.
- Listen to others' points of view in order to understand them.
- Approach directly those persons with whom you have a conflict or disagreement.
- Conduct in a professional manner, even when it is not replied the same way.

2. Mandatory Standards

- Negotiate in good faith.
- Do not exercise the power of your expertise or position to influence the decisions or actions of others in orders to get benefit personally at their expense.
- Do not act in a rude manner toward others.
- Respect the property rights of others.

3. Fairness

Remember

In the workplace, perceived injustice has been directly linked to burnout and job dissatisfaction.

Fairness is our duty to make decisions and act neutrally and objectively. Our conduct must be free from competing self-interest, bias, and favoritism. Fairness involves two types of standards working in a work place, which are as under:

1. Aspirational Standards

- Always demonstrate transparency in your decision-making process.
- Constantly re-examine your neutrality and objectivity
- Provide equal access to information to those who are authorized to have that information.
- Make opportunities equally available to qualified candidates.

2. Mandatory Standards

- Fully disclose any real or potential conflicts of interest to the appropriate stakeholders.
- If you realize that you have a real or potential conflict of interest, avoid engaging yourself in the decision making process or otherwise attempting to influence outcomes until you have made full disclosure to the affected stakeholders.
- Never hire or fire, reward or punish, or award or deny contracts based on personal considerations, bias, or favoritism.
- Never discriminate against others based on gender, race, age, religion, disability, nationality, or sexual orientation.
- Apply the rules of the organization without favoritism or prejudice.

4. Honesty

Honesty is to understand the truth and act in a truthful manner both in our communications and in our conduct. It involves two types of standards working in a work place, which are as under:

1. Aspirational Standards

- Sincerely try to understand the truth.
- Always be truthful in your communications and in your conduct.
- Provide accurate information in a timely manner.
- Always make commitments and promises, unspoken or clear, in good faith.
- Should strive to create an environment in which others feel safe and comfortable to tell the truth.

2. Mandatory Standards

- Do not engage in or ignore behavior that is intended to deceive others, making misleading or false statements, stating half-truths, providing information out of context or withholding information that, if known, would render your statements as misleading or incomplete.
- Do not engage in dishonest behavior with the intention of personal gain at the expense of another.

Learning Unit 2: Planning of the Business Process Activities

Overview

In this learning unit, you will come to know about different concepts and activities involved in the planning of the business process activities. After the completion of this learning unit, you will be able to assist their in-line managers, define activities like specific life cycle methodologies, estimate time for activities, and perform breakdowns of the work and leveling the resources.

1. Provide Due Assistance to In-Line Manager

Do you know!

The agenda of recurring meeting depends upon the management decision. It may be to present status report to attendees or to plan for the next phase.

While working at the workplace, the following tasks may provide assistance to the managers:

1. Coordinating Recurring Meetings

- Schedule recurring meetings properly using software like outlook calendar, or some other good schedule software's.

- Organize the meeting venue.

- Inform the attendees about the schedule and make the agenda of the meeting clear to them.

- Make sure that documents to be used and other equipment like computer etc. are ready to use.

Remember

Resources needed to be available can be machinery, equipment, human or time.

2. Intimate Resource Availability

A project plan is considered to be good if tasks are as clear as possible and resources needed to accomplish those tasks are readily available. Before assigning individuals to tasks, associate a task with a resource type. Then enter the expected duration of that task based on the resource chosen. This ensures the intimate resource availability.

3. Create and Keep Documentation

You can assist in-line managers by maintaining the documents about meetings, resource assignments, project assignments and completion status, client history etc. This involves the creation and updating of documentation.

4. Validate Applicable Company Defined Standards

It is important to validate and follow established company standards for the duration of your employment. You should be informed and understand all the company standards but pay particular attention to the ones that are specific to your job role in the company. Try to help other employs to understand and follow the company applicable standards.

2. Define Activities

In order to perform task in good manner, you should be able to apply specific life cycle methodology to the procedure. Prior to perform your job or duty, the undergone activities belong to some specific phase. It is necessary to define what phase an activity belongs to. Application of life cycle methodology help the worker and a company to deliver assignment effectively. The different phases of life cycle are:

1. Requirement Gathering

Requirement gathering is the first and the most important phase of any project development. The specifications of the project results are an outcome of requirements gathered. The activities involved in this phase include interviewing the potential users or employees of the company about their needs for the final product (in case of new system replacing an old one, interviewing them about the problems they face in the existing system), verification of the gathered information, documentation of information for further development.

2. Design Solution

During this phase, the gathered requirements are analysed and assessed to find out the problem. The activities in this phase include plans are laid out concerning the physical construction, hardware, operating systems, programming, communications, and security issues.

3. Prototype

At this phase, instead of freezing the requirements before a design or coding can proceed, a prototype is built to understand the requirements. This prototype is developed based on the currently known requirements. By using this prototype, the client can get an “actual feel” of the system, since the interactions with prototype can enable the client to better understand the requirements of the desired system.

Prototype

A prototype is an instance of a working product, representing all the specification of final project.

4. Testing

After the prototype is approved, the life cycle proceeds to the final product that fulfills the gathered requirements. This product is then tested thoroughly using series of testing techniques. Product should be tested from every aspect and in all the possible conditions and audience.

5. Documentation

In this phase, the activities performed include, preparing documentation of the various area that need to be documented. This documentation can be used as written proof, can be used as a help for future consultation if some problem arises.

Remember

Time estimation depends on a number of factors, including how much experience you have with the type of work you're doing.

3. Estimate Time

Whether you bill clients hourly or on a per project basis, a necessary step of all projects is estimating the time it will take. You need to estimate time accurately if you're going to deliver your project on time and within budget. Without this skill, you won't know how long your project will take, and you won't be able to get commitment from the people required to help you achieve your objective. Not only does the client want to have an idea of how much money they will be spending, but they also need to plan

around an estimated timeline. And you need to be able to ensure you have the time and resources necessary to complete the project.

Time estimation depends on a number of factors, including how much experience you have with the type of work you're doing. With the help of following you can estimate the time:

1. Identify the Product Deliverables

The first step is to identify the main project (i.e. website redesign), and then pinpoint the specific deliverables associated with the project. For example, upon completion of the redesign, you will be providing the client with a newly designed website by transferring the site files and sending the client a CD or USB drive with the working files.

2. Breaking the Project in Sub-Tasks

Do you know!

Work breakdown is not restricted to a specific field when it comes to application. This methodology can be used for any type of project management.

Next, take the project and break it down into simple tasks. At the end of this step, you will have a list of activities that will take us to the deliverables. Now, list all of the activities you identified in the order in which they need to happen.

3. Estimate Time for Each Step

The next step is to estimate time in hour for each task or activity, rounding up. To begin with, estimate the time needed for each task rather than for the project as a whole. Then take the total time for all of the tasks and add in a buffer. The buffer can be anything, although I usually stick with a 10-25% addition. This helps to deal with any unexpected situations or challenges that arise.

4. Things to keep in mind

Following points need to be kept in mind while calculating total time required by a project:

- Project management time
- All the constraints that are relevant, it will help to identify risks.
- Consider calendar year official leaves,
- Company's working timings
- Debugging

4. Achieve Work Breakdowns

Dividing complex projects into simpler and manageable tasks is the process identified as Work Breakdown Structure (WBS). Usually, the project managers use this method for simplifying the project execution. In WBS, much larger tasks are broken down to manageable chunks of work. These chunks can be easily supervised and estimated. Following are a few reasons to achieve work breakdown in your project:

- Accurate and readable project organization.
- Accurate assignment of responsibilities to the project team.
- Indicates the project milestones and control points.
- Helps to estimate the cost, time and risk.
- Illustrate the project scope, so the stakeholders can have a better understanding of the same.

5. Level Resource Due to Work Load

Research indicates that it is not just the amount of work that makes a difference in employee satisfaction and success, but also the extent to which employees have the resources (time, equipment and support) to do the work well.

Resource leveling is a technique in project management that deals with resource allocation and resolves any possible conflict that can arise from wrong allocation. When project managers take a project, they need to plan their resources accordingly. This helps an organization to avoid any conflicts and being able to deliver the project on time. Resource leveling is considered one of the key elements to resource management in the organization.

An organization starts to face problems if resources are not allocated properly i.e., some resource may be over-allocated whilst others will be under-allocated. Both will bring about a financial risk to the organization.

Key Elements of Resource Leveling

The main aim of resource leveling is to allocate resource efficiently, so that the project can be completed in the given time period. Resource leveling can be broken down into two main areas:

- Projects that can be completed by using up all resources, which are available and projects that can be completed with limited resources.
- Projects, which use limited resources can be extended for over a period of time until the resources required are available.

Process of Resource Leveling

Resource leveling helps an organization to make use of the available resources to the maximum. The idea behind resource leveling is to reduce wastage of resources i.e. to stop over-allocation of resources.

Project manager will identify time that is unused by a resource and will take measures to prevent it or making an advantage out of it. By resource conflicts, there are numerous disadvantages suffered by the organization, such as:

- Delay in certain tasks being completed
- Difficulty in assigning a different resource
- Unable to change task dependencies
- To remove certain tasks
- To add more tasks
- Overall delays and budget overruns of projects

Learning Unit 3: Awareness to Rights

Overview

In this learning unit, you will learn about the workers' rights at the workplace, policies and procedures, reporting of illegal conduct. After the completion of this module, you will be able to define and know the importance of the policies, rules and regulations that administer the work and workplace, reporting the illegal conduct or illegitimate action to appropriate management and the importance of protecting the propriety or confidential information.

1. Inform and Uphold the Policies, Rules and Regulations at the Workplace

Policy

A policy is a statement which explains how human resource management issues will be dealt with in an company.

Policies, rules or regulations communicate an organization's values and the organization's expectations of employee behaviors and performance. Workplace policies support and clarify standard operating procedure in a workplace. They help organization to manage staff more effectively by clearly defining acceptable and unacceptable behavior in the workplace, and define the effects of not complying with those policies.

A policy may also be required where there is a large number of interests and preferences, which could result in unclear and conflicting objectives among those who are directly involved.

They set rules and guidelines for decision-making in routine situations so that employees and managers do not need to continually ask senior managers what to do. They help you to adopt a consistent and clear response across the company to continually refer to situations involving employee interaction.

We should understand well and support these policies, rules, regulations and laws that govern our work, professional, and volunteer activities. These rules, regulation and policies protect business and workers and if correctly implemented and executed, create and maintain a better work environment for all.

2. Report Illegal Conduct or Illegitimate Action to the Appropriate Authority

Do you know!

It is unlawful to terminate an employee who reported, complains about some illegal or fraudulent conduct by an employer or co-workers.

From time to time, there is a possibility that the workers may violate the policies or laws established for a business or company. Even if an employee breaks the rules with the best of intentions, the flow of the workplace can be impacted negatively.

It is the responsibility of a worker to report illegal or illegitimate action to appropriate management. That needs to encourage employees to bring ethical and legal violations they are aware of to an internal or responsible authority so that action can be taken immediately to resolve the problem. It important to minimize the organization's exposure to the damage that can

occur when employees circumvent internal mechanisms. For this purpose organization should let employees know the organization is serious about adherence to codes of conduct.

The main barriers to lack of confidence in employees to report illegitimate conduct can be as under:

- A lack of trust in the internal system
- Unwillingness of employees to be "informers"
- Misguided union solidarity
- Belief that management is not held to the same standard
- Fear of revenge
- Fear of isolation from peers

It is the moral and social responsibility of the employees to report unethical or illegal conduct to appropriate management and if necessary to those affected by the conduct. If he sees any illegal behavior including but not limited to theft, fraud, corruption, embezzlement or bribery. Furthermore someone taking or abusing the property of others is including intellectual property.

3. Protect Propriety or Confidential Information

Protecting confidential and proprietary business information, good will and relationships with clients, customers and key employees are matters of most important concern to any successful business. Theft of trade secrets, harassment of clients and customers, raiding of key employees, employee disloyalty and violations of trusty duties can cause irreparable loss.

Remember

All key staff members should read and become familiar with the guide.

The company's confidential information falls into two main categories:

1. Information developed and owned by company.
2. Information temporarily given to company by its customers, collaborators and others.

Every company team member, whether a manager, employee or contractor, has a key role in maintaining the company's confidential information. Following policies can help to protect the company's proprietary and secrets:

1. The company should establish a written confidentiality protection guide and share it with all staff who interact with confidential information related to the company.
2. Upon hiring, each company staff member should sign a contract that must include a confidentiality provision about their confidentiality promises.
3. The staff member should refrain from disclosing a confidential information until management has provided clarification.
4. A staff member should not disclose confidential information unless the staff member obtains authorization from management and the receiving party has signed a confidentiality agreement.
5. Staff members should not store or keep open the confidential information to on a desktop or computer screen exposed to view when not actively used.
6. A staff member should only share confidential information with only those staff members of other company who need to know the information.
7. The company should prevent unauthorized user access to any electronic and physical areas containing confidential information. For computers, staff members should password protect

screensavers and password protect files. For hardcopy documents, staff members should limit the physical access to the document by locking the office door, locking a desk drawer, locking a filing cabinet, and / or restricting room access.

8. A sender of an email should assume unauthorized readers will view the text and files contained in an unencrypted email. A sender should not send sensitive data in an unencrypted email or file.

Summary of Module

- Take responsibility and make corrections instantly, if you make errors or omissions. And others are involved then communicate if you come to know that the errors or omissions were caused by others, communicate them to the appropriate person as soon they are discovered.
- Always aware of the rules and traditions of others and avoid engaging in behaviors they might consider disrespectful.
- If you realize that you have a real or potential conflict of interest, avoid engaging in the decision making process or otherwise attempting to influence outcomes until you have made full disclosure to the affected stakeholders.
- Do not engage in or ignore behavior that is intended to deceive others, making misleading or false statements, stating half-truths, providing information out of context or withholding information that, if known, would render your statements as misleading or incomplete.
- You can provide assistance to the manager by coordinating meetings, intimate resource availability, creating and keeping documentation, validating company's defined standards.
- It is a professional approach to apply life cycle methodology to project and define its activities as phase like requirement gathering, planning design, prototype, testing and documentation.
- Estimate time accurately for your job or assignment. Follow the steps required for accurate estimation of time and cost. Break down the work in smaller manageable pieces and allocate time cost and other resources required to get the job done.
- Resource leveling is a technique in project management that deals with resource allocation and resolves any possible conflict that can arise from wrong allocation.
- Understand well and follow the specific policies, rules, regulations and laws that govern our professional work, and volunteer activities.
- It is the moral and social responsibility of the employees to report unethical or illegal conduct to appropriate management and if necessary to those affected by the conduct.

Frequently Asked Questions (FAQs)

FAQ 1: What are the four values that serve as the foundation of ethical and professional conduct?

Answer These are Responsibility, Honesty, Fairness and Respect.

FAQ 2: What is meant by fairness?

Answer Fairness is our duty to make decisions and act neutrally and objectively. Our conduct must be free from competing self-interest, bias, and favoritism.

FAQ 3: What is recurring meeting?

Answer Recurring meetings are where the same group of people regularly gather to accomplish the same goal. Its agenda may depend upon the company's policy.

FAQ 4: Which are the main phases of life cycle?

Answer The main phases of a life cycle are requirement gathering, design solution, prototype, testing and documentation.

FAQ 5: What is prototype?

Answer A prototype is an instance of a working product, representing all the specification of final project. Prototype is developed to verify and assess customer's needs about the final product.

FAQ 6: What is buffer in time estimate?

Answer The buffer is the supplementary time that worker requires after the completion of the service.

FAQ 7: What rule is used for work breakdown?

Answer There is no hard and fast rule on how you should breakdown a task in work breakdown structure. Rather, the level of breakdown is a matter of the project type and the management style followed for the project

FAQ 8: What is meant by resource leveling?

Answer Resource leveling is a technique in project management that deals with resource allocation and resolves any possible conflict that can arise from wrong allocation

FAQ 9: Why is policy important for an organization?

Answer Workplace policies help organization to manage staff more effectively by clearly defining acceptable and unacceptable behavior in the workplace, and define the effects of not complying with those policies.

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

1. _____ is our duty to take ownership for the decisions we make.

- | | |
|-------------------|-------------|
| a. Respect | b. Honesty |
| c. Responsibility | d. Fairness |

2. _____ refers to show a high regard for ourselves, others, and the resources assigned to us.

- | | |
|-------------------|-------------|
| a. Respect | b. Honesty |
| c. Responsibility | d. Fairness |

3. The first step of life cycle methodology is _____.

- | | |
|--------------------|--------------------------|
| a. Design Solution | b. Requirement Gathering |
| c. Testing | d. Prototype |

4. Goal of work breakdown is _____.

- | | |
|---|--|
| a. Giving visibility to important work efforts. | b. Giving visibility to risky work efforts |
| c. Show clear ownership by task leaders | d. All of them |

5. The idea behind resource leveling is _____.

- | | |
|---------------------------------|--------------------------------|
| a. Reduce wastage of resources | b. Purchase resources |
| c. Assign resources permanently | d. Estimate time for resources |

6. Buffer in time estimate adds _____ to time estimate.

- | | |
|--------------|--------------|
| a. 30 – 40 % | b. 25 – 35 % |
| c. 5 – 10 % | d. 10 – 25 % |

7. Select the INCORRECT option: reasons to achieve work breakdown are:

- | | |
|--|---|
| a. Accurate and readable project organization | b. Point out the negative points in project. |
| c. Indicates the project milestones and control points | d. Helps to estimate the cost, time and risk. |

8. A policy is _____.

- | | |
|---|--|
| a. A statement which explains how human resource management issues will be dealt with in an organization. | b. A rule that helps in estimating the time for project. |
| c. A statement that describes the history concerns of the organization. | d. All of them |

Answer Key

MCQ Number	Correct Answer
1	c
2	a
3	b
4	d
5	a
6	d
7	b
8	a

OFFICE - ASSISTANT



Module-2

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 2: Computer Skills

Learning Outcomes

After completion of this learning module, you will be able to:

- Install operating system by applying instructional manual.
- Install as per sequence and according to the instructional manual without losing any kind of data (Disk Management and Fragmentation).
- List and Understand functionality of Computer Hardware (Mother Board, Processor, Bus, and Firmware (e.g. ROM-BIOS) Components.
- Understand various kinds of peripheral devices.
- Configure peripheral devices as per recommended manual and perform “test” function(s).
- Troubleshoot different commonly known (Level-1 Support) basic computer hardware problems.
- Perform Basic Internet Connectivity for standalone computer(s)
- Compose and Type a document draft (Letter, Report, Meeting Minute, Resume) with a typing speed of up to 25 words/minute by following standardized typing pattern (asdfg ;lkjh) on Qwerty keyboards.
- Perform the combinations of Control, Shift, and Alternative keys e.g. Shift+F7 for Similar Words, Ctrl+] to increase text size, Shift+F3 for toggle text and Alt+N for New command.
- Utilize standard menu (toolbar) e.g. Home, Page Layout, References, Review hover buttons.

- Given any word document, insert table, picture, header/footer, endnote, page number, word art, table of contents, etc.
- Associate data as Hyperlink at a given location of a document or storage device with a URL.
- Explain the nature of document views (Print, Full Screen, Web Layout, and Outline Draft).
- Insert a Section Break at a given location of a word document. When clicked on show/hide icon under home menu, different breaks should be displayed.
- Protect a given document. Document by assigning a password and making it final.
- Insert dialog box and grouping shapes.
- Understand OLE concept.
- Install and Configure Phonetic Keyboard for Urdu language editing in Inpage software.

Learning Unit 1: Configure Graphical User Interface Enabled System Software

Overview

In this learning unit, you will be introduced to basic concepts of configuring graphic user interface and learn sharing techniques, computer short cut keys, administrative tools, computer backup and scanning system. After completion of this learning unit, you will be able to install operating system in sequential order by applying instructional manual.

1. Precautions to be taken to Install Operating System

The following precautions should be taken before installing an Operating System (O.S):

1. Ensure the System is Compatible

The hardware must meet the following specifications;

Processor:	Min. 1 GHz or faster for 32(x86)/64-bit
RAM:	Min. 1 GB for 32-bit / 2GB for 64-bit
HDD:	Min. available disk space 16 GB for 32-bit and 20 GB for 64-bit

Hardware

The physical parts of a computer system are called hardware e.g. Monitor, keyboard, system unit, mouse etc.

Do you know!

A set of instructions that tells the computer what to do and how to do is called software.

2. Get Data Backup (if the system already contains O.S and data)

- Obtain a secondary storage device like DVD, CD, Flash Drive etc.
- Make sure that there is enough space available for data backup on the selected drive.
- Copy the whole data to the selected device.
- Secure the device at a safe place.

System Restore

System restore creates a restore point in order to preserve all previous programs and configurations.

3. Create System Restore Point (if system already contains an O.S)

Procedure to create system restore point has the following steps:

1. Go to start menu and select control panel.
2. Click on system and security.
3. Select system from the list.
4. Select remote setting.
5. Select system protection.
6. Select system restore.
7. Create your restore point here.

Remember

Boot Sequence is very important in order to load operating system into memory.

2. Procedure to Install Windows 8 Operating System

The procedure of installing Windows 8 operating system from DVD, insert the DVD into DVD Drive and restart the PC. Then perform the following steps:

Do you know!

Disk formatting is the process of preparing a data storage device such as a hard disk drive, solid-state drive, floppy disk or USB flash drive for initial use. In some cases, the formatting operation may also create one or more new file systems.

Partitioning

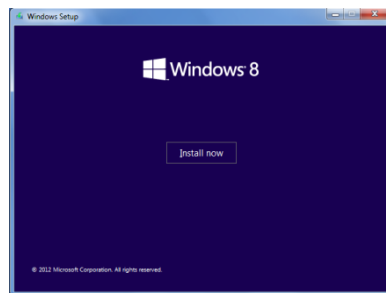
Logical division of a Hard Disk Drive is called Partitioning.

Clean Installation

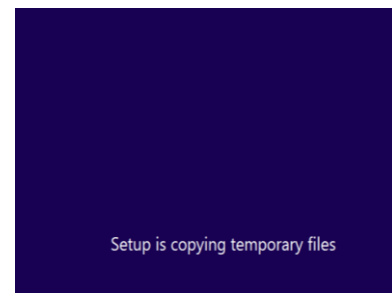
The process of removing previous version of an operating system and installing a fresh version.

Upgraded Installation

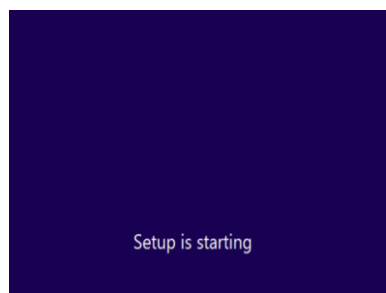
The kind of installation in which features of previous version remain in addition the features of the fresh version.



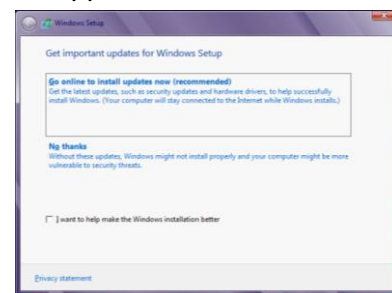
1. Welcome screen will appear.



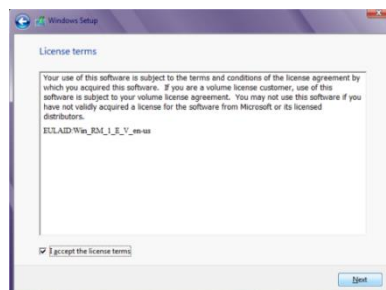
2. Copying temporary files screen will appear.



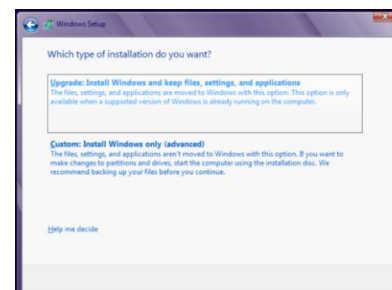
3. Setup starting Screen will appear.



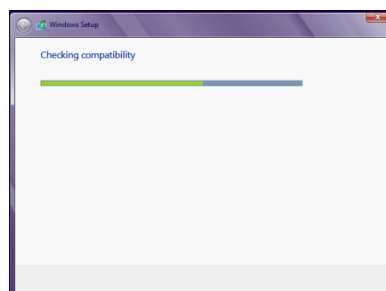
4. Select Installation updates option.



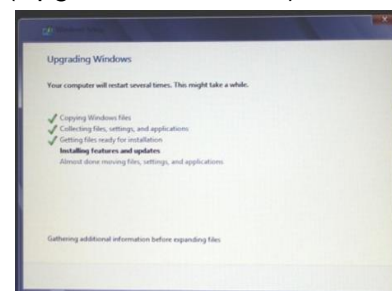
5. Agree to the system license.



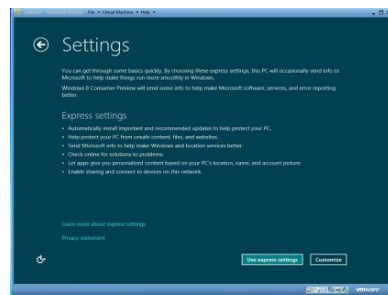
6. Select type of installation (Upgraded or Custom).



7. Checking compatibility Screen will appear.



8. Installing features and updates screen will appear.



9. The systems will restart and configure post installation settings. Use express settings (Recommended).



10. Start Screen will appear

3. Executing Common Commands using Help

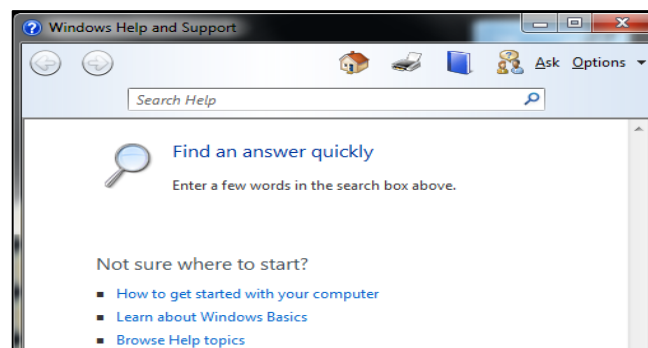
Format a Storage Disk Using Help Command

Perform the following steps to format a Storage Disk:

1. Come to the Windows Main Desktop Screen.
2. Press F1 Function key to run Windows Help Application.
3. Help interface will open as shown below.

Short key

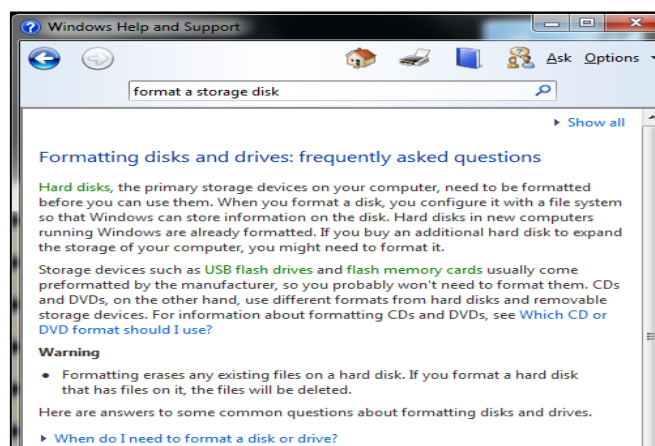
Press F1 to run help.



Control Panel

The part of **Windows O.S** that allows users to view and configure basic system settings and controls via applets such as adding hardware, add and remove software etc.

4. Type "Format a Storage Disk" in the search bar and press enter key.
5. You will find a list of related help links.



6. Click "Formatting disks and drives" link.

7. The detailed procedure will appear.
8. Follow the procedure to format a storage disk.

View the List of Running Processes Using Help Command

Partitioning

The process of Logical division of a Hard Disk Drive is called Partitioning.

The procedure of using Help command to view the list of running process has following steps:

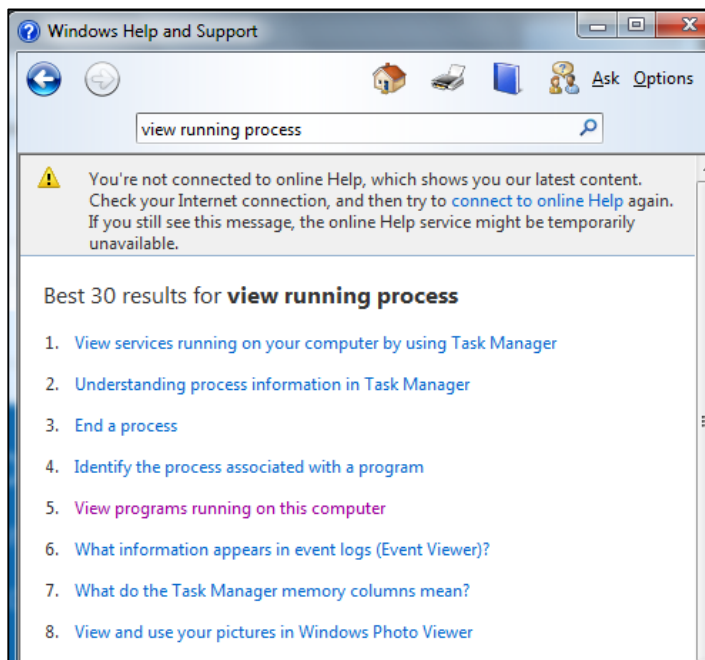
1. Type “view running process” in the search bar and press enter key.
2. The following screen will appear.

Installation requirements

The given minimum specifications are required for windows 7 Operating System. Different O.S may have different Hardware requirements.

Windows updates

New features of windows O.S for better performance and services.



3. Click on “View Programs running on this computer” link. It will take you to Task Manger where you can see all the running programmes.

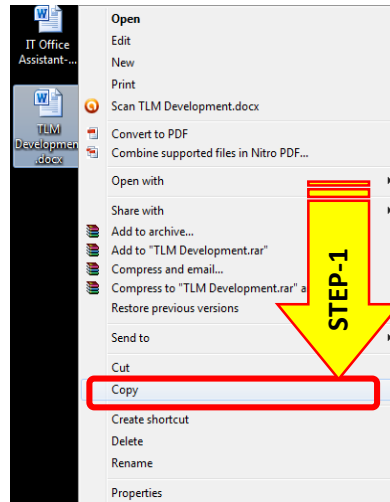
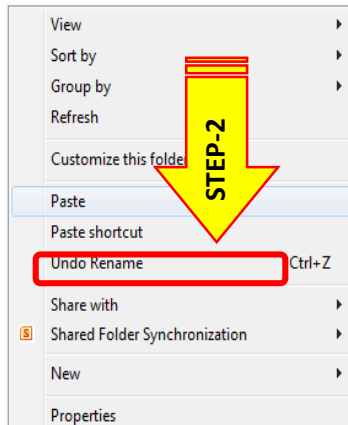
File Sharing Techniques

Following operations can be performed on files:

1. Copy and Paste a file/folder.
2. Cut and Paste a file/folder.

Steps to Copy and Paste File(s) / Folder(s)

1. Click the file(s) you want to copy
2. **Right click** on any selected file
3. From the menu click **Copy**
4. Go to the destination
5. Right Click at the destination
6. Click **Paste** option



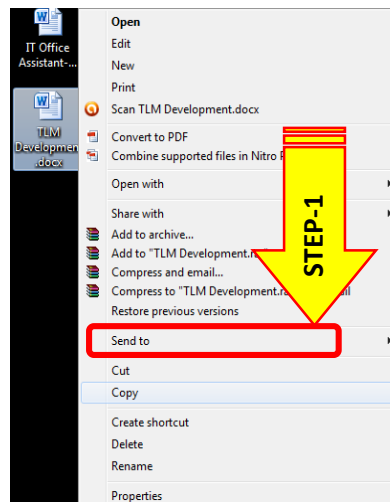
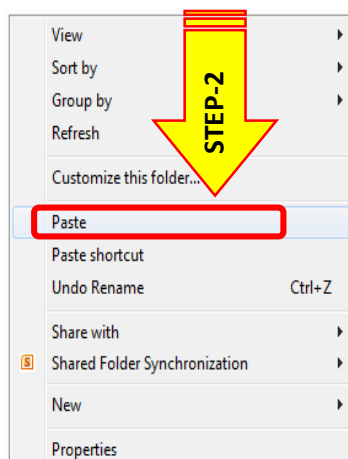
Keyboard Shortcuts

Keyboard shortcuts are combinations of two or more keys that you can use to perform a task that would typically require a mouse or other pointing device. Keyboard shortcuts can make it easier to work with your PC, saving you time and effort as you work with Windows and other apps.

Steps to Cut and Paste File(s)

The following are the steps to cut and paste file(s):

1. Click the file(s) you want to cut.
2. Right click on any selected file.
3. From the menu click **Cut**.
4. Go to the destination.
5. Right Click at the destination.
6. Click **Paste** option.



4. Computer Shortcut Keys

There are certain shortcuts you can use. Some of most frequently used shortcut keys are given below:

Ease of Access	
Right Shift for eight seconds	Turn Filter Keys on and off
Left Alt+Left Shift+PrtScn (or PrtScn)	Turn High Contrast on or off
Left Alt+Left Shift+Num Lock	Turn Mouse Keys on or off
Shift five times	Turn Sticky Keys on or off
Num Lock for five seconds	Turn Toggle Keys on or off
Windows logo key +U	Open the Ease of Access Center
General	
F1	Display Help
Ctrl+C or Ctrl+Insert	Copy the selected item
Ctrl+X	Cut the selected item
Ctrl+V or Shift+Insert	Paste the selected item
Ctrl+Z	Undo an action
Ctrl+Y	Redo an action
Delete or Ctrl+D	Delete the selected item and move it to the Recycle Bin
Shift+Delete	Delete the selected item without moving it to the Recycle Bin first
F2	Rename the selected item
Ctrl+Right Arrow	Move the cursor to the beginning of the next word
Ctrl+Left Arrow	Move the cursor to the beginning of the previous word
Ctrl+Down Arrow	Move the cursor to the beginning of the next paragraph
Ctrl+Up Arrow	Move the cursor to the beginning of the previous paragraph
Ctrl+Shift with an arrow key	Select a block of text
Shift with any arrow key	Select more than one item in a window or on the desktop, or select text within a document

Ctrl with any arrow key+Spacebar	Select multiple individual items in a window or on the desktop
Ctrl+A	Select all items in a document or window
F3	Search for a file or folder
Alt+Enter	Display properties for the selected item
Alt+F4	Close the active item, or exit the active program
Alt+Spacebar	Open the shortcut menu for the active window
Ctrl+F4	Close the active document (in programs that allow you to have multiple documents open simultaneously)
Alt+Tab	Switch between open items
Ctrl+Alt+Tab	Use the arrow keys to switch between open items
Ctrl+Mouse scroll wheel	Change the size of icons on the desktop
Windows logo key +Tab	Cycle through programs on the taskbar by using Aero Flip 3-D
Ctrl+Windows logo key +Tab	Use the arrow keys to cycle through programs on the taskbar by using Aero Flip 3-D
Alt+Esc	Cycle through items in the order in which they were opened
F6	Cycle through screen elements in a window or on the desktop
F4	Display the address bar list in Windows Explorer
Shift+F10	Display the shortcut menu for the selected item
Ctrl+Esc	Open the Start menu
Alt+underlined letter	Display the corresponding menu
Alt+underlined letter	Perform the menu command (or other underlined command)
F10	Activate the menu bar in the active program
Right Arrow	Open the next menu to the right, or open a submenu
Left Arrow	Open the next menu to the left, or close a submenu
F5 or Ctrl+R	Refresh the active window
Alt+Up Arrow	View the folder one level up in Windows Explorer
Esc	Cancel the current task
Ctrl+Shift+Esc	Open Task Manager

Shift when you insert a CD	Prevent the CD from automatically playing
Left Alt+Shift	Switch the input language when multiple input languages are enabled
Ctrl+Shift	Switch the keyboard layout when multiple keyboard layouts are enabled
Right or Left Ctrl+Shift	Change the reading direction of text in right-to-left reading languages
Dialog Box	
Ctrl+Tab	Move forward through tabs
Ctrl+Shift+Tab	Move back through tabs
Tab	Move forward through options
Shift+Tab	Move back through options
Alt+underlined letter	Perform the command (or select the option) that goes with that letter
Enter	Replaces clicking the mouse for many selected commands
Spacebar	Select or clear the check box if the active option is a check box
Arrow keys	Select a button if the active option is a group of option buttons
F1	Display Help
F4	Display the items in the active list
Backspace	Open a folder one level up if a folder is selected in the Save As or Open dialog box
Windows Logo Key	
Windows logo key	Open or close the Start menu.
Windows logo key +Pause	Display the System Properties dialog box.
Windows logo key +D	Display the desktop.
Windows logo key +M	Minimize all windows.
Windows logo key +Shift+M	Restore minimized windows to the desktop.
Windows logo key +E	Open Computer.
Windows logo key +F	Search for a file or folder.
Ctrl+Windows logo key +F	Search for computers (if you're on a network).

Windows logo key +L	Lock your computer or switch users.
Windows logo key +R	Open the Run dialog box.
Windows logo key +T	Cycle through programs on the taskbar.
Windows logo key +number	Start the program pinned to the taskbar in the position indicated by the number. If the program is already running, switch to that program.
Shift+Windows logo key +number	Start a new instance of the program pinned to the taskbar in the position indicated by the number.
Ctrl+Windows logo key +number	Switch to the last active window of the program pinned to the taskbar in the position indicated by the number.
Alt+Windows logo key +number	Open the Jump List for the program pinned to the taskbar in the position indicated by the number.
Windows logo key +Tab	Cycle through programs on the taskbar by using Aero Flip 3-D.
Ctrl+Windows logo key +Tab	Use the arrow keys to cycle through programs on the taskbar by using Aero Flip 3-D.
Ctrl+Windows logo key +B	Switch to the program that displayed a message in the notification area.
Windows logo key +Spacebar	Preview the desktop.
Windows logo key +Up Arrow	Maximize the window.
Windows logo key +Left Arrow	Maximize the window to the left side of the screen.
Windows logo key +Right Arrow	Maximize the window to the right side of the screen.
Windows logo key +Down Arrow	Minimize the window.
Windows logo key +Home	Minimize all but the active window.
Windows logo key +Shift+Up Arrow	Stretch the window to the top and bottom of the screen.
Windows logo key +Shift+Left Arrow or Right Arrow	Move a window from one monitor to another.
Windows logo key +P	Choose a presentation display mode.
Windows logo key +G	Cycle through gadgets.
Windows logo key +U	Open Ease of Access Center.
Windows logo key +X	Open Windows Mobility Center.
Windows Explorer	
Ctrl+N	Open a new window
Ctrl+W	Close the current window

Ctrl+Shift+N	Create a new folder
End	Display the bottom of the active window
Home	Display the top of the active window
F11	Maximize or minimize the active window
Ctrl+Period (.)	Rotate a picture clockwise
Ctrl+Comma (,)	Rotate a picture counter-clockwise
Num Lock+Asterisk (*) on numeric keypad	Display all subfolders under the selected folder
Num Lock+Plus Sign (+) on numeric keypad	Display the contents of the selected folder
Num Lock+Minus Sign (-) on numeric keypad	Collapse the selected folder
Left Arrow	Collapse the current selection (if it's expanded), or select the parent folder
Alt+Enter	Open the Properties dialog box for the selected item
Alt+P	Display the preview pane
Alt+Left Arrow	View the previous folder
Backspace	View the previous folder
Right Arrow	Display the current selection (if it's collapsed), or select the first subfolder
Alt+Right Arrow	View the next folder
Alt+Up Arrow	View the parent folder
Ctrl+Shift+E	Display all folders above the selected folder
Ctrl+Mouse scroll wheel	Change the size and appearance of file and folder icons
Alt+D	Select the address bar
Ctrl+E	Select the search box
Ctrl+F	Select the search box
Taskbar	
Shift+Click on a taskbar button	Open a program or quickly open another instance of a program
Ctrl+Shift+Click on a taskbar button	Open a program as an administrator

Shift+Right-click on a taskbar button	Show the window menu for the program
Shift+Right-click on a grouped taskbar button	Show the window menu for the group
Ctrl+Click on a grouped taskbar button	Cycle through the windows of the group

5. Administrative Tools

Following are the most commonly used administrative tools:

1. Computer Management
2. Event viewer
3. Performance Monitor
4. Services
5. Boot Sequence
6. Task Scheduler
7. Registry Editor

Restore Point

A restore point is a representation of a stored state of your computer's system files. You can use a restore point to restore your computer's system files to an earlier point in time.

Steps to Take System Backup

Following are the strategies to take system backup:

1. Create system restore point
2. Incremental Backup
3. Differential Backup

Types of Backup

There are two types of backup i.e Incremental and Differential.

Steps to Create System Restore Point

To create a restore point, you need to;

1. Open System by clicking the **Start button**, right-clicking Computer, and then clicking **Properties**.
2. In the left pane, click **System protection**. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
3. Click the **System Protection** tab, and then click **Create**.
4. In the **System Protection** dialog box, type a description
5. Click **Create**.

Administrative Tools is a folder in Control Panel that contains tools for system administrators and advanced users. The tools in the folder might vary depending on which version of Windows you are using.

Open Administrative Tools by clicking the Start button, and then clicking Control Panel. In the search box, type administrative tools, and then click Administrative Tools.

Many of the tools in this folder, such as Computer Management, are Microsoft Management Console (MMC) snap-ins that includes their own help topics. To view specific help for an MMC tool, or to search for an MMC snap-in that you don't see in the following list, open the tool, click the Help menu, and then click Help Topics. Some common administrative tools in this folder include:

Component Services. Configure and administer Component Object Model (COM) components. Component Services is designed for use by developers and administrators.

Computer Management. Manage local or remote computers by using a single, consolidated desktop tool. Using Computer Management, you can perform many tasks, such as monitoring system events, configuring hard disks, and managing system performance.

Data Sources (ODBC). Use Open Database Connectivity (ODBC) to move data from one type of database (a data source) to another.

Event Viewer. View information about significant events, such as a program starting or stopping, or a security error, which are recorded in event logs.

iSCSI Initiator. Configure advanced connections between storage devices on a network.

Local Security Policy. View and edit Group Policy security settings.

Performance Monitor. View advanced system information about the central processing unit (CPU), memory, hard disk, and network performance.

Print Management. Manage printers and print servers on a network and perform other administrative tasks.

6. System Backup

When you set the Backup Type setting to Full, all the files and folders on the drive are backed up every time you use that file set. To set the backup type, click Options on the Settings menu, and then click the Backup tab. Steps to perform full backup are as under:

1. In Backup, click the drives, files, or folders to back up, and then click Next Step.
2. Click the destination (where you want the files backed up to).
3. On the Settings menu, click Options, click the Backup tab, click "Full: backup of all selected files," and then click OK.
4. On the File menu, click Save As and name your backup set. Once saved, click Start Backup.
5. Provide a name for the selected drive, files, or folders in the Backup Set Label dialog box, and then click OK.

Incremental Backup

An incremental backup differs from the other types of backup. The difference is that Windows 8 incremental backup saves only the data from last successful incremental backup. The “incremental restore” will usually take more time comparing to using restore from the other types of backups. Steps to perform incremental backup:

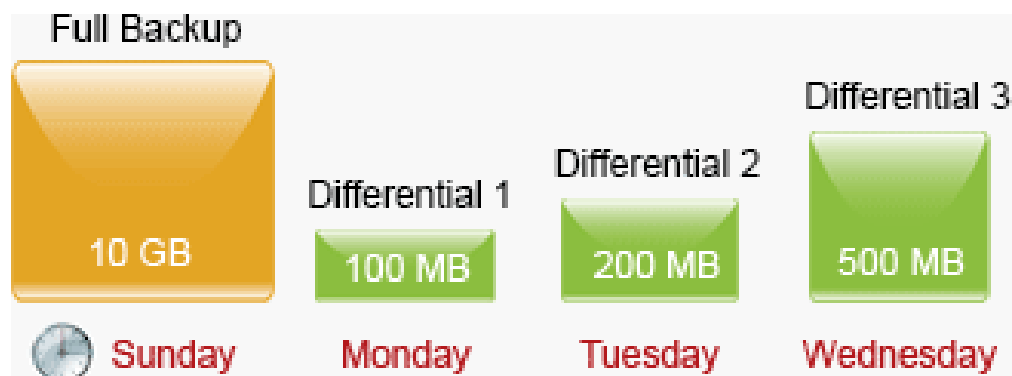
1. On the File menu, click Open File Set. Click the file set you want to use, and then click Open. Click Next Step.
2. Click the destination (where you want the files backed up to).
3. On the Settings menu, click Options, click the Backup tab, click "Full: backup of all selected files," and then click OK.
4. On the File menu, click Save to save your backup set.
5. Repeat steps 1 and 2.
6. On the Settings menu, click Options, click the Backup tab
7. Click "Incremental: backup of selected files that have changed since the last full back up," and then click OK.

Differential Backup

Differential backup is more elegant backup utility, because in fact every time you do a differential backup you save not all the data, but only changes made since the last full backup. Remember yourself, do you reinstall your programs every day, or make significant changes to the registry? In below pictures, it is shown schematically how that works:

Incremental Vs Differential Backup

Incremental and differential backups keep only the differences, so they require less disk space and time.



7. Local Security Policy

To Open Local Security Policy Editor, follow the steps given below:

1. Open the Control Panel (icons view), and click/tap on the Administrative Tools icon. Close the Control Panel window. Then, double click/tap on Local Security Policy to open it, and go to step 2 below.
2. If prompted by UAC, click/tap on Yes. Note: If you did step 2, then you can now close the Administrative Tools window if you like.
3. You can now set and manage the Local Security Policies on your computer to how you want them.

Scan Devices for Viruses/Worms

Following a the steps to perform a scan using AVG:

1. Open the AVG Program.
2. Click the Update Now button to make sure that AVG is fully up-to-date.
3. Click the Scan options button.
4. Click the Change scan settings blue text within the Whole computer scan button.
5. Make sure that all available check boxes are selected (except the Scan for Tracking Cookies option).
6. Click the Additional scan settings... blue text, and then click All file types.
7. Click OK, and then click Start scan.

Learning Unit 2: Configure Peripheral Devices

Overview

In this learning unit, you will learn the methods and techniques for configuring the peripheral devices, capacitor, types and usage of ports, hardware problems and their solution and basic features of internet. After the completion of this learning unit, you will be able to understand functionality of various kinds of peripheral devices and will be able to configure peripheral devices as per recommended manual and perform “test” function(s) and troubleshoot basic hardware problems and perform basic internet features.

1. Peripheral Devices

A peripheral device is generally defined as any auxiliary device such as a computer mouse or keyboard that connects to and works with the computer in some way. Other examples of peripherals are image scanners, tape drives, microphones, loudspeakers, webcams, and digital cameras.



Input Devices:

1. Mouse and keyboard.
2. KVM = keyboard video and monitor switch.
3. Scanners and barcode readers.
4. Biometric devices.
5. Game pads and joysticks.
6. Microphones.
7. Digitizers (capturing an analog signal in a digital format).

Remember

They are add-on components that are external to the PC. They add capabilities that were not present when the system was built. They have a connection to the computer and utilize drivers to communicate with the OS and other peripherals.

Remember

They can be broken out into three basic categories: input devices (e.g., keyboard/mouse, KVM, scanners), output devices (e.g., printers, video displays, speakers), or multimedia devices (e.g., camcorders, webcams, MIDI).

Output Devices:

1. Printers.
2. Speakers.
3. Display devices.

Multimedia Devices:

1. Digital cameras, camcorders, and webcams.
2. MIDI = Musical Instrument Digital Interface.

Connecting Peripheral Devices

Peripheral devices can be connect to the PC with different ways. Some wired connections include: through a serial port, through a PS/2 port, and via a USB port. Peripheral devices may also be connected wirelessly. If manufacturers require a proprietary type of connection, it is up to them to provide the means of making the connection. Read the installation instruction before installing to reduce frustration.

2. Capacitor, VLSI, PCB, and FPGA

Capacitor

A capacitor (originally known as a condenser) is a passive two-terminal electrical component used to store electrical energy temporarily in an electric field.

VLSI

VLSI (Very Large Scale Integration) is a technology that helps us integrate millions of transistors in one small chip. It is a structured design flow that enables millions of transistors to sit together and work on a single microchip by saving microchip area. This comes under the Circuit Design process flow

FPGA

A Field Programmable Gate Array (FPGA) is an integrated circuit designed to be configured by a customer or a designer after manufacturing – hence "field-programmable". The FPGA configuration is generally specified using a Hardware Description Language (HDL), similar to that used for an Application Specific Integrated Circuit (ASIC), (Circuit diagrams were previously used to specify the configuration, as they were for ASICs, but this is increasingly rare).

3. Steps to Configuring Peripheral Devices with Software Driver (s)

Monitors

Before connecting or disconnecting a monitor, ensure that the power to both the PC and the monitor is off. Then connect a VGA (DB-15) cable from the monitor to the PC's video card, and connect the monitor's power cord to an AC outlet.

Modems

There are two types of modems:

Internal modems; These are installed as expansion cards inside a computer.

External modems; They have their own power supplies and connect to an external COM port with an RS-232 cable or to a USB port.

Internal modems are usually smaller and cheaper than their external counterparts. However, they are more difficult to configure, especially if they are not Plug and Play. You need to configure them to use an unused COM port. Non-PnP internal modems have jumpers on them for setting the resources to use.

External modems use an existing serial port (legacy serial port or USB), so they don't have the configuration problem with IRQs and I/O addresses. A legacy serial external modem must be connected with the power off for both the PC and the modem. A USB modem can be connected or disconnected to the computer at any time. External modems have their own power supplies that connect to an AC outlet.

Digital Cameras

Most digital cameras connect to a PC via a USB interface. When the camera is connected, the camera appears as a removable drive in My Computer, and you can browse its contents to examine the pictures. You can then copy the pictures to the PC's hard disk with drag-and-drop through a regular file-management interface.

Wireless Access Points, Hubs, and Routers

A wireless access point is like a network hub. It works independently of any network node and continues to function even when the PCs are turned off. However, you can configure it by entering its IP address into a web browser interface. Check the documentation to find out the IP address to use and the username and password required for access to it.

Infrared Devices

Infrared ports are most often associated with notebook PCs, although any PC may have one installed as an add-on. An infrared device is automatically recognized through the operating system whenever it comes into range of the PC, and it's available through the infrared port. For example, when an infrared printer comes into range, the printer is detectable.

Printers

Almost all printers are Plug and Play, such that Windows can automatically detect them and either install a driver automatically or prompt you for a Setup disk. To set up a printer, use the Add Printer Wizard through the Printers applet in the Windows Control Panel.

Some printers have their own special queue software. If possible, run the Setup utility that comes with the printer. A printer may have either a legacy parallel or USB interface. If it's legacy parallel, both the printer and the PC must be powered off to make the connection; if it's USB, the connection can be made at any time.

4. Types of Computer Ports

With passage of time new technologies are incorporating with old one and they are bringing more and more users to avail chance of using best gifts of technology. Just like that new kinds of ports are also becoming popular with new devices. Some of famous and new ports are given as below:

PS/2 Ports are most simple and oldest type of ports, and are still working in market with systems. These are 6-pin, low-speed serial connection ports which are used with mouse and keyboards mostly. In system two ports of this kind are found, although they look similar but they are not interchangeable. It is important to be extremely careful to attach the keyboard and mouse to their respective PS/2 port.

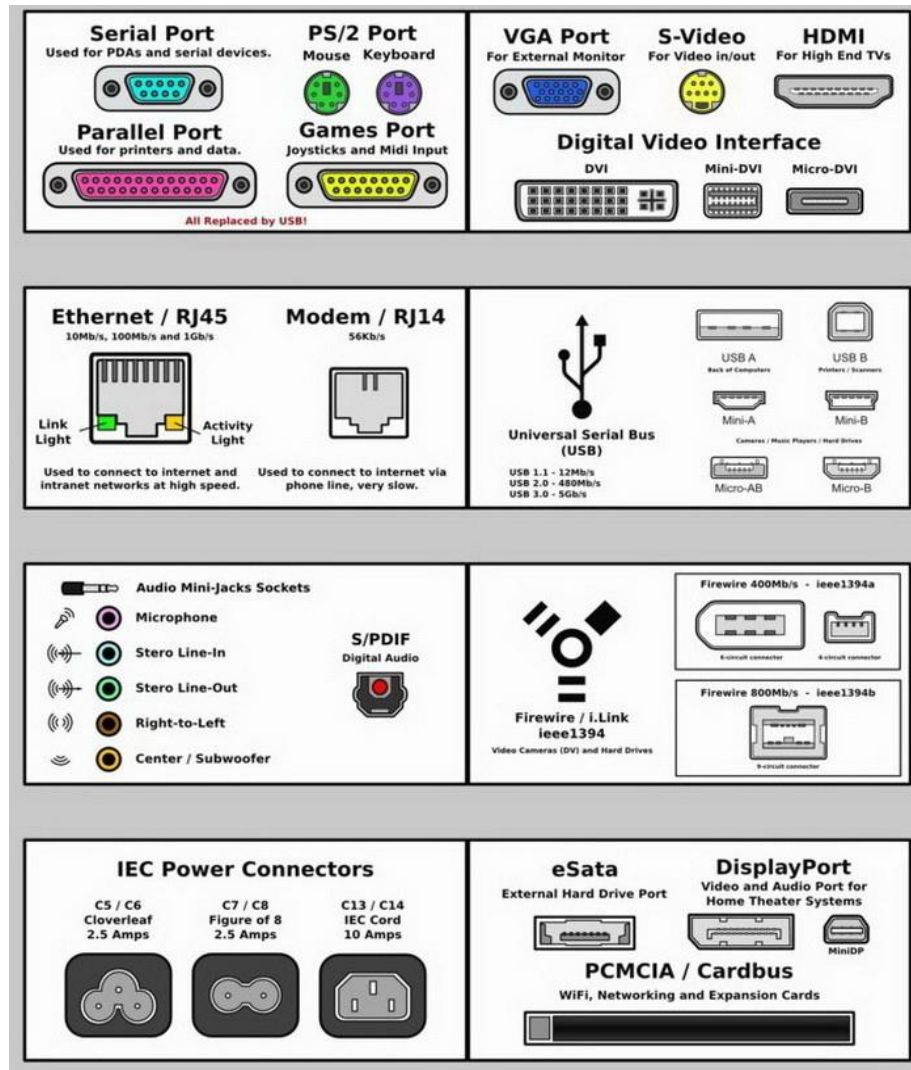
VGA Monitor Port is used to display Video Graphics Array in your system. This port uses an analog monitor which forward signals towards display adapter. All monitors and LCDs accept these signals, but some flat displays prefer to use digital signal interface. VGA resolution typically refers to the original resolution of 640×480 pixels and 16 colors, but it is not preferred to use for small monitors or displays.

USB ports are popular now as they have replaced many old ports from systems now. They have take place of old printer hook-ups, and these port are also addition ways for transferring data and add accessories to a system. Flash drives are biggest examples for these ports, which are connected on these ports only. These ports are also helping Smartphone users, as they can now transfer data very easily from computer to their phones.

Serial ports are designed to handle all processes of a system. This port consist 9 to 24 pins and are able to send data in range of more than 18 feet. Serial ports have ability to do one and two way data transmission with complete responsibility.

Parallel ports consisted of 25 holes or pins and commonly connected the devices to system. Performance capability of these ports is much faster as compared to serial ports and other types of ports. These ports are built in mother board and consist of 25 wires, 8 of those wires are responsible to transfer data and control complete circuit.

RJ45 Ethernet Port is famous to use for connecting your system with local area networks. It look like connector of telephone wire but it is little wider than that.



Computer Ports

5. Solutions for Hardware Failure

Common hardware failures of PCs and their solutions are discussed below:

1. Computer Freeze

Heat is the measure Reason for PC hardware problems. Ensure if it's computer freeze or lockup. Generally, your computer temperature is controlled by the internal fan called the Heat Sink. Dust is another enemy of PC hardware as it sticks on motherboard and electrical components. You can control overheating by removing dust from around the internal fan.

2. System Error Blue Screen

Often it is seen that a blue screen appears suddenly while you are working or when you start your computer. This is usually due to either a hardware failure or a driver problem. Reinstalling the driver or correcting the hardware problem can help to solve the issue. If nothing seems to work, you should consider backing up and re-formatting your Hard Drive, then reinstalling your operating system.

3. RAM Faults and Errors

Whenever RAM fault occurs your monitor shows a blue screen with a memory reference like x000xxxx as a boot interruption. RAM faults cannot be prevented but you can fix them. There may be frequent PC restarts. This is due to faulty RAM chips. These Faulty RAM chips are unable to store the boot loader or NT loader file therefore the OS cannot find it and hence it shuts down all the processes, due to non-availability of the boot loader file in the RAM as a result the PC restarts again and again. This problem can be fixed by replacing the old RAM with a new one. You must know the model compatibility of your motherboard before buying a new RAM. It may be DDR, DDR2 or DDR3.

4. Noisy Computer

It means that the computer system is making noise while running. The reason of noisy computer is dirty condition fan. The dust particles sticks on the fan including the heat sink and other parts such as motherboard and other electrical parts of computer. This dust blocks the smooth action of fan and causing the fan to make noise. Clean your system completely by removing motherboard from its place and also clean the fan and heat sink with a brush or soft cloth.

6. Basic Features of Internet

The Internet is a collection of computers that share information. Home users commonly use a phone modem, cable modem, or DSL connection to connect to the Internet. An Internet Service Provider (ISP) connects the home user to other computers. Files that are transferred over the Internet are called Web pages. Computers that store these Web pages are called Web servers. For Web servers to work effectively, it must always be connected to the Internet. The main features of Internet:

- Connect to people in just a moment
- Emailing and transferring of files
- Internet calls
- Online shopping
- Websites and Blogs
- Online advertisement
- Watching TV
- Playing online games

Electronic Email

E-mail is defined as the transmission of messages over communications networks. Typically the messages are notes entered from the keyboard or electronic files stored on disk. Most mainframes, minicomputers, and computer networks have an email system.

Web Suffering

To navigate through the World Wide Web or Internet, usually by clicking with a mouse. The term also has a generic meaning of spending time on the Internet.

Learning Unit 3: Business Writing


Overview

In this learning unit, you will be introduced to compose business writings. After the completion of this learning unit, you will be able to compose and type a document draft like letters, reports, minutes of meeting, resume etc.

1. Installing Microsoft Office Suit

Install or Remove Individual Office Program

If you want to install custom programs from your Office suite - for example, you have Office Home and Business and want to install Word, Excel, PowerPoint and Outlook but not OneNote. You can choose a custom installation during setup as

1. Initiate the installation of your Office suite.
2. In the Choose the installation you want dialog box, click Customize.
3. On the Installation Options tab, right click the programs that you do not want installed, and then click  Not Available.
4. Click Install now to complete the custom installation.

Remember

Always use licensed software.

Remember

You can't remove Office programs individually after the suite has been installed. You must uninstall Office completely, and then reinstall it using a custom installation following the steps outlined above.

Uninstall Office

1. Click the Start button, and then click Control Panel.
2. Do one of the following:
 - Windows 7 and Windows Vista Click Programs, and then click Programs and Features. Click the name of the Office suite that you want to remove, and then click Uninstall.

Note In Classic view, double-click Programs and Features. Click the name of the Office suite that you want to remove, and then click Uninstall.

- Microsoft Windows XP Click Add or Remove Programs, and then click Change or Remove Programs. Click the name of the Office suite that you want to remove, and then click Uninstall.

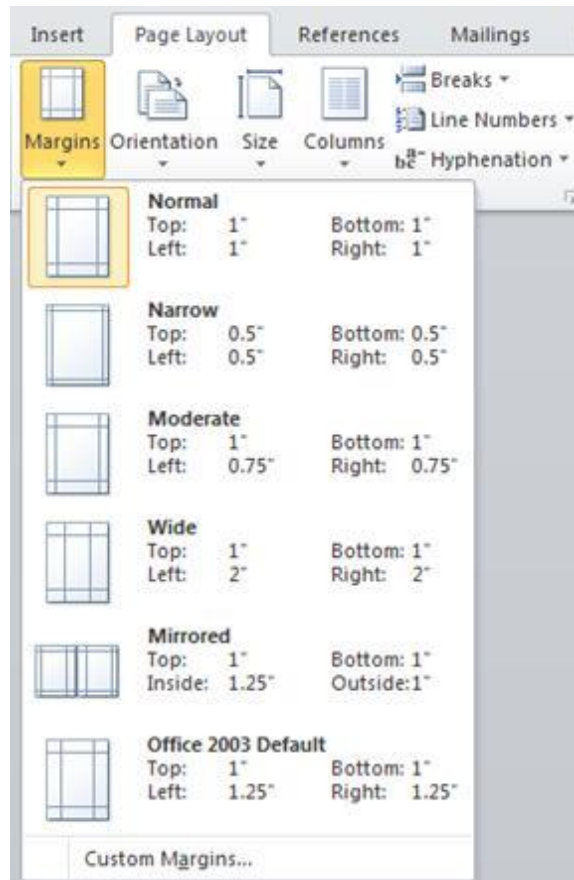
Note In Classic view, double-click Add or Remove Programs, click the name of the Office suite that you want to remove, and then click Uninstall.

3. Follow the prompts to complete the removal.

2. Steps to Adjust Page Margins, Size and Layout

Choose page margins using predefined settings using following:

1. On the Page Layout tab, in the Page Setup group, click Margins. The Margins gallery appears as shown below.



2. Click the margin type that you want to apply.

If your document contains multiple sections, the new margin type will only be applied to the current section. If your document contains multiple sections and you have multiple sections selected, the new margin type will be applied to each section you have selected.

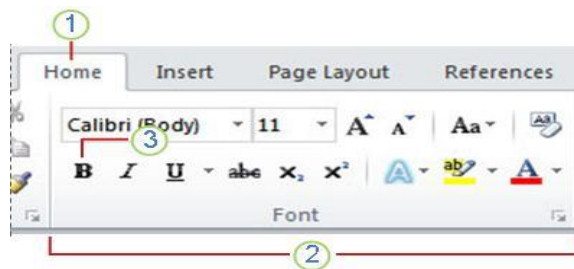
3. Document Editing Features

Editing and Formatting Text

Before you edit or format text, you must first select the text. Follow the steps below to select text:

- Place the cursor at the beginning of the text you'd like to edit or format and then press the left mouse button.
- While holding down the left mouse button, move it to the right (called "dragging") to select the text. A background color is added in the location of the selected text to indicate the selection range.

Most text formatting tools are found by clicking the **Home** tab and then choosing from the **Font** group.



1. This is the **Home** tab.
2. This is the **Font** group on the **Home** tab.
3. This is the **Bold** button. See the table below for the names and functions of all the buttons in the **Font** group.

Button	Name	Function
	Font	Changes the font.
	Font Size	Changes the size of the text.
	Grow Font	Increases the text size.
	Shrink Font	Decreases the text size.
	Change Case	Change all the selected text to uppercase, lowercase, or other common capitalizations.
	Clear Formatting	Clears all formatting for the selected text, leaving only the plain text.
	Bold	Makes the selected text bold.
	Italic	Italicizes the selected text.
	Underline	Draws a line under the selected text. Click the dropdown arrow to select the type of underline.
	Strikethrough	Draws a line through the middle of selected text.
	Subscript	Creates subscript characters.
	Superscript	Creates superscript characters.
	Text Effects	Apply a visual effect to selected text, such as shadow, glow, or reflection.
	Text Highlight Color	Makes text look like it was marked with a highlighter pen.
	Font Color	Changes the text color.

4. Saving and Opening a Document

Save and Open a Document

In M.S Word, you must save your document so you can quit the program without losing your work/data. When you save the document, it is stored as a file on your computer. Later, you can open the file, change it, and print it. To save a document, do the following:

1. Click the Save button in the Quick Access toolbar.
2. Specify the location where you want to save the document in the Save in box. The first time you save your document, the first line of text in the document is pre-filled in as the file name in the File name box. To change the file name, type in a new file name.
3. Click Save.

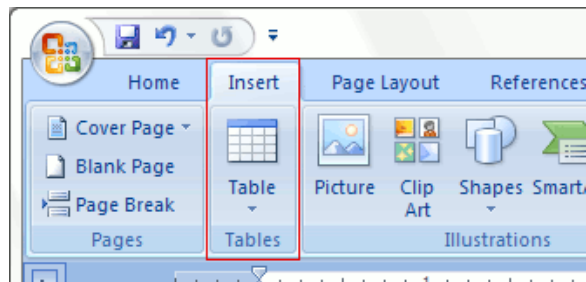
The document is saved as a file. The file name in the Title Bar changes to reflect the saved file name.

5. Steps to Create a Table

The following are steps to Create a Table:

Use the Table Menu

1. Click where you want to insert a table.
2. On the Insert tab, in the Tables group, click Table, and then, under Insert Table, drag to select the number of rows and columns that you want.




The document is saved as a file. The file name in the Title Bar changes to reflect the saved file name.

Applying Table Designs

After you create a table, you can format the entire table by using Table Styles. By resting your pointer over each of the preformatted table styles, you can preview what the table will look like.

1. Click in the table that you want to format.
2. Under Table Tools, click the Design tab.

3. In the Table Styles group, rest the pointer over each table style until you find a style that you want to use. Note: To see more styles, click the arrow .
4. Click the style to apply it to the table.

In the Table Style Options group, select or clear the check box next to each the table element to apply or remove the selected style.

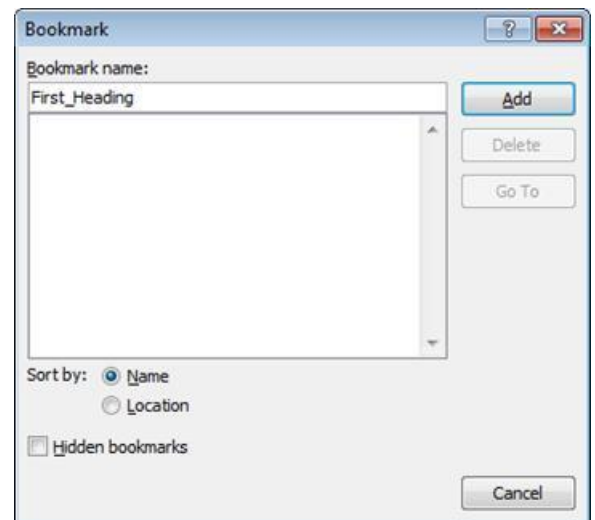
6. Inserting Links

Adding a Bookmark

1. Select the text or item to which you want to assign a bookmark, or click where you want to insert a bookmark.
2. On the Insert tab, in the Links group, click Bookmark.
3. Under Bookmark name, type or select a name.

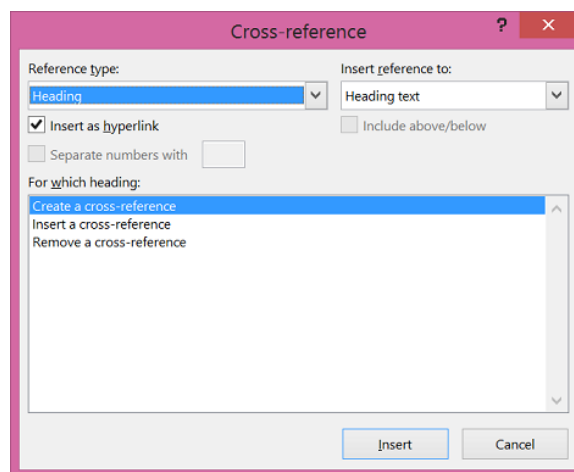
Bookmark names must begin with a letter and can contain numbers. You can't include spaces in a bookmark name. However, you can use the underscore character to separate words — for example, "First_Heading."

4. Click Add.

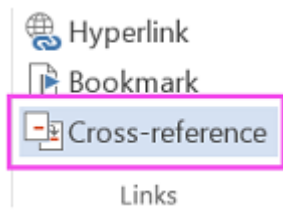


Creating a Cross-Reference

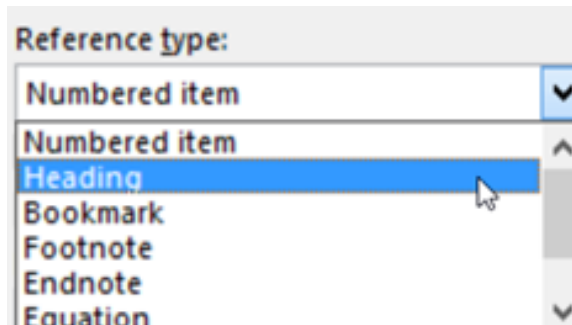
You can't cross-reference something that doesn't exist, so be sure to create the chart, heading, page number, etc. When you insert the cross-reference, you will see a dialog box that lists everything that's available to link. You can see in the below example:



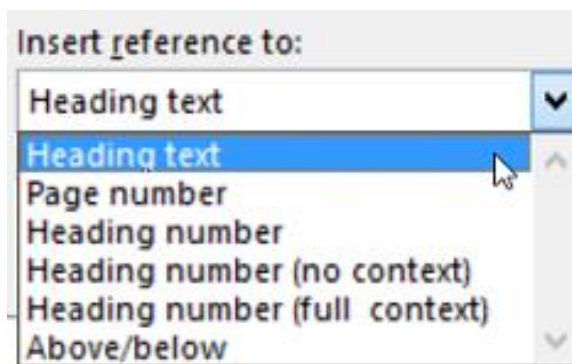
Insert the Cross-Reference



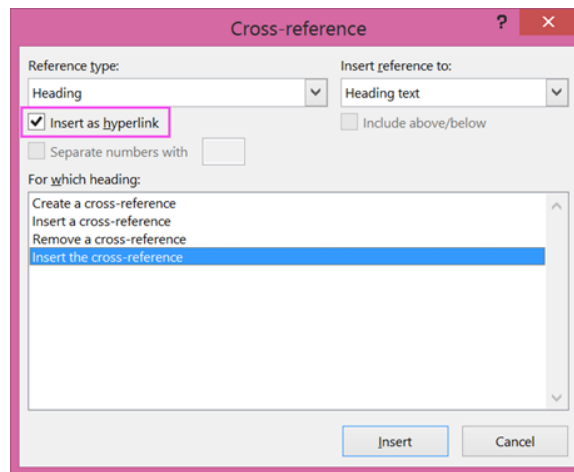
1. In the document, type the text that begins the cross-reference. For example, "See Figure 2 for an explanation of the upward trend."
2. On the Insert tab, click Cross-reference.
3. In the Reference type box, click the drop-down list to pick what you want to link to. The list of what's available depends on the type of item (heading, page number, etc.) you're linking to.



4. In the Insert reference to box, click the information you want inserted in the document. Choices depend on what you chose in step 3.



5. In the For which box, click the specific item you want to refer to, such as "Insert the cross-reference."
6. To allow users to jump to the referenced item, select the Insert as hyperlink check box.



7. If the Include above/below check box is available, check it to include specify the relative position of the referenced item.
8. Click Insert.

Insert a Hyperlink

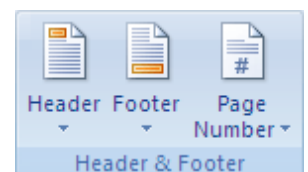
1. Select the text or picture that you want to display as the hyperlink.
2. On the Insert tab, in the Links group, click Hyperlink. You can also right-click the text or picture and then click Hyperlink on the shortcut menu.
3. Do one of the following:
 - To link to an existing file or Web page, click Existing File or Web Page under Link to, and then type the address that you want to link to in the Address box. If you don't know the address for a file, click the arrow in the Look in list, and then navigate to the file that you want.
 - To link to a file that you haven't created yet, click Create New Document under Link to, type the name of the new file in the Name of new document box, and then, under When to edit, click Edit the new document later or Edit the new document now.

Note: To customize the ScreenTip that appears when you rest the pointer over the hyperlink, click ScreenTip and then type the text that you want. If you don't specify a tip, Word uses the path or address of the file as the tip.

7. Header and Footer

Insert a Predefined Header or Footer

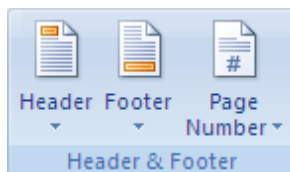
- On the Insert tab, in the Header & Footer group, click Header or Footer.
- Click the header or footer design that you want.



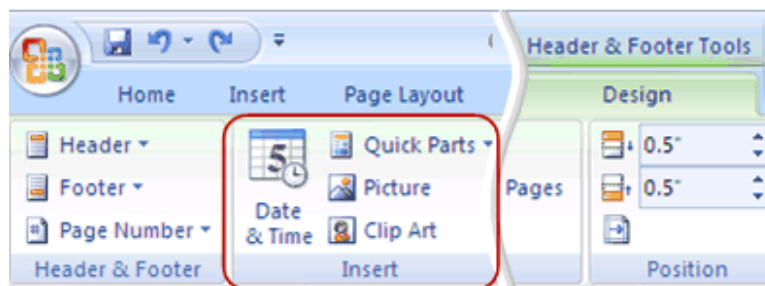
Note:

- If you don't see a gallery of header or footer designs, there might be a problem with the Building Blocks template on your computer. The header or footer is inserted on every page of the document.
- If necessary, you can format the text in the header or footer by selecting the text and using the formatting options on the Mini toolbar, which is a part of the Microsoft Office Fluent interface.
- If you want to switch to a different predefined header or footer, repeat these steps, and choose a different header or footer from the gallery.

Insert a Custom Header or Footer



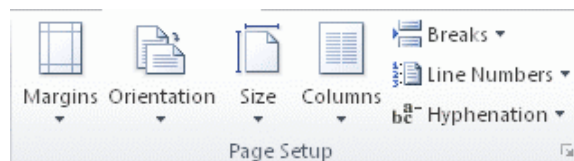
- On the Insert tab, in the Header & Footer group, click Header or Footer.
- Click Edit Header or Edit Footer.
- Type text or insert graphics and other content by using the options in the Insert group on the Design tab, under the Header & Footer Tools tab.



Tip: To save the header or footer that you created to the gallery of header or footer options, select the text or graphics in the header or footer, and then click Save Selection as New Header or Save Selection as New Footer.

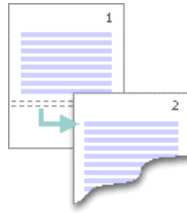
8. Inserting Section Breaks

To insert a section break, click Page Layout, click Breaks, and then click the section break that you want to add.



A Next Page section break starts the new section on the next page.

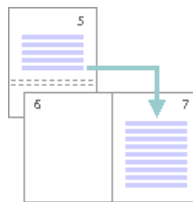
A Continuous section break starts the new section on the same page.



A continuous section break is useful when you want to change the formatting, such as changing the number of columns, without starting a new page.



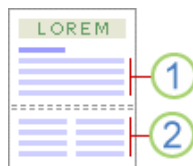
An Even Page or an Odd Page section break starts the new section on the next even-numbered or odd-numbered page.



When you want document chapters to begin on an odd page, use an Odd page section break.

9. Insert a Column Break

To change a section's layout into columns, click Page Layout, click Columns, and then click the number of columns that you want. For example, you can add a Continuous section break and then lay out part of a single-column page as two columns.



1. Section formatted as a single column.
2. Section formatted as two columns.

The section break is like a fence that encloses your column formatting. But if you remove a section break, the text above becomes part of the section that was below the break, and it's formatted like that text.

Let's look at the example in the picture above. If we remove the section break between the first and second sections, the entire document will be formatted in two columns, because that's the formatting below the section break.

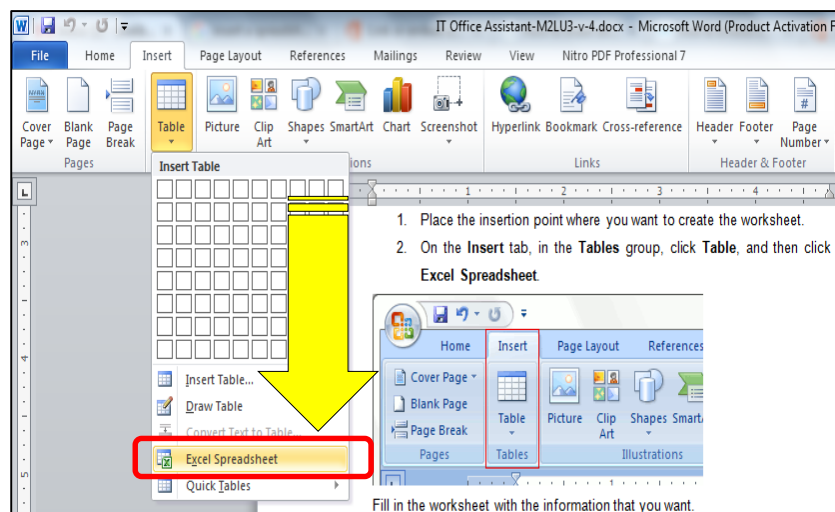
10. Section Break Vs Page Break

After a page break, the following text will start at the beginning of the next page. Section Breaks split your document into sections, enabling you to have different formatting for each section: for example - different page numbering, margins, header/footers, page orientation and borders.

11. Insert a Spreadsheet

When you create a new worksheet within a document, the worksheet is inserted in the document as an embedded object.

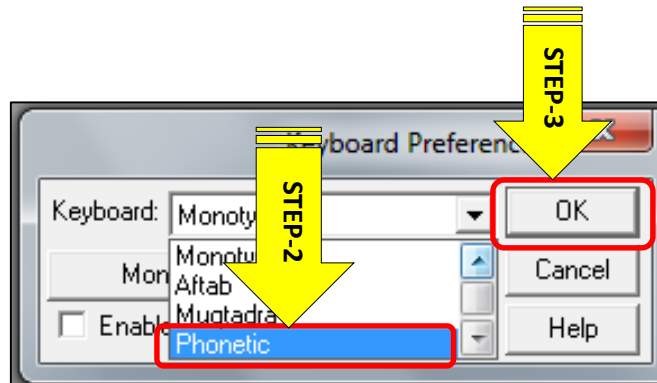
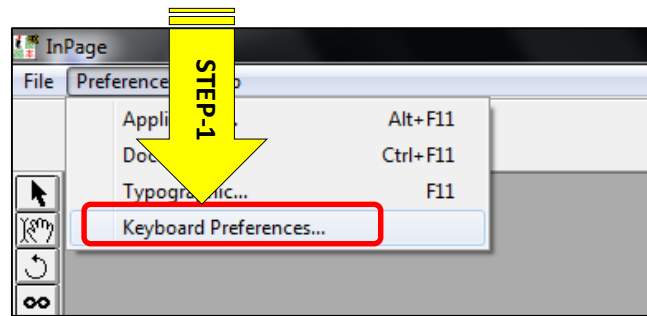
1. Place the insertion point where you want to create the worksheet.
2. On the Insert tab, in the Tables group, click Table, and then click Excel Spreadsheet.



Fill in the worksheet with the information that you want.

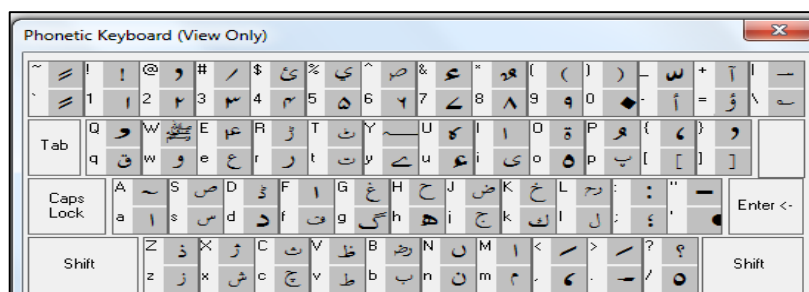
12. Customize In-Page for Phonetic Keyboard

Run In-Page by double clicking on the INPAGE.exe file.



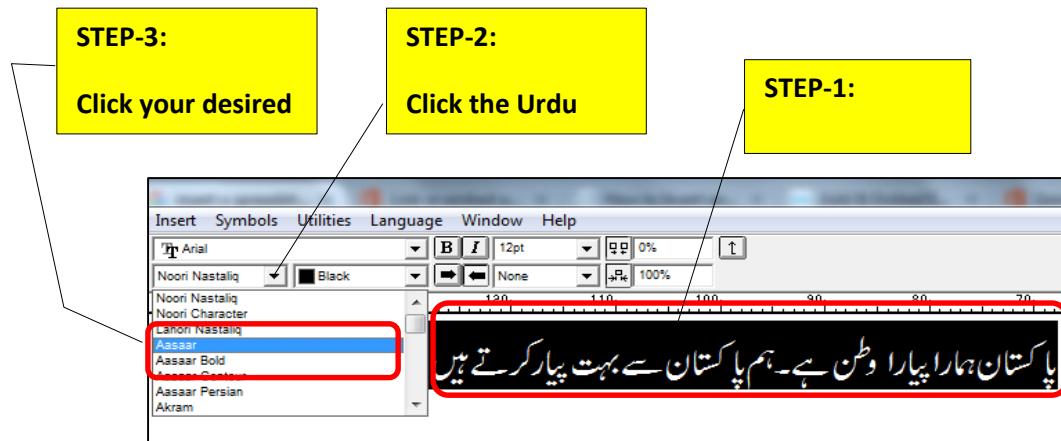
13. Type the Urdu Language Text

The following Phonetic keyboard layout will help you typing Urdu text.



14. Execute the Text Editing Instructions

After typing the text select the text and follow the steps mentioned in the given picture to edit the text.



Summary of Module

- Computer is a combination of software and hardware. Hardware needs an operating system that provides interface to a user.
- This module explains the procedure for the installation of windows 8 operating system.
- Administrative Tools is a folder in Control Panel that contains tools for system administrators and advanced users. The tools in the folder might vary depending on which version of Windows you are using.
- An incremental backup differs from the other types of backup. The difference is that Windows 8 incremental backup saves only the data from last successful incremental backup. The “incremental restore” will usually take more time comparing to using restore from the other types of backups.
- After the installation of operating system configuration process begins where settings are made according to the user requirements Administrative Tools is a folder in Control Panel that contains tools for system administrators and advanced users. The tools in the folder might vary depending on which version of Windows you are using.
- Peripheral devices like mouse, keyboard, printer, scanner etc., are also essential for giving input to the computer system and getting output accordingly.
- The Internet is a collection of computers that share information. Home users commonly use a phone modem, cable modem, or DSL connection to connect to the Internet.
- For business writing Microsoft Word Processing software is used. This module elaborated and covers all of the important aspects for preparing a word document for writing letters, reports, resume etc.

Frequently Asked Questions (FAQs)

FAQ 1: What is an operating system?

Answer A set of instructions that coordinates between computer software and computer hardware is called an operating system.

FAQ 2: What do you understand by the term installation?

Answer Installation (or setup) of a computer program (including device drivers and plugins), is the act of making the program ready for execution.

FAQ 3: What are the commonly used applications available in Microsoft Office Suit?

Answer Microsoft Word, Excel, Power Point, Access etc.

FAQ 4: Define disk formatting?

Answer Disk formatting is the process of preparing a data storage device such as a hard disk drive, solid-state drive, floppy disk or USB flash drive for initial use. In some cases, the formatting operation may also create one or more new file systems.

FAQ 5: Define ports?

Answer An interface on a computer to which you can connect a device. Personal computers have various types of ports.

FAQ 6: List down the different types of ports?

Answer There are two types of ports i.e. internal and external. Internally, there are several ports for connecting disk drives, display screens, and keyboards. Externally, personal computers have ports for connecting modems, printers, mice, and other peripheral devices.

FAQ 7: What is a word processing program?

Answer Applications software that allows user to create letters, applications and reports etc. e.g Microsoft word.

FAQ 8: What is spread sheet program?

Answer Table of data arranged in columns and rows often used in business and financial applications. Spreadsheet software programs are widely used computer applications that allow the user to organize large amounts of data.

FAQ 9: What are peripheral devices? Give examples?

Answer A peripheral device is generally defined as any auxiliary device such as a computer mouse or keyboard that connects to and works with the computer in some way. Other examples of peripherals are image scanners, tape drives, microphones, loudspeakers, webcams, and digital cameras.

FAQ 10: What is a presentation Software?

Answer A presentation program is a software package used to display information in the form of a slide show.

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

- 1. Windows is an _____ software**
 - a. application
 - b. Platform
 - c. Microsoft
 - d. Operating System
- 2. Which one of the following is NOT application software?**
 - a. Word
 - b. Excel
 - c. Windows
 - d. In-Page
- 3. Which one of the following is NOT available in Microsoft Office Suit?**
 - a. Word
 - b. In-Page
 - c. Excel
 - d. Power Point
- 4. Which one of the following is NOT a step of windows installation procedure?**
 - a. Create restore point
 - b. Install Microsoft Office Tool
 - c. Take data backup
 - d. None
- 5. Which one of the following is a peripheral device?**
 - a. Motherboard
 - b. RAM
 - c. Mouse
 - d. Processor
- 6. What is the short key for copy and paste command?**
 - a. CTRL + V / CTRL + C
 - b. CTRL + C / CTRL + V
 - c. CTRL + C / CTRL + P
 - d. ALT + C / ALT + V
- 7. In which tab Text formatting options are available?**
 - a. HOME
 - b. LAYOUT
 - c. VIEW
 - d. FORMAT

8. And excel spreadsheet can be inserted in a word document using_____ command?

- | | |
|------------------|-----------|
| a. Links | b. Review |
| c. Illustrations | d. Table |

9. Which keyboard layout is recommended for Urdu Text composing?

- | | |
|-------------|-------------|
| a. Arabic | b. Monotype |
| c. Phonetic | d. Farsi |

10. Which section of HOME tab contains the text alignment options?

- | | |
|--------------|------------|
| a. Font | b. Styles |
| c. Paragraph | d. Editing |

Answer Key

MCQ Number	Correct Answer
1	d
2	c
3	b
4	b
5	c
6	b
7	a
8	d
9	c
10	c

OFFICE - ASSISTANT



Module-3

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 3: Database

Learning Outcomes

After completion of this learning module, you will be able to:

- Perform record keeping and explain database concept and procedure.
- Define, apply and integrate data relationships.
- Describe Column (Field) of a table.
- Define Row (Record) of a table.
- Explain structure of a table (Database) in similarity with a table of a word document file.
- Describe different data type e.g. character, number, logical, and date/time, etc.
- Define the role of different “key” including Primary Key, etc.
- Illustrate definition of a Database; not null, unique, logical data entry.
- Describe search and its criteria (query) e.g. select, etc.
- Find and apply relationships on different data entities entered, e.g. one student can register many courses in a training session; so here 1 To N (Many) relation meets.
- Design ERD (entity relationship diagram) in word document using symbols and shapes.
- Define different relationships types (One-to-One, One-to-Many, and Many-to-Many).

Learning Unit 1: Record Keeping

Overview

In this learning unit, you will learn to keep record using database. After completion of this learning module, you will be able to describe Column (Field) of a table, define Row (Record) of a table and use search and its criteria (query) etc.

1. Database Concept

A database is a collection of related data that is stored in a computer system. Databases allow their users to enter, access, and analyze their data quickly and easily. The easiest way to understand a database is to think of it as a collection of lists.

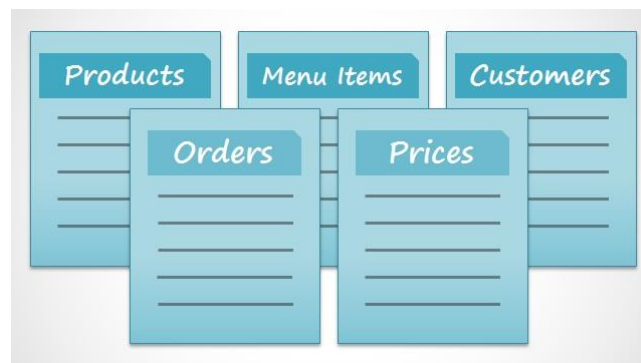
Remember

Good record keeping is vital for its survival.

This is true of all databases, from the simplest to the most complex. For instance, if you like to bake you might decide to keep a database containing the types of cookies you know how to make and the friends you give these cookies to. This is one of the simplest databases imaginable. It contains two lists: a list of your friends, and a list of cookies.



However, if you were a professional baker, you would have many more lists to keep track of: a list of customers, a list of products sold, a list of prices, a list of orders, and so on. The more lists you add, the more complex the database will be.



In Access, lists are a little more complex than the ones you write on paper. Access stores its lists of data in **tables**, which allow you to store even more detailed information. In the table below,

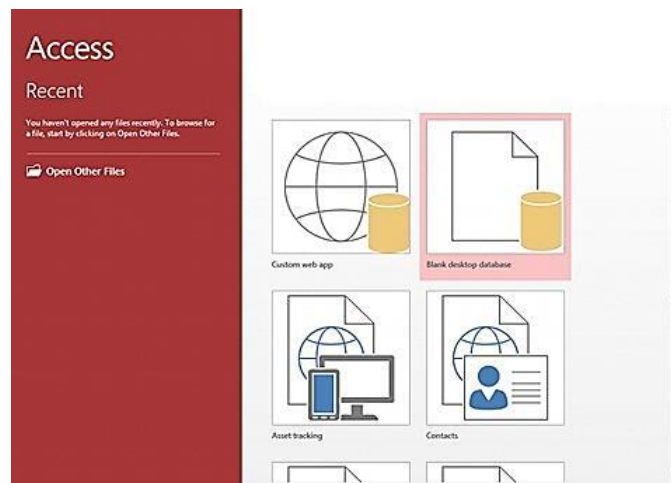
the **People** list in the amateur baker's database has been expanded to include other relevant information on the baker's friends.

ID ▾	Name ▾	Cell Phone ▾	Birthday ▾
1	Dad	555-0404	June 3
2	Aunt Aida	555-9890	July 8
3	Joakim	555-0462	September 19
4	Dwane	555-9975	January 5
5	Allegra	555-0099	January 14

If you are familiar with other programs in the Microsoft Office suite, this might remind you of Excel, which allows you to organize data in a similar way. In fact, you could build a similar table in Excel.

2. Procedure of Database Creation from Table

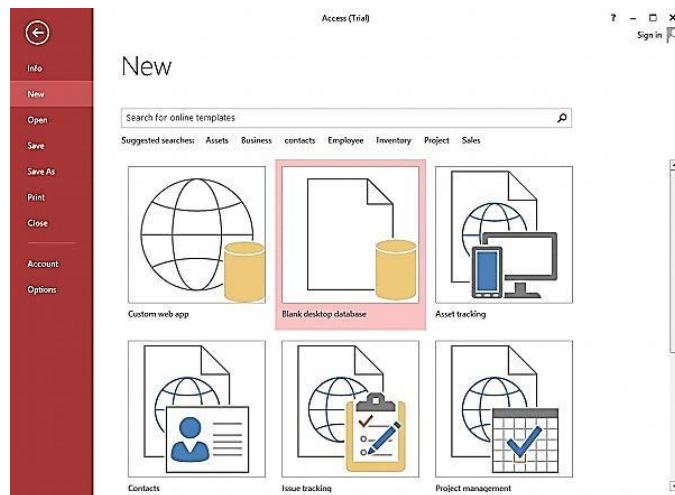
To begin, launch access by clicking on the desktop icon, or choose access from the start menu. This brings up the getting started with Microsoft Office Access screen.



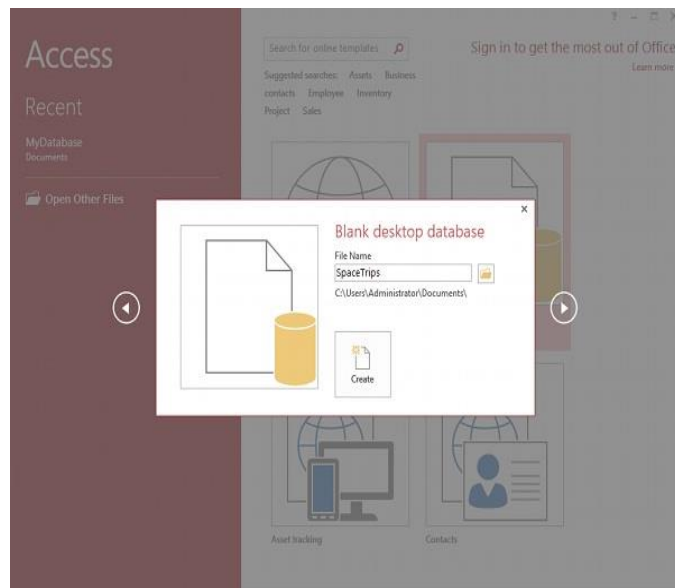
If you already have MS Access open, you can go to the File menu:



Choose Blank desktop database. (Skip this step if you already chose Blank desktop database at step one). You also have other options, but we'll just use a blank database here:

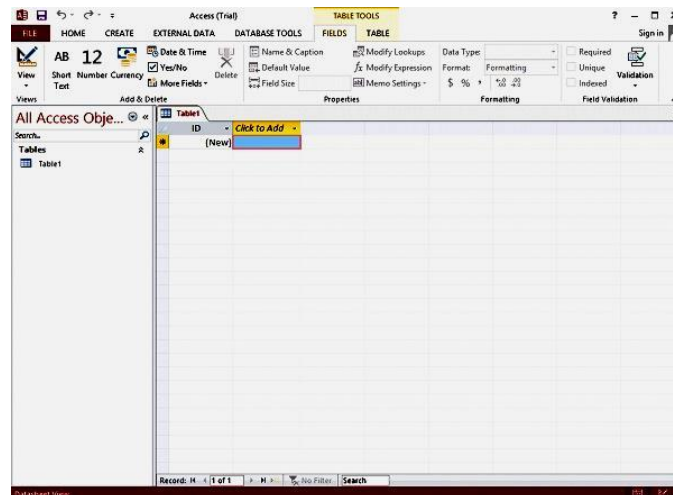


Choose a name and click **Create**. Let's call it Space Trips. You can either use the default location or click the folder icon to change the location:



Your New Database

Once you have completed the above steps, you should see a blank database, like this:



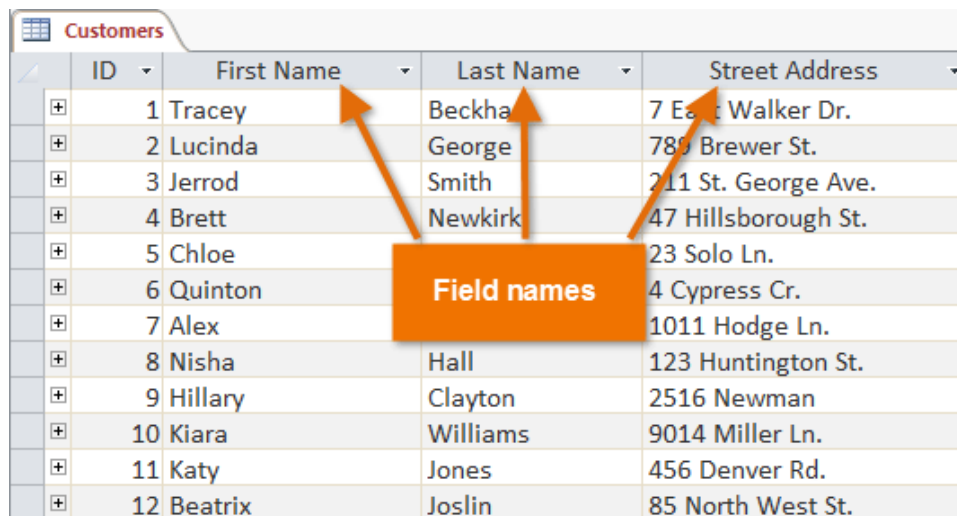
As you know this database is blank because it only contains one table (called Table1) and that table has only one column (called ID). So we need to add some more columns to the table and give the table a name.

3. Fields (column) and Records (row) in a Table

Tables are organized into vertical **columns** and horizontal **rows**.

Customers						
	ID	First Name	Last Name	Street Address	City	State
	1	Tracey	Am	7 East Walker Dr.	Raleigh	NC
	2	Lucinda	George	789 Brewer St.	Cary	NC
	3	Jerrold	Smith	211 St. George Ave.	Raleigh	NC
	4	Brett	Newkirk	47 Hillsborough St.	Raleigh	NC
	5	Chloe	Jones	23 Solo Ln.	Raleigh	NC
	6	Quinton	Boyd	4 Cypress Cr.	Durham	NC
	7	Alex	Hinton	1011 Hodge Ln.	Cary	NC
	8	Nisha	Hall	123 Huntington St.	Raleigh	NC
	9	Hillary	Clayton	2516 Newman	Raleigh	NC
	10	Kiara	Williams	9014 Miller Ln.	Durham	NC
	11	Katy	Jones	456 Denver Rd.	Cary	NC
	12	Beatrice	Joslin	85 North West St.	Raleigh	NC
	13	Mariah	Allen	12 Jupe	Raleigh	NC
	14	Jennifer	Hill	2100 Field Ave.	Raleigh	NC
	15	Jaleel	Smith	123 Hill Top Drive	Garner	NC

In Access, rows and columns are referred to as records and fields. A field is more than just a column; it's a way of organizing information by the type of data and the information within a field is of the same type, for example, every entry in a field called First Name would be a name, and every entry in field called Street Address would be an address.



ID	First Name	Last Name	Street Address
1	Tracey	Beckham	7 East Walker Dr.
2	Lucinda	George	789 Brewer St.
3	Jerrold	Smith	211 St. George Ave.
4	Brett	Newkirk	47 Hillsborough St.
5	Chloe	Jones	23 Solo Ln.
6	Quinton	Boyd	4 Cypress Cr.
7	Alex	Hinton	1011 Hodge Ln.
8	Nisha	Hall	123 Huntington St.
9	Hillary	Clayton	2516 Newman
10	Kiara	Williams	9014 Miller Ln.
11	Katy	Jones	456 Denver Rd.
12	Beatrix	Joslin	85 North West St.

Likewise, a record is more than just a row; it is a unit of information. Every cell in a given row is part of that row's record.



ID	First Name	Last Name	Street Address	City	State
1	Tracey	Beckham	7 East Walker Dr.	Raleigh	NC
2	Lucinda	George	789 Brewer St.	Cary	NC
3	Jerrold	Smith	211 St. George Ave.	Raleigh	NC
4	Brett	Newkirk	47 Hillsborough St.	Raleigh	NC
5	Chloe	Jones	23 Solo Ln.	Raleigh	NC
6	Quinton	Boyd	4 Cypress Cr.	Durham	NC
7	Alex	Hinton	1011 Hodge Ln.	Cary	NC
8	Nisha	Hall	123 Huntington St.	Raleigh	NC
9	Hillary	Clayton	2516 Newman	Raleigh	NC
10	Kiara	Williams	9014 Miller Ln.	Durham	NC
11	Katy	Jones	456 Denver Rd.	Cary	NC

Notice how each record spans several fields. Even though the information in each record is organized into fields, it belongs with the other information in that record. See the number at the left of each row? It is the ID number that identifies each record. The ID number for a record refers to every piece of information contained on that row.



ID	First Name	Last Name
40	Vig	Aurelio
41	Jeffery	Bergman
42	William	Bittiman
43	Megan	
44	Elk	
45	Marjan	
46	Colin	Hopkins
47	Hakim	Auden
48	Pilar	Semana
49	Eliza	Harris
50	Chloe	Ford
51	Juanita	Harris

Each customer would be represented by a unique **record**, and each type of information about these customers would be stored in its own field.

4. Selection and Limitation of Different Data Types

Select the field type that best describes the data you want to store in the field and that works for the type of analysis you need to use the field. Here are tips for using different types of fields.

Selection	Limitation
Short Text	Text up to 255 characters long (including spaces and punctuation). Use a Text field, not a Number field, for codes even if they look like numbers, such as phone numbers, zip codes, and other postal codes.
Long Text	Text up to 65,536 characters. A Long Text field can contain Rich Text (formatted text), and you can set it to append only so that it can accumulate text notes without allowing the user to delete what's already there.
Number	Only numbers. You may use + or – before the number, as well as a decimal point. If you plan to do math with a field, use a Number or Currency field.
Currency	Numbers with a currency sign in front of them (\$, ¥, and so on).
AutoNumber	Numbers unique to each record and assigned by Access as you add records, starting at 1. Use an AutoNumber field as the primary key field for most tables.
Date/Time	Dates, times, or both.
Hyperlink	Text string formatted as a hyperlink. (If you click the link, it takes you to the page.) This field type is especially useful if related information is available on the web.
Yes/No	Yes or no (a particular condition is, or isn't, in effect) — or other two-word sets, such as True/False, On/Off, and Male/Female. Use a Yes/No field if you want to display the field as a check box on forms.
Attachment	Stores one or more entire files — pictures, sound, Word documents, even video — in one Attachment field.
Calculated	Data created with a formula. Use a calculated field when a calculated value will be used in many queries, forms, and reports.

5. Different “keys” for the Functionality of Having Indexes

There are following main kinds of indexes those have keys:

1. Primary Key

A primary key is unique and can never be null. It will always identify only one record, and each record must be represented. Each table can only have one primary key.

2. Unique Index

A Unique Index must be unique, but it can be null. So each key value identifies only one record, but not each record needs to be represented.

3. Multiple-column Indexes

Indexes can contain more than one column. Maria DB is able to use one or more columns on the leftmost part of the index, if it cannot use the whole index.

6. Execution of Specific Search

Flexible search form provides several boxes where a user can enter criteria. An efficient search form creates the criteria from only those boxes where the user enters a value.

Sample search form by Allen Browne, July 2006.

Criteria:

Type: Name contains: City is: Level: Entered date from: to:

Results:

ID	Corporate?	Company/Surname	City	Level	Entered
3	<input checked="" type="checkbox"/>	Acme Corporation	Perth	1	25/12/2005 11:59:50 AM
3	<input type="checkbox"/>	Jones	Springfield	1	1/02/2006 2:19:34 PM
5	<input type="checkbox"/>	Atkinson	London	1	16/02/2006 2:21:05 PM

(([LevelID] = 1) AND ([EnteredOn] >= #01/01/2005#))

Documentation: <http://allenbrowne.com/ser-62.html>

Record: 1 of 3 (Filtered)

It illustrates how to use:

- Exact matches,
- Partial matches (wildcards),
- A range of values,
- Delimiters for each field type,
- Any combination of criteria,
- A design that is easy to extend.

7. Procedure of Data Entry and Assurance Procedure to Check Validity of Punched Data

There are 5 steps of data entry and assurance procedures to check validity of punched data:

1. Data Collection

- Data are collected

- Cover Sheet
- Length Frequency Form.
- Pot Catch Form
- Tagging and Release Form

2. Pre-key Punching, Checking and Collating

Paper forms from each sample are visually checked for obvious errors or omissions, corrected, and collated together with paper forms from other samples from the same fishing area, allocated a file name.

3. Key Punching Data Entry

All data entry is verified, that is, each page of data is key punched twice and the two results are crosschecked electronically for mismatches. Any data entry operator errors are corrected at this point. Data are now ready for error checking and validation routines. If the client requires invalidated data, a disk copy of the digitized data will be returned to the client, along with a hard copy print out together with the original raw data. If validation is required then the data go through the next step.

4. Data Error Checking (Manual and Computer) and Validation (“Grooming”)

Grooming is defined as the process by which digitized data files are checked for validation errors (is value A within valid range?), data integrity (given that value A is valid, and value B is valid, does B make sense given A?), and the file structure is manipulated in preparation for insertion into the database. The individual data files are now put through a number of computer error checking (validation) routines that look for inconsistencies within the sample and check ranges of data within set limits.

5. Groomed Data Loaded to Database

The groomed data are now loaded into the database. At this point the data become available for analyses.

Learning Unit 2: Data Relationships

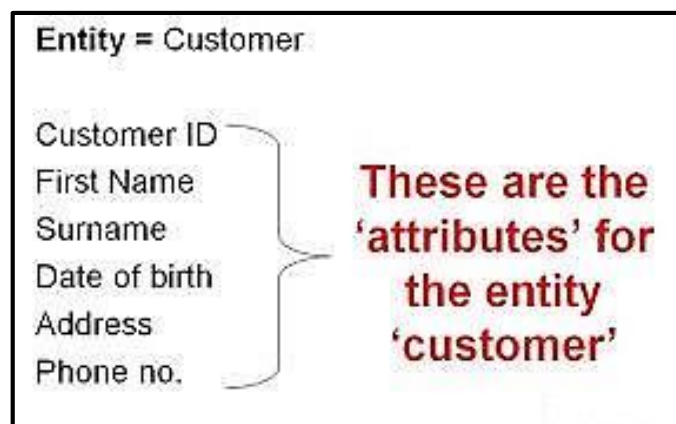
Overview

In this learning unit, you will be introduced to the concepts and principles about data relationship. After completion of this learning unit, you will be able to find and apply relationships on different data entities entered, design ERD (entity relationship diagram).

1. Relationships between Entities

The types of information that are saved in the database are called 'entities'. These entities exist in four kinds: people, things, events, and locations.

In relation to a database, an entity is a single person, place, or thing about which data can be stored. In data modeling (a first step in the creation of a database), an entity is some unit of data that can be classified and have stated relationships to other entities.



Relationship

A relationship exists between two database tables when one table has a foreign key that references the primary key of another table.

Remember

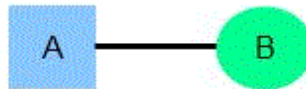
All things are not entities only those about which information should be captured.

An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data—an object or concept about which data is stored.

A relationship is how the data is shared between entities. There are three types of relationships between entities:

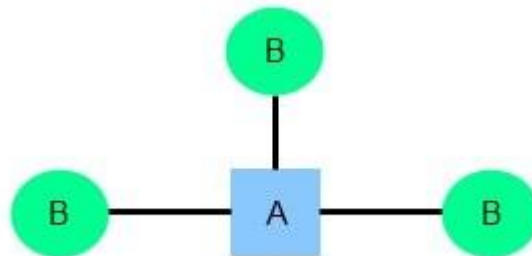
1. One-to-One

One instance of an entity (A) is associated with one other instance of another entity (B). For example, in a database of employees, each employee name (A) is associated with only one social security number (B).



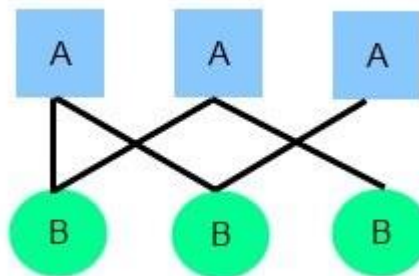
2. One-to-Many

One instance of an entity (A) is associated with zero, one or many instances of another entity (B), but for one instance of entity B there is only one instance of entity A. For example, for a company with all employees working in one building, the building name (A) is associated with many different employees (B), but those employees all share the same singular association with entity A.



3. Many-to-Many

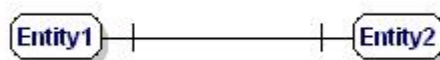
One instance of an entity (A) is associated with one, zero or many instances of another entity (B), and one instance of entity B is associated with one, zero or many instances of entity A. For example, for a company in which all of its employees work on multiple projects, each instance of an employee (A) is associated with many instances of a project (B), and at the same time, each instance of a project (B) has multiple employees (A) associated with it.



2. Design Entities Relationship Diagrams for (1:1, 1: N, M: N) Relations

The Entity Relationship Diagram (ERD) gives a graphical overview of the database.

1:1 relationship is represented as follows:



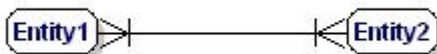
One to one relationship.

1:N relationship:

One to many relationship.

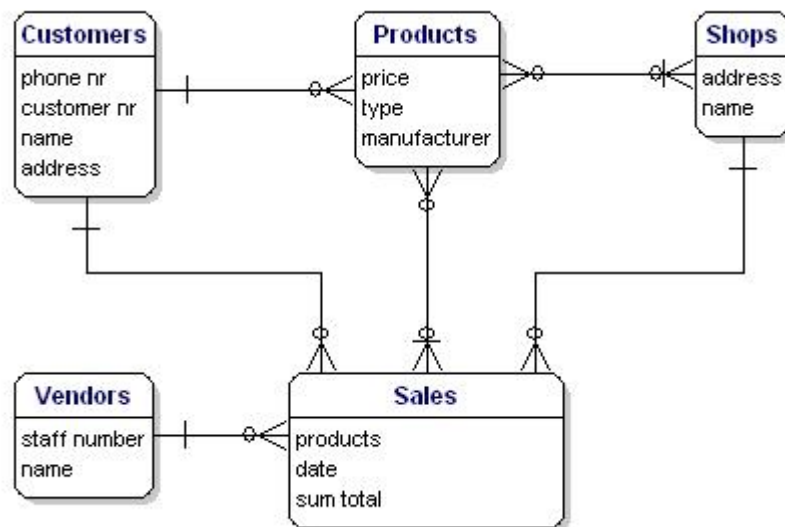
Do you know!

A relational database holds its data over a number of tables instead of one. Records within the tables are linked (related) to records held in other tables.

A M:N relationship is:

Many to many relationship.

The model of our example will look like this:



Model with entity relationships.

Summary of Module

- Computer based databases are usually organized into one or more tables.
- A table stores data in a format similar to a published table and consists of a series of rows and columns.
- To carry the analogy further, just as a published table will have a title at the top of each column, so each column in a database table will have a name, often called a field name.
- The term field is often used instead of column. Each row in a table will represent one example of the type of object about which data has been collected.
- An entity relationship is the result of using a systematic process to describe and define a subject area of business data. It does not define business process; only visualize business data.
- The data is represented as components (entities) that are linked with each other by relationships that express the dependencies and requirements between them, such as, one building may be divided into zero or more apartments, but one apartment can only be located in one building. Entities may have various properties (attributes) that characterize them. Diagrams created to represent these entities, attributes, and relationships graphically are called entity.

Frequently Asked Questions (FAQs)

FAQ 1: What is a recordkeeping system?

Answer A "recordkeeping system" is a manual or automated system that collects, organizes, and categorizes records, facilitating their preservation, retrieval, use, and disposition.

FAQ 2: What is the value of record keeping system?

Answer A recordkeeping system helps ensure that records are trustworthy.

FAQ 3: What are trustworthy records?

The characteristics of trustworthy records are:

- Answer
- Reliability - the records are a full and accurate representation of the transactions, activities or facts to which they attest.
 - Authenticity - the records can be proven to be what they claim to be, to have been created or sent by the persons claiming to have created or sent them, and to have been created or sent at the claimed time;
 - Integrity - the records are complete and unaltered; and
 - Usability - the records can be located, retrieved, presented and interpreted.

FAQ 4: How long do records have to be kept?

Answer The length of time, a record must be kept depends on the nature of record.

FAQ 5: What are the advantages of a relational database?

There are following major advantages of relational database.

- Answer
- Avoids data duplication
 - Avoids inconsistent records
 - Easier to change data
 - Easier to change data format
 - Data can be added and removed easily
 - Easier to maintain security.

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

1. The first step to create a database is to create a/an _____ database first.

- | | |
|---------------------------|----------------------|
| a. already saved database | b. blank database |
| c. Both are correct | d. None of the above |

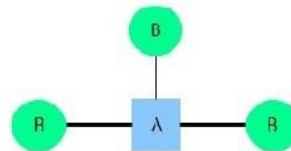
2. A/An _____ is a single person, place, or thing about which data can be stored.

- | | |
|----------------------|----------------------|
| a. Attribute | b. Entity |
| c. Both of the above | d. None of the above |

3. A _____ key is unique and can never be null

- | | |
|------------|----------------------|
| a. Unique | b. Composite |
| c. Primary | d. None of the above |

4. Which relation shows given picture?



- | | |
|----------------|----------------------|
| a. One to many | b. Many to many |
| c. One to one | d. None of the above |

5. A flexible search form provides _____ boxes where a user can enter criteria.

- | | |
|-----------------|------------|
| a. One | b. Two |
| c. Both a and b | d. Several |

Answer Key

MCQ Number	Correct Answer
1	b
2	b
3	c
4	a
5	d

OFFICE - ASSISTANT



Module-4

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 4: Business Functional Process Area (Account - Bookkeeping)

Learning Outcomes

After completion of this learning module, you will be able to:

- Define basic accounting terminologies and important principles such as matching.
- Gain a good knowledge of recording, closing and posting entries.
- Differentiate between credit and debit entries.
- Explain assets types e.g. fixed, current, etc.
- Define the depreciation, and their techniques.
- Record the daily business transactions (Revenue, Expense, etc.) detail in worksheet (e.g. Microsoft Excel) from day book.
- Calculate balance amount (either credit or debit) of petty cash (Treasury) after each & every business transaction.
- Explain and Implement CoA (chart of accounts) e.g. A-1017 means repair and maintenance of wood furniture.
- Apply the credit and debit rules on CoA.
- Know the basic information about checking (auditing) procedure and reporting of findings.
- Know the introduction of different regulation imposed by company-nature (e.g. Private limited) Government regulation body (e.g. SECP) including but not limited to From-29.
- Deposit and electronic filing of Tax returns in scheduled banks and on Federal Board of Revenue Website.

- Given any set of data, apply basic formulas/functions. Applied formulas/functions are error free. E.g. $= (A1 + D24) * X39$.
- Apply different logical functions.
- Use different logical, mathematical, statistics, and financial formulas.
- Plot column data in charts.
- Edit worksheet.
- Select different currency styles.

Learning Unit 1: Accounting and Bookkeeping Terminologies

Overview

In this unit, you will learn about fundamental concept of book keeping process and accounting terminologies. These concepts are building block to perform basic accounting operation and for working in accounting software (e.g. Peachtree). After completion of this learning unit you will be able to explain accounting cycle, assets types. You will also able to define depreciation and their techniques.

1. Accounting Terminologies

Credit

Entered in the right column of accounts. Liability, equity and revenue increase on the credit side.

Debit

Entered in the left column of accounts. Assets and expenses increase on the debit side.

Revenue

The actual amount of money a company brings in during a particular time period; gross income.

Expense

Costs that are matched with revenues on the income statement. For example, Cost of Goods Sold is an expense caused by Sales. Insurance Expense, Wages Expense, Advertising Expense, Interest Expense is expenses matched with the period of time in the heading of the income statement. Under the accrual basis of accounting, the matching is NOT based on the date that the expenses are paid.

Taxation

Accounting methods that focus on taxes rather than the appearance of public financial statements. Tax accounting is governed by the Internal Revenue Code which dictates the specific rules that companies and individuals must follow when preparing their tax returns. Tax principles often differ from Generally Accepted Accounting Principles.

Invoice

An Invoice shows the amount of money owed for goods or services received.

Receipt

A written acknowledgment that something of value has been transferred from one party to another. In addition to the receipts consumers typically receive from vendors and service providers, receipts are also issued in business-to-business dealings, as well as stock market transactions. For example, the holder of a futures contract is generally given a delivery instrument, which acts as a receipt, in that it can be exchanged for the underlying asset when the future contract expires.

Capital

In simple word, capital means that amount or asset which is invested in business by businessman or owner of business.

Assets

Things that are resources owned by a company and which have future economic value that can be measured and can be expressed in dollars. Examples include cash, investments, accounts receivable, inventory, supplies, land, buildings, equipment, and vehicles. Assets are reported on the balance sheet usually at cost or lower. Assets are also part of the accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Owner's (Stockholders') Equity's}$$

Liabilities

Obligations of a company or organization. Amounts owed to lenders and suppliers. Liabilities often have the word "payable" in the account title. Liabilities also include amounts received in advance for a future sale or for a future service to be performed.

Equity

The difference between assets and liabilities, such as stockholders' equity, owner's equity, or a nonprofit organization's net assets.

Also used to indicate an owner's interest in a personal asset. For example, the owner of a RS 200,000 house with a RS 75,000 mortgage loan is said to have equity of RS 125,000.

Journal

The first place financial transactions are entered. They are entered chronologically.

Ledger

Where debit and credit transactions are recorded.

Trail Balance

A listing of the accounts in the general ledger along with each account's balance in the appropriate debit or credit column. The total of the amounts in the debit column should equal the total of the amounts in the credit column.

Income

This term is used in several ways. Some use the word interchangeably with revenues. Others use the word to signify a net amount, such as income from operations (revenues minus expenses in the company's main operating activities). Still others use it when referring to nonoperational revenues, such as interest income.

Balance Sheet

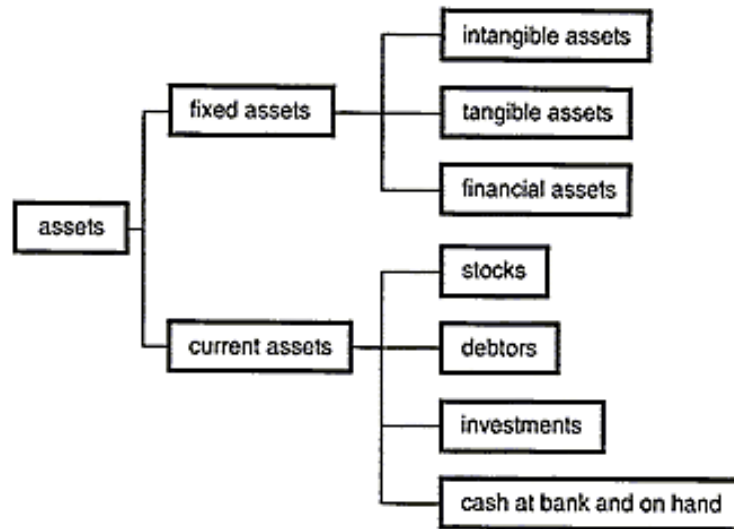
Provides a snapshot of a business' assets, liabilities, and equity on a given date.

2. Categorization of Assets

Assets can be defined as "Things that are resources owned by a company and which have future economic value that can be measured". Examples include cash, investments, accounts receivable, inventory, supplies, land, buildings, equipment, and vehicles.

Types of Assets

There are two types of current assets and fixed assets. That is used differently in business cycle accordingly.



Current Assets: Current assets are those assets that can be expected to turn into cash within a year or less. Current assets include cash, marketable securities, accounts receivable, and inventory.

Fixed Assets: Fixed assets cannot be quickly turned into cash without interfering with business operations. Fixed assets include land, buildings, machinery, equipment, furniture, and long-term investments.

- **Intangible Assets** are items such as patents, copyrights, trademarks, licenses, franchises, and other kinds of rights or things of value to a company, which are not physical objects. These assets may be the most important ones a company owns. Often they do not appear on financial reports.
- **Tangible Assets** It can be touch physically like land, building, furniture.

3. Depreciation

Depreciation is a systematic and rational process of distributing the cost of tangible assets over the life of assets.

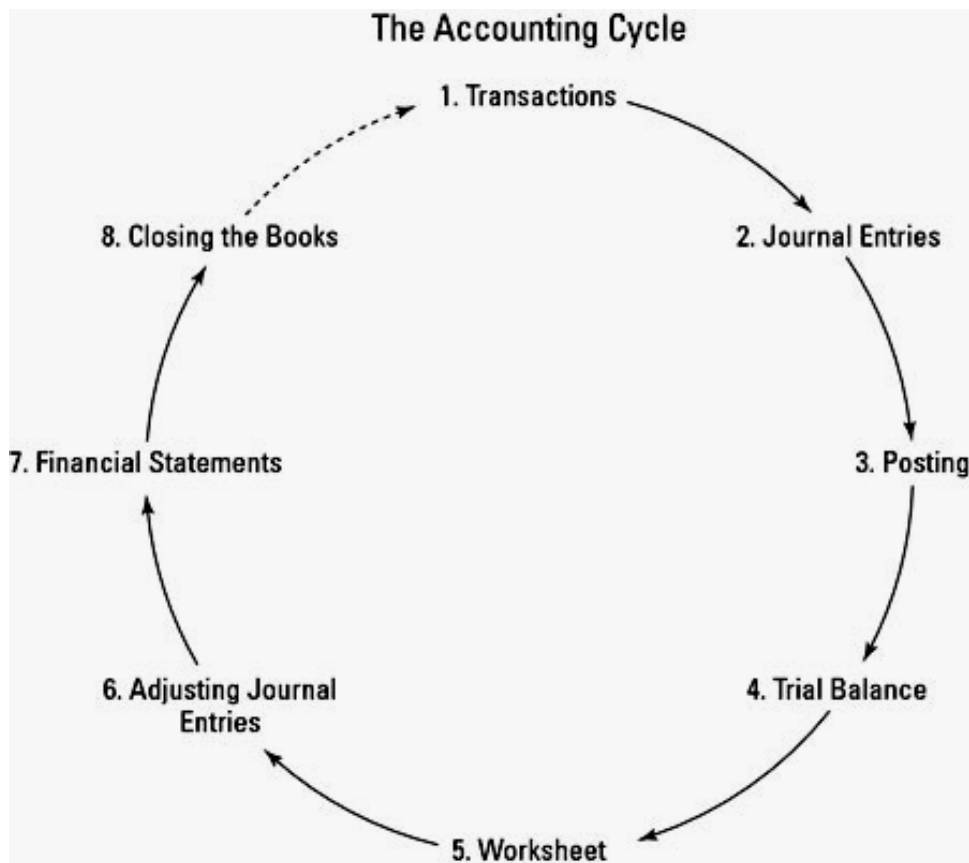
- Depreciation is a process of allocation.
- Cost to be allocated = acquisition cost - salvage value
- Allocated over the estimated useful life of assets.
- Allocation method should be systematic and rational.

Depreciation Methods

- Depreciation methods based on time:
 - Straight line method
 - Declining balance method
 - Sum-of-the-years'-digits method
- Depreciation based on use (activity)

4. Accounting Life Cycle

The accounting cycle has eight steps, which you can see in the following illustration:



1. Transactions

Financial transactions start the process. Transactions can include the sale or return of a product, the purchase of supplies for business activities, or any other financial activity that involves the exchange of the company's assets, the establishment or payoff of a debt, or the deposit from or payout of money to the company's owners.

2. Journal Entries

The transaction is listed in the appropriate journal, maintaining the journal's chronological order of transactions. The journal is also known as the "book of original entry" and is the first place a transaction is listed.

A company purchasing 10,000 shares of RS 1 par stock.

Date	Account Name	Debit	Credit
January 1	Cash	10,000.00	
	-Common Stock		10,000.00
(1)	To record stock issuance.		

3. Posting in Ledger Account

The transactions are posted to the account that it impacts. These accounts are part of the General Ledger, where you can find a summary of all the business's accounts.

Let's post the journal entries that Abdullah & Co. made during the first year in business to the ledger accounts.

Cash			
No.		No.	
(1)	10,000	(5)	500
(6)	500	(8)	200
(12)	2,000	(9)	500
(14)	25,000	(10)	500
		(11)	1,000
		(13)	1,000
		(15)	1,000
Totals	37,500	Totals	(4,700)

Accounts Receivable			
No.		No.	
(7)	300		
Totals	300	Totals	-

Inventory			
No.		No.	
(4)	50,000	(6)	100
		(7)	100
		(14)	10,000
Totals	50,000	Totals	(10,200)

Accounts Payable			
No.		No.	
(11)	1,000	(4)	50,000
Totals	1,000	Totals	(50,000)

4. Trial Balance

At the end of the accounting period (which may be a month, quarter, or year depending on a business's practices), you calculate a trial balance.

After ABDULLAH & CO records its journal entries and posts them to ledger accounts, it prepares this unadjusted trial balance.

ABDULLAH & CO		
Account	<u>Debit</u>	<u>Credit</u>
Cash	\$ 32,800	
Accounts Receivable	300	
Inventory	39,800	
Leasehold Improvements	100,000	
Accounts Payable		\$ 49,000
Long-term Liabilities		99,500
Common Stock		10,000
Dividends	1,000	
Revenues		27,800
Cost of Goods Sold	10,200	
Rent Expense	500	
Supplies Expense	500	
Utilities Expense	200	
Wages Expense	500	
Interest Expense	500	
Totals	\$ 186,300	\$ (186,300)

5. Worksheet

Unfortunately, many times your first calculation of the trial balance shows that the books aren't in balance. If that's the case, you look for errors and make corrections called *adjustments*, which are tracked on a worksheet.

Adjustments are also made to account for the depreciation of assets and to adjust for one-time payments (such as insurance) that should be allocated on a monthly basis to more accurately match monthly expenses with monthly revenues. After you make and record adjustments, you take another trial balance to be sure the accounts are in balance.

6. Adjusting Journal Entries

You post any corrections needed to the affected accounts once your trial balance shows the accounts will be balanced once the adjustments needed are made to the accounts. You don't need to make adjusting entries until the trial balance process is completed and all needed corrections and adjustments have been identified.

7. Financial Statements

Financial statements give a picture of how your business is doing.

8. Closing the Books

You close the books for the revenue and expense accounts and begin the entire cycle again with zero balances in those accounts.

Learning Unit 2: Introduction to Accounts Reporting

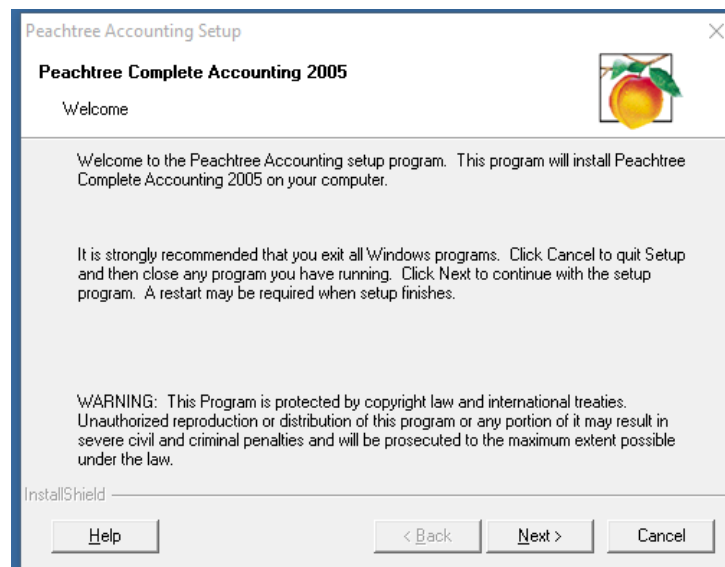
Overview

In this learning unit, you will be able to work on Peachtree, installation, maintaining charts of accounts, recording daily business transactions (revenue, expense). After completion of this learning unit you will be able to record daily business transactions, calculate and navigate financial reporting like: General journal, income statements & balance sheet and basic knowledge about regulations and electronic filing of tax return.

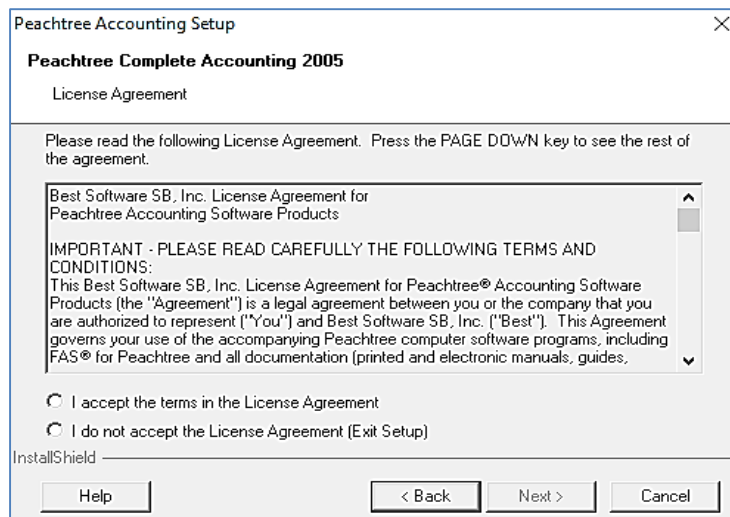
1. Installation of Peachtree

Peachtree is an accounting application for small and medium-sized businesses (SMBs) made by Sage Software. **Peachtree** enables comptrollers and managers to automate and manage numerous accounting tasks, like: Reconciling accounts payable and receivable. Steps required to install Peachtree software are as under:

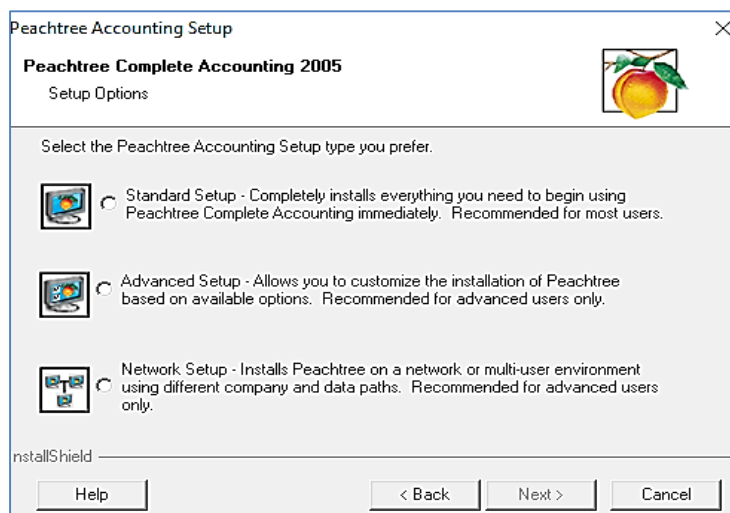
1. Run step up Peachtree Complete 2005 CD into your CD-ROM tray.
2. Click "Next" on the Peachtree Complete 2005 installation prompt.



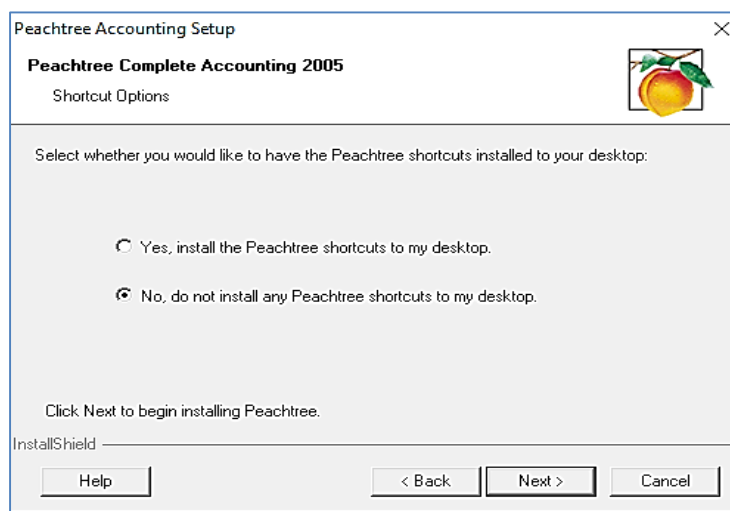
3. Select "I accept the terms in the License Agreement" and then click "Next."



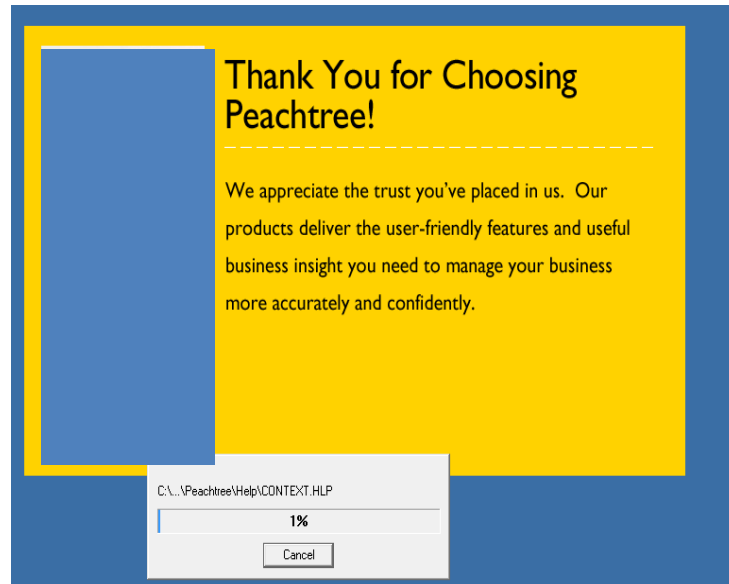
4. Select standard setup and click next as shown below.



5. Check Yes , install the Peachtree shortcut to my desktop



6. When installation starts, you will see the following on your screen.



After the installation of software you will create company information. The method of creating company information is illustrated below.

Company Creation

This is the first window of the setup process. It lists the areas you will be setting up as you use the wizard.



1. Read the introductory information.
2. Select **Next** to continue setting up your company.
3. Peachtree displays the New Company Setup - Company Information Window.

New Company Setup - Company Information

Company Information

Company Name: Business Type:

Address Line 1: Federal Employer ID:

Address Line 2: State Employer ID:

City, State, Zip: St. Unemployment ID:

Country:

Telephone: Web Site:

Fax: E-mail:

< Back Next > Finish Cancel Help

4. Enter the company name, address, phone, and fax information.
5. From the list in the **Business Type** field, select your business type.

The business type defines the kind of business you run. Your selection here determines the makeup of the equity section of your chart of accounts. You can change the business type at any time. You can select the type of business after referring the following types of businesses.

TYPES OF BUSINESSES

Corporation

This is a business that is owned by a few persons or by thousands of persons and is incorporated under the laws of one\of the 50 states. It is a body formed and authorized to act as a single entity and is legally endowed with various rights and duties including the capacity of succession.

Corporation

A type of corporation that, for federal tax purposes (in most states), may be taxed as a partnership provided certain requirements are met. There are certain limitations that restrict this election typically to small businesses. These are limits on the number of shareholders, the types of shareholders, the classes of stock issued, and on other things.

Partnership

A business owned by two or more persons associated as partners. The partners have joint control over operations and the right to share in profits.

Sole Proprietorship

A business owned by a single individual and often managed by that same individual. A person who does business for himself or herself is engaged in the operation of a sole proprietorship. Many small service businesses, such as doctors, lawyers, barbers, electricians, and small retail establishments are sole proprietorships.

Limited Liability Company

An unincorporated association of two or more persons (partners, corporations, or other business entities) whose members have limited personal liability for obligations or debts of the company. Similar to corporations, a limited liability company shields the assets of owners and investors from liability claims. This type of business is classified as a partnership for federal tax purposes. If the company has more corporate characteristics, it may be taxed as a corporation.

6. Enter your Federal and State Employer ID, as well as your State Unemployment ID.
7. Enter your company's Web site and e-mail address, if applicable.
8. Select **Next** to continue setting up your company.

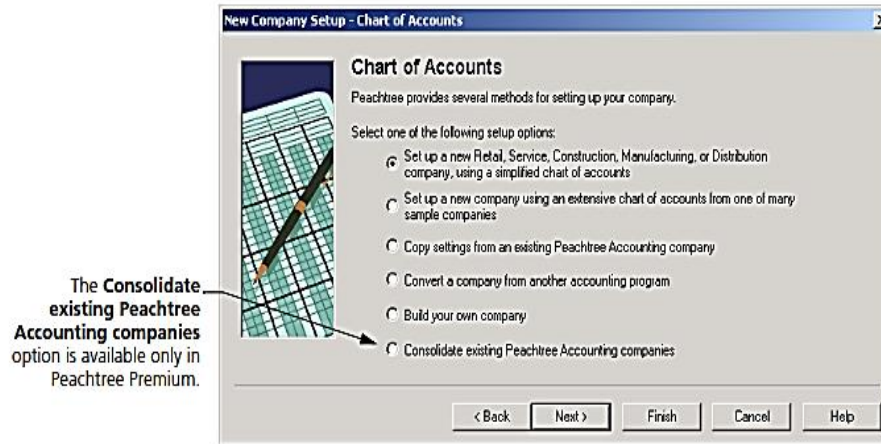
Peachtree displays the New Company Setup - Chart of Accounts window.

Chart of Accounts

The chart of accounts is nothing more than a list of categories into which your transactions are summarized. It contains a code, referred to as an account ID, a description for each account, and a type code.

Chart of Accounts Windows

On the first Chart of Accounts window, you choose how you will be defining the chart of accounts for your company



Select one of the setup options on the window. You will select **Build your own company**

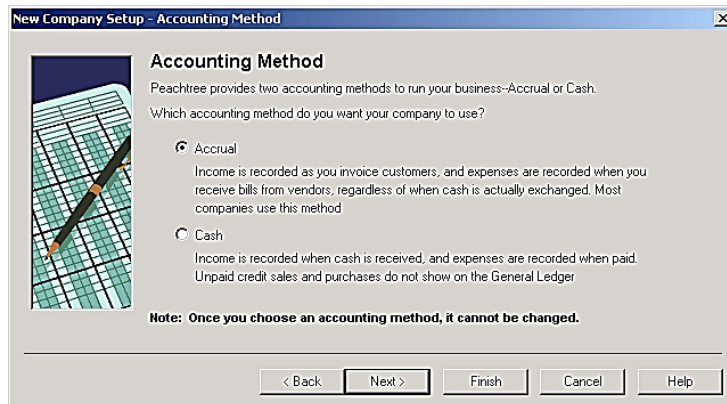
Accounting Method

When you set up your company, you must indicate if you will use a cash or accrual accounting method. The cash method records income when cash is received, expenses when cash is paid out. Accrual accounting records income and expenses at the time of the transaction regardless of when the cash is exchanged.

If you choose cash accounting, Peachtree updates your income or expense accounts only when you receive or disburse checks. However, the invoice is recorded in the vendor or customer ledger. That way, you still have aging information available.

The choice between cash and accrual accounting is final. You cannot change this decision after you finish New Company Setup. The only way to change accounting methods is by setting up a new company all over again. You select the accounting method on the New Company Setup – Accounting

Method Window



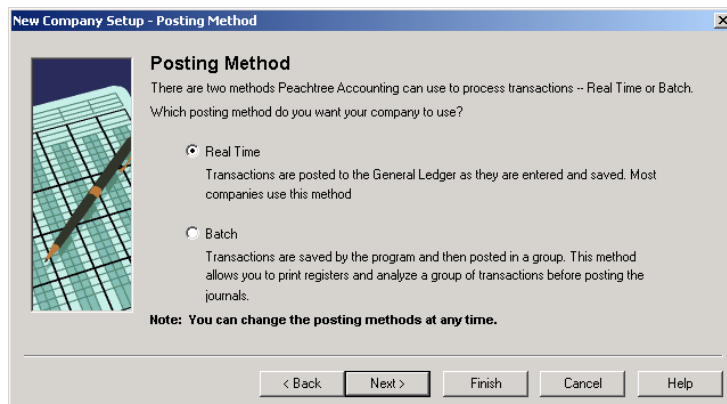
1. Select either the Accrual or Cash option.
2. Select Next to continue setting up your new company.

Peachtree displays the New Company Setup - Posting Method window.

Posting Method

You must choose whether you want Peachtree to post your transactions as they are entered (real time) or if you want to wait and post transactions in a group (batch posting). Remember that in batch posting, the transactions you enter are saved to a temporary holding area, where you can review them before posting the batch to the general ledger. In real-time posting, the transactions you enter are posted as you save them.

You can edit your transactions in either of the methods, and you can change the method at any time. You select the posting method on the New Company Setup - Posting Method window.

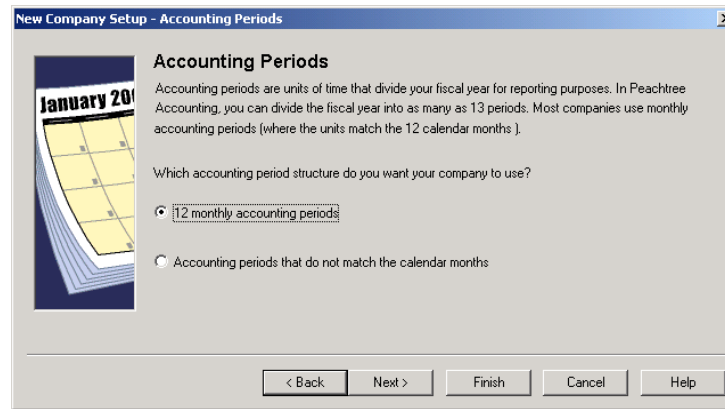


3. Select either the Real Time or Batch option.
4. Select Next to continue setting up your new company.

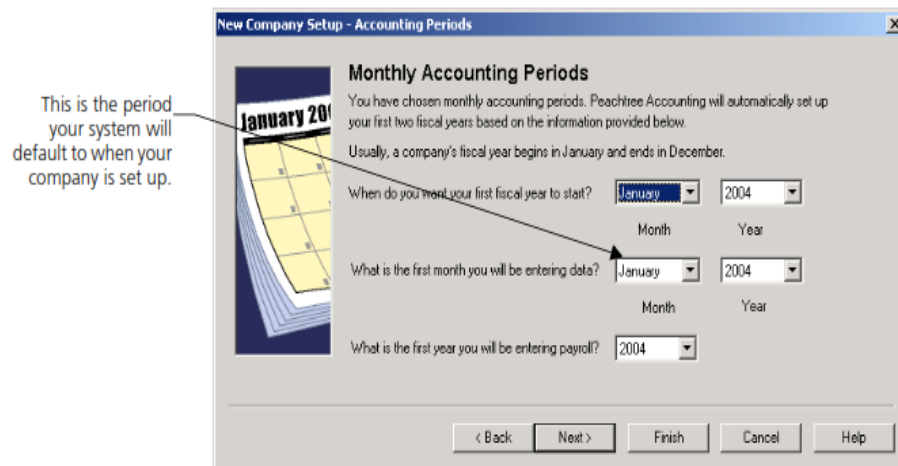
Peachtree displays the New Company Setup - Accounting Periods window.

Accounting Periods Windows

You select the type of accounting periods on the first New Company Setup as shown below.



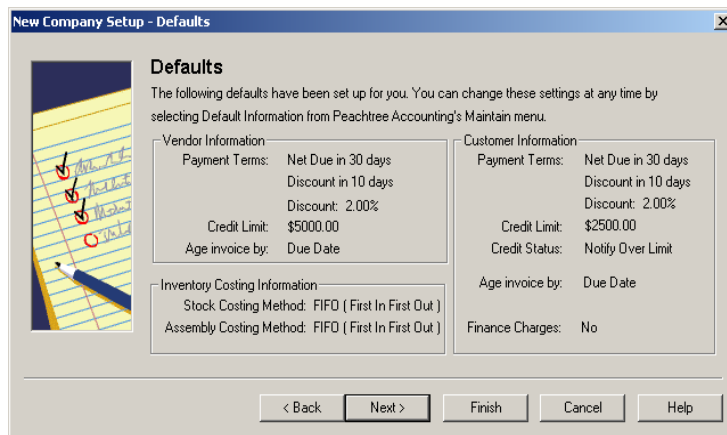
5. Select either the option button for 12 monthly accounting periods.
6. Select Next to continue setting up your accounting periods. If you selected 12 monthly accounting periods, Peachtree displays the following window. Here, you specify information for your standard accounting periods.



Two fiscal years are created, 24 periods total. The fiscal years are based on the start date you specify, as well as the first month you specify for entering data. Both fiscal years are set up with 12 periods each. The month you enter as the month your first fiscal year starts will be the first period for your company in Peachtree. Each period after that increases by month and year.

Defaults

The information on this window shows you the defaults that were created for you automatically if you chose to set up a company based on a sample company. It will look similar to the following window:



7. Review the accuracy and appropriateness of the default information. If it is not satisfactory, you can change it before you begin entering transactions. From the Peachtree menu, select Maintain, Default Information, and then select the appropriate type of default information.
8. Select Next to continue setting up your new company.

Finish

There are several versions of the Finish window. The one displayed depends on an earlier option you selected in New Company Setup. Peachtree displays this window if you selected one of the following options:

The New Company Setup - Chart of Accounts Window:

- Set up a new Retail, Service, Construction, Manufacturing, or Distribution company, using a simplified chart of accounts.
- Set up a new company using an extensive chart of accounts from one or many sample companies.
- Copy settings from an existing Peachtree company
- Build your own company.



- Click Finish.

After the Completion of company creation process now you have to create charts of accounts for practically posting of double entry system in this PEACHTREE accounting software.

2. Creation of Charts

Introduction to Charts of Accounts:

A chart of accounts is a listing of the names of the accounts that a company has identified and made available for recording transactions in its general ledger. A company has the flexibility to tailor its chart of accounts to best suit its needs, including adding accounts as needed.

Each account in the chart of accounts is typically assigned a name and a unique number by which it can be identified. (Software for some small businesses may not require account numbers.) Account numbers are often five or more digits in length with each digit representing a division of the company, the department, the type of account, etc. Now for understanding of creation of charts of accounts here is an example below:

As you will see, the first digit might signify if the account is an asset, liability, etc. For example, if the first digit is a "1" it is an asset. If the first digit is a "5" it is an operating expense.

A gap between account numbers allows for adding accounts in the future. The following is a *partial* listing of a sample chart of accounts.

Current Assets (account numbers 10000 - 16999)

- 10100 Cash - Regular Checking
- 10200 Cash - Payroll Checking
- 10600 Petty Cash Fund
- 12100 Accounts Receivable
- 12500 Allowance for Doubtful Accounts
- 13100 Inventory
- 14100 Supplies
- 15300 Prepaid Insurance

Property, Plant, and Equipment (account numbers 17000 - 18999)

- 17000 Land
- 17100 Buildings
- 17300 Equipment
- 17800 Vehicles
- 18100 Accumulated Depreciation - Buildings
- 18300 Accumulated Depreciation - Equipment
- 18800 Accumulated Depreciation – Vehicles

Current Liabilities (account numbers 20000 - 24999)

- 20100 Notes Payable - Credit Line #1
- 20200 Notes Payable - Credit Line #2
- 21000 Accounts Payable
- 22100 Wages Payable
- 23100 Interest Payable
- 24500 Unearned Revenues

Long-term Liabilities (account numbers 25000 - 26999)

- 25100 Mortgage Loan Payable
- 25600 Bonds Payable
- 25650 Discount on Bonds Payabl

Stockholders' Equity (account numbers 27000 - 29999)

27100 Common Stock, No Par
27500 Retained Earnings
29500 Treasury Stock

Operating Revenues (account numbers 30000 - 39999)

31010 Sales - Division #1, Product Line 010
31022 Sales - Division #1, Product Line 022
32015 Sales - Division #2, Product Line 015
33110 Sales - Division #3, Product Line 110

Cost of Goods Sold (account numbers 40000 - 49999)

41010 COGS - Division #1, Product Line 010
41022 COGS - Division #1, Product Line 022
42015 COGS - Division #2, Product Line 015
43110 COGS - Division #3, Product Line 110

Marketing Expenses (account numbers 50000 - 50999)

50100 Marketing Dept. Salaries
50150 Marketing Dept. Payroll Taxes
50200 Marketing Dept. Supplies
50600 Marketing Dept. Telephone

Payroll Dept. Expenses (account numbers 59000 - 59999)

59100 Payroll Dept. Salaries
59150 Payroll Dept. Payroll Taxes
59200 Payroll Dept. Supplies
59600 Payroll Dept. Telephone

Other (account numbers 90000 - 99999)

91800 Gain on Sale of Assets
96100 Loss on Sale of Assets

Moreover you will be able to create charts of account according to need of organization. After the understanding of charts of account you will learn creating of charts of accounts in accounting software. (PEACHTREE)

Creation of Charts of Accounts in PEACHTREE Accounting Software

The Chart of Accounts window is used to add new accounts, to modify the description of an existing account, to delete an existing account, to make an account inactive, or to change the account type for an account.

1. When you are setting up a new chart of accounts (instead of copying from one of Peachtree's sample businesses), you need to have all your account numbers and names written down.
2. Have all of your transactions that have occurred after the conversion date ready to enter to bring your accounts up to date.
1. Do one of the following:

- To let Peachtree walk you through the process of setting up your chart of accounts, open Peachtree Today, and on the Welcome page, select Setup Guide. Select General Ledger from the menu bar; then select the first task on the page, Set up Your Chart of Accounts.

OR

- From the Maintain menu, select Chart of Accounts.

2. Peachtree displays the Maintain Chart of Accounts window.

3. Enter an account ID and description for the account.

Account ID: This is an alphanumeric code that identifies the account. To enter a new account, select the New button. It also determines how the account is identified and sorted in the chart of accounts list. Most charts of accounts are set up with specific account types grouped together.

Description: This is the description of the account entered in the Maintain Chart of Accounts window. You can edit this description by selecting the New button, entering the ID of the account whose description you want to edit, and then making any changes you want to the description.

4. Select an account type from the drop-down list.

Account Types: It defines how the account will be grouped in reports and financial statements. They also control what happens during fiscal year-end. General Ledger accounts are assigned types on the **General** tab of the Maintain Chart of Accounts window. Choose one of the following account types from the drop-down list:

- Accounts Payable
- Accounts Receivable
- Accumulated Depreciation
- Cash
- Cost of Sales
- Expenses
- Fixed Assets
- Income
- Inventory
- Long term liabilities

- Equity - doesn't close (Corporation)
- Equity - gets closed (Proprietorship)
- Equity - Retained Earnings
- Other assets
- Other current assets
- Other current liabilities

5. Enter any debits or credits you've made against the account in the months listed for period history.
6. Select **Save** and then select **Close**.

After this Charts of accounts will be started to create as per Organization need.

Some Important Operations of Charts of Accounts Window

Changing an Account ID:

As your business changes and grows, your chart of accounts may need to change as well, including the IDs of existing accounts. Use the following procedure to change a general ledger account ID.

1. From the Maintain menu, select Chart of Accounts. Peachtree displays the Maintain Chart of Accounts window.
2. Enter or select the account ID you want to change. To display a list of existing general ledger accounts, type in the Account ID field, or select the Lookup button.
3. From the Edit menu, select Change ID, or select the Change ID button on the window toolbar. Peachtree displays the Change Account ID window.
4. Enter the new ID that you want to use instead of the current ID.
5. When you are finished, select OK to change the ID and return to the Maintain Chart of Accounts window.

When you change an account ID, all data records and transactions associated with this account will reflect the new ID. This includes both current and past transactions.

Deleting an Account from Charts of Accounts:

In order to delete an account from the chart of accounts, there must be no transactions posted to the general ledger that references the account ID. If an account has a nonzero balance, you must delete or remove transactions associated with it. These can include beginning-balance entries.

If an account has a nonzero balance, you can enter an adjusting G/L transaction in the General Journal to bring the account's balance to zero. Then, after two year-end closings, you can purge or delete the account.

Making the Account In-active

You can make the account inactive to ensure that no further transactions are associated with it. Then after two year-end closings, you can purge the account.

1. From the Maintain menu, select Chart of Accounts. Peachtree displays the Maintain Chart of Accounts window.
2. Select the account you want to make inactive. To display a list of existing accounts, type in the G/L Account ID field, or select the Lookup button.
3. Select the Inactive check box to the right of the account ID. (There is an X in the check box when it is selected.)

Deleting an Account Immediately

1. From the Maintain menu, select Chart of Accounts. Peachtree displays the Maintain Chart of Accounts window.
2. Enter or select the account ID you want to remove. To display a list of existing accounts, type in the G/L Account ID field, or select the Lookup button.
3. Select the Delete toolbar button to remove the account.

If the account has a non-zero balance in any accounting period within the two currently open fiscal periods, Peachtree displays a message stating that you cannot delete the account.

If you still want to remove an account that has had a nonzero balance at one time, examine the history of the account in the Maintain Chart of Accounts window. Then, display the General Ledger report including a date range of the two open fiscal years. Locate the account transactions; then double-click to display the corresponding task window where the transactions originated. Finally, delete these transactions, and return to the general ledger. To remove an account beginning-balance entry, select the Beginning Balances button in the Maintain Chart of Accounts window.

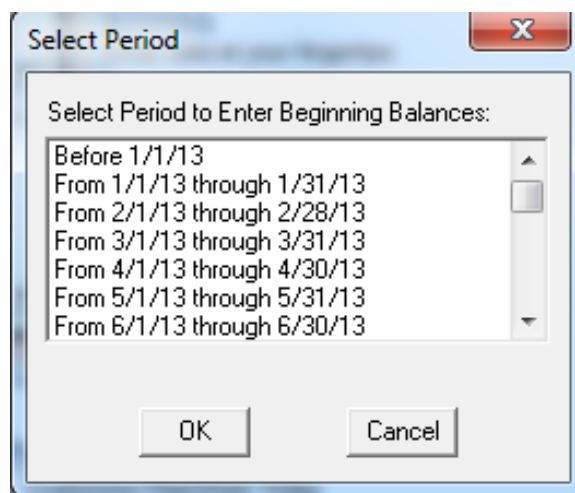
Enter General Ledger Account Beginning Balances

You are just starting out with your company and have not posted any transactions; Peachtree assumes that you are entering beginning balances for your accounts when you select the Beginning Balances button. If you have posted transactions, Peachtree assumes that you are entering adjustments to your accounts for a period in a prior year. If you enter a new account, Peachtree assumes that this account has a zero balance. You may find it easier to add all necessary accounts and then create one cumulative beginning-balance entry.

1. From the Maintain menu, select Chart of Accounts. Peachtree displays the Maintain Chart of Accounts window.
2. Select the Beginning Balances button. Peachtree displays the Select Period window.

Selecting Period

If you are operating with a new chart of accounts and no transactions have been posted to an account, you can enter a beginning balance for the account for a previous accounting period, the current accounting period, or a future accounting period. Select the period in which you want to start your beginning balances by highlighting the period and selecting the OK button.



Note: When setting up a new chart of accounts, it is best to wait to enter the Beginning Balances until after you have set up all your accounts.

3. Select the period in which you want to enter beginning balances. You can select from previous, current, or future periods.
4. Select OK. Peachtree displays the Chart of Accounts Beginning Balances window.

Account ID	Account Description	Account Type	Assets, Expenses	Liabilities, Equity, Income
1000	Cash at bank	Other Current Assets	0.00	
2000	A/c	Accounts Payable		
	Cash at bank	Cash		
Total:			0.00	0.00
Trial Balance:			0.00	0.00
(Difference posts to Beg Bal Equity)				
Income - Expenses:			0.00	0.00
Net Income:				0.00

Beginning Balances for General Ledger Accounts

Select the **Beginning Balances** button on the **General** tab of the Maintain Chart of Accounts window to enter beginning balances for general ledger accounts. You use this to enter the beginning balance for the account or to adjust the balance for an account in a previous period.

Although you enter beginning balances on the **Chart of Accounts Beginning Balances** window and prior period adjustments on the **Chart of Accounts Prior Year Adjustments** window, the fields on the two windows are the same. The columns where you enter amounts for accounts on these two windows are set up to give you a better feel for how the different accounts in your chart of accounts affect the balance of your finances. When you finish entering balances for all of your accounts, the total of the amounts in the **Assets, Expenses** column must equal the total of the amounts in the **Liabilities, Equity, and Income** column.

Notice that the **Trial Balance** keeps a running total, or trial balance, of your entries. In addition, totals for your income and expenses are calculated.

Account ID: This is an alphanumeric code that identifies the account. To enter a new account, select the New button.

Description: This is the description of the account entered in the Maintain Chart of Accounts window. You can edit this description by selecting the **New** button, entering the ID of the account whose description you want to edit, and then making any changes you want to the description.

Account Type: This is the type of the account entered in the Maintain Chart of Accounts window.

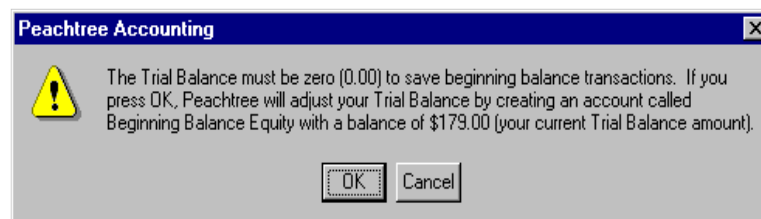
Assets, Expenses or Liabilities, Equity, Income: Depending on the Account Type specified for this account in Maintain Chart of Accounts, you will either have to enter an amount in the **Assets, Expenses** column or in the **Liabilities, Equity, Income** column. Peachtree tells you the column where you enter the amount by graying out the other column. Enter a positive amount in the column, unless circumstances warrant a negative amount .

For example, if you enter Rs.5,000 as a beginning balance for your checking account in the **Assets, Expenses** column, to offset this entry, you might enter Rs.5,000 in the **Liabilities, Equity, Income** column for a capital account such as retained earnings. For normal balances, you will just enter positive numbers.

5. Click or tab to any of the white cells in the grid to add an amount. (The gray cells are for viewing purposes only.)
6. Enter all the beginning balances for the accounts. Scroll the list box to make sure the account amounts are correct. If necessary, you can enter a negative amount; just type a minus sign before the number. Note that for each period, a running beginning balance is kept. Thus, if you change an amount in Period 1, the amounts for subsequent periods are also changed. However, if you change an amount in Period 2, the same account balance in Period 1 is unchanged.
7. Select the **OK** button when you're finished.

If Software says you are Out of Balance:

If you are out of balance in the Beginning Balances for General Ledger Accounts window, Peachtree displays a warning message indicating that an equity account will be created (or updated) to contain the difference or out-of-balance amount.



This account will be named **Beginning Balance Equity**, and its type is Equity-Doesn't Close. This account does not appear in the Beginning Balances window, but it will appear in the list of accounts and on financial statements and general ledger reports.

Try to find the reason for the out-of-balance situation, and correct it if possible. (Select **Cancel** when Peachtree displays the warning message.) If you are entering beginning balances from financial statements supplied by your previous accounting system or by your accountant, you most likely made

an error in data entry. Make sure you didn't leave out an account or balance and that you entered all amounts correctly.

If you still cannot find the error, you can select **OK** at the warning message. Your books will be in balance, and you can proceed with setting up your company. You can even begin entering and posting transactions. (Remember that once you post transactions, you will need to enter prior-period adjustments rather than beginning balances. Although both are entered using the Maintain Chart of Accounts **Beginning Balances** button, Peachtree will display the proper window according to whether the transaction has been posted or not.) Then later, if you find the cause of the out-of-balance situation, you can go back to the Beginning Balances or Prior Period Adjustments window and correct the situation. Once the Beginning Balance Equity account has no transactions associated with it, you can delete the account.

1. Continue entering beginning balances.
2. Select **OK** when you are through.

3. Adding a New Account While Entering G/L Beginning Balances

The method of adding a new account while entering general ledger beginning balances is as under:

1. In the Beginning Balances window accessed from the Maintain Chart of Accounts window, select the *New* button. Peachtree displays the **Enter New Account** window.
2. Enter an account ID and description for the account. To display a list of existing accounts, type in the **G/L Account ID** field, or select the Lookup button. The account ID determines how the account is identified and sorted in the chart of accounts list. Most charts of accounts are set up with specific account types grouped together.
3. Select a type for the account.
4. Select **OK**.

After the creation of charts of accounts in Peachtree now you will be able to post journal entry.

Introduction of General Journal in Peachtree

In the General Journal, you enter both debits and credits, and when the amounts balance, you can post the General Journal by selecting the Save button if you're using the real-time posting method. If you are using the batch-posting method, select the **Save** button; then use the Post option from the **System** selection of the **Tasks** menu.

In General Journal Entry, you can also enter withdrawal and deposit adjustments you need to make during account reconciliation. Sometimes adjustments must be made to account for errors, service charges, check charges, or unrecorded withdrawals or deposits; such adjustments are necessary to help keep your bank account balanced. When you select the Adjust button in Account Reconciliation, the General Journal Entry window opens to receive this adjustment data.

You use the General Journal to enter those types of transactions that are not readily categorized in the **Tasks** menu. Depreciation would be an example of something that would be entered into the General Journal.

Record a General Journal Entry

The General Journal is used to enter those types of transactions that are not readily categorized in the **Tasks** menu. Typical General Journal entries include chart of account beginning balances, depreciation, and account transfers.

Here, you also enter adjustments you need to make during Account Reconciliation. Such adjustments are necessary to account for errors, service charges, check charges, or unrecorded withdrawals or deposits. When you select Adjust in Account Reconciliation, the General Journal Entry window opens.

Unlike other screens in Peachtree, you provide all the accounting distributions in the General Journal. At other times, Peachtree automatically distributes certain amounts, based on guidelines you set in **Maintain** menus.





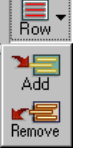
1. From the **Tasks** menu, select **General Journal Entry**. Peachtree displays the General Journal Entry window.

GL Account	Description	Debit	Credit	Job
Totals:		0.00	0.00	
Out of Balance:		0.00		

2. Enter or select the date of the transactions you want to enter. Peachtree defaults this date to the Peachtree system date. If you are in an accounting period that is different from the system date, then Peachtree displays the first day of that period. You can also select the Open toolbar button to edit a General Journal entry in the current or alternate accounting period.
3. Select the **Reverse** check box to have the transaction automatically reversed the first day of the next accounting period. Reversing means that debits become credits and credits become debits.
4. Enter a reference for the transaction up to 20 characters. If you enter a number reference, Peachtree will increase future General Journal entries by one while this window is open.
5. For each line enter or select an account ID. To display a list of existing accounts, type in the **G/L Account ID** field, or select the Lookup button.
6. For each line enter an amount in either the **Debit** or **Credit** columns.
7. For each line enter a description for the transaction.
8. The description will appear in General Ledger and various reports.

9. If the transaction is associated with a job, enter or select a job ID. You can later apply the General Journal entry to a customer invoice, if needed.
10. Once the **Out of Balance** field is zero (0.00), select **Save** to record the transaction in the General Journal.

The General Journal Entry window is essentially a table where you enter debit and credit distributions to specific accounts for the General Journal transaction. Before you save the transaction, the total debit amount must equal the total credit amount. If you are unsure about whether an account should be debited or credited, check with your accountant.

	<p>Save or post the entry Click the Save button to post or record the currently displayed transaction. If you use the Real-Time posting method, the saved transaction is posted to the General Journal, and the general ledger is updated. If you use the Batch posting method, the transaction is recorded in the General Journal and must be posted later to update the general ledger. For more information,</p>
	<p>Memorize the general journal entry To save a general journal entry as a memorized transaction, click the drop-down arrow to the right of the Save button, and then select the Memorize button from the drop-down button menu. For more information, look up “memorized transactions, Maintain Memorized General Journal Entries” in the Peachtree Help index.</p>
	<p>Memorize the general journal entry To save a general journal entry as a memorized transaction, click the drop-down arrow to the right of the Save button, and then select the Memorize button from the drop-down button menu. For more information, look up “memorized transactions, Maintain Memorized General Journal Entries” in the Peachtree Help index.</p>
	<p>Save or post the entry Click the Save button to post or record the currently displayed transaction. If you use the Real-Time posting method, the saved transaction is posted to the General Journal, and the general ledger is updated. If you use the Batch posting method, the transaction is recorded in the General Journal and must be posted later to update the general ledger.</p>
	<p>Schedule future transactions like this one Select the Recur button to set up repeating journal entries for this transaction in future months or accounting periods. You can change or delete a recurring entry at any time.</p>
	<p>Add or remove a distribution line Use the Row button menu to add an extra line item or remove the selected line item from the displayed transaction.</p> <ul style="list-style-type: none"> • To insert a line in the grid, select the line <i>below which</i> you want the new line to appear; then from the Row button menu, click the Add button. • To remove a line in the grid, select the line you want to delete; then from the Row button menu, click the Remove button.

After the posting of journal entries in software you will be able to generate the required reports with the help of Peachtree software. Here are some steps to find out the reports:

1. Select a Report Menu from Menu Bar

The Select a Report window lists all the reports, forms, and financial statements currently set up in Peachtree. Use this window to select a report or form you want to display, print, or design.

2. Report Area, List, and Description

On the left of the Select a Report window is the report area (Accounts Receivable, Accounts Payable, Financial Statements, and so on), where you select what type of reports or forms you want to see. When you select a report area, Peachtree displays a list of reports and forms associated with that area on the right. Once a report or form is selected (highlighted in the report list), Peachtree displays its description at the far-right side of the window.

Whenever you select a report or form in the report list, a special right-click pop-up menu lets you perform most of the functions available from the toolbar at the top of the window. For more information, click.

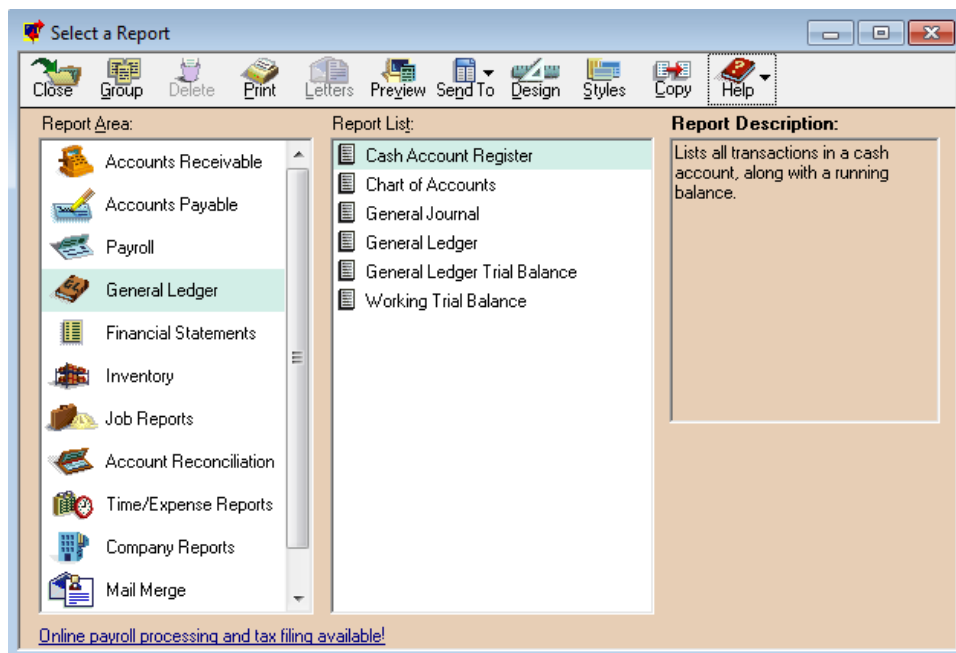
3. Report and Form Icons

Each report and form icon indicates what type it is:

- *This report or statement is read-only.* You cannot make changes to this, but you can use this as a basis for customizing.
- *This report or statement has been customized.* Forms and report groups are contained in folders like this. A report group is a group of multiple reports. You can set up groups of reports that you want to print at the same time so it won't take as long to print them. Click the folder with the *left* mouse button to see the forms or reports that the folder contains.
- *This form is read-only.* You cannot make changes to this form, but you can use it as a basis for customizing.

General Ledger Reports:

General Ledger reports allow you to list your Chart of Accounts, General Ledger, General Journal, and Trial Balances. When you display or print a report,



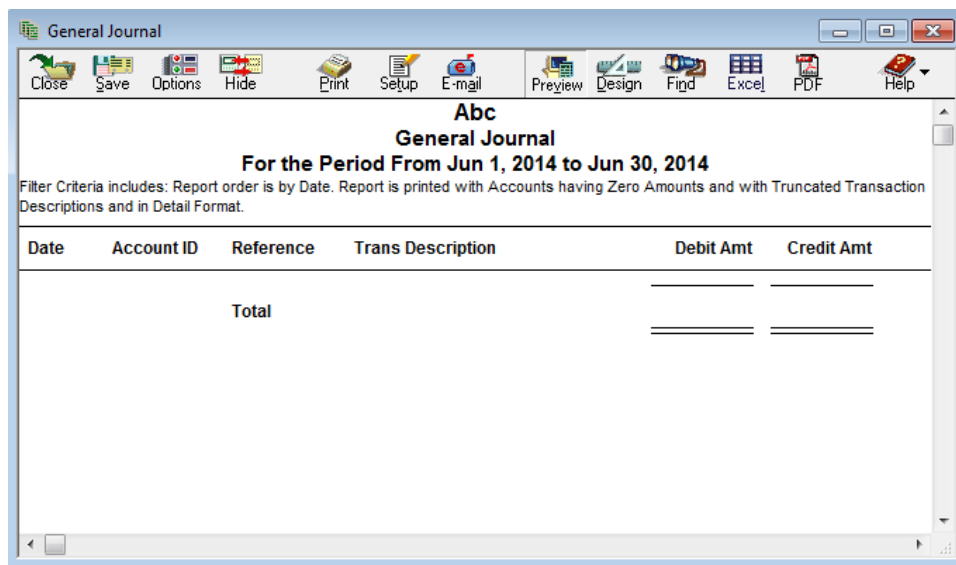
Peachtree displays the following three tabs:

Filter: Select the **Filter** tab to determine the data criteria for the reports you want to see or print. For specific information about a particular report's filter options, select the report from the list below.

Fields: Select the **Fields** tab to choose which data fields to include and where the columns break on your report. For more information on choosing report fields, click.

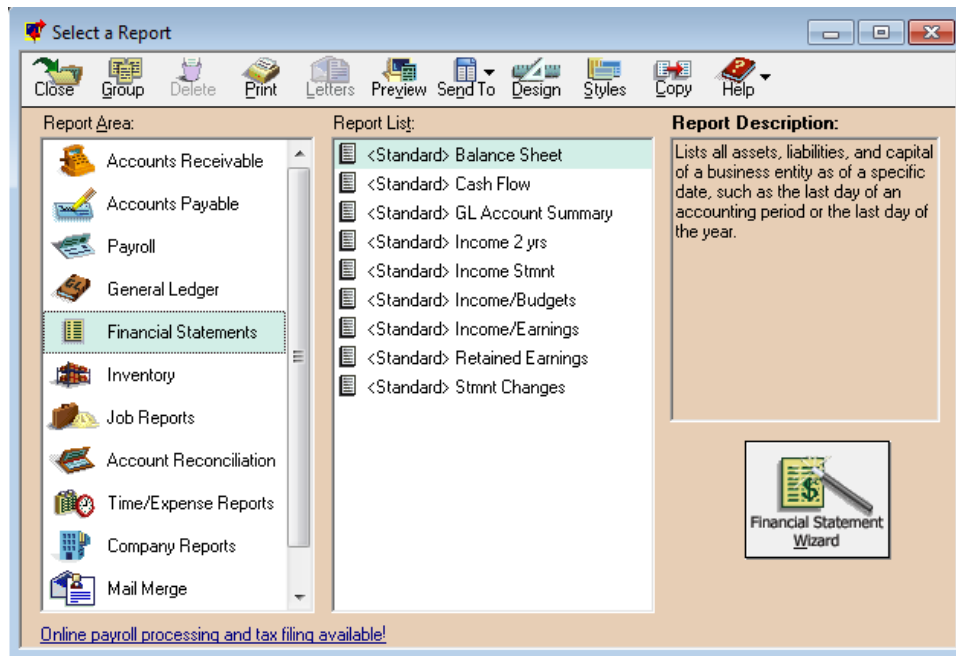
Fonts: Select the **Fonts** tab to set the font styles for the heading and body of the report. You can also have the titles of the report show special codes, such as the current period, today's date, an as-of date, and the company name.

Now click on general journal report than you will see the window:



From the Reports menu, select Financial Statements:

Peachtree displays the Select a Report window with the Financial Statements report area selected. The report list displays reports, forms, or financial statements pertaining to the respective report area selected.



There are several report areas. You can switch among them at any time in this window. Selecting a new report area displays a different list of reports.

1. From the report list, scroll down to select a financial statement you want to appear on the screen.
2. There are two methods to displaying a financial statement on the screen:
 - Double-click the specific financial statement in the report list.
 - Select the specific report or financial statement. Then, select the Preview button in the top of the Select a Report window.
3. Peachtree displays the report Options window pertaining to the financial statement. Enter the desired information, then select **OK**. Peachtree displays the financial statement on the screen. **Note:** For assistance on each report filter, select the **Help** button or press **F1** when the Options window is displayed.
4. To print a financial statement displayed on the screen, select the Print button.
5. To design a financial statement displayed on the screen, select the Design button.
6. To display alternate financial statement filter information, select the Options button. If you change the financial statement options, you will be prompted to save the new report when closing the report window.
7. When finished viewing the financial statement, select **Close** to return to the Select a Report window.

4. Income Statement (Financial Statement)

The Income Statement shows income and expenses over a range of time, reflecting the difference as a **profit** (income greater than expenses) or a loss (income less than expenses). Peachtree's Income Statement sums totals for the following:

- Total Revenues
- Total Cost of Sales
- Gross Profit
- Expenses
- Net Income (Income minus Expense)

In addition, there are columns for current month and year-to-date figures, as well as the percentage each account represents of each subtotal. When you display or print a financial statement, Peachtree displays the following options:

Time Frame: You have the choice of a range of periods, current period, or current three periods. If you select a range, use the From and To list boxes.

Print Page Numbers: Checking this will print page numbers on the top right corner of the page. Both the page number and the number of pages are indicated. For example, if you are looking at page 2 of a 13-page document, it will display on the report as "Page: 2 of 13."

Show Zero Amounts: Select this check box to show accounts with zero amounts.

Print All Words Capitalized: Select this check box if you want the report to print in all capital letters.

Right Margin/Left Margin: Enter the size of the margins you want, in inches.

Center on Page: Select this check box if you want each page of the report to be centered on the page instead of left justified when it is printed.

Number of Copies: Enter the number of copies you want to print. You can enter any number from 1 to 99.

	Current Month		Year to Date	
Revenues				
Total Revenues	0.00	0.00	0.00	0.00
Cost of Sales				
Total Cost of Sales	0.00	0.00	0.00	0.00
Gross Profit	0.00	0.00	0.00	0.00
Expenses				
Total Expenses	0.00	0.00	0.00	0.00
Net Income	\$ 0.00	0.00	\$ 0.00	0.00

5. Balance Sheet (Financial Statement)

The Balance Sheet lists all assets, liabilities, and capital of a business entity as of a specific date, such as the last day of an accounting period or the last day of the year. Peachtree's Balance Sheet sums totals for the following:

- Current Assets
- Property and Equipment (Fixed Assets)
- Other Assets
- Total Assets
- Current Liabilities
- Long Term Liabilities
- Total Liabilities
- Total Capital
- Total Liabilities plus Capital

When you display or print a financial statement, Peachtree displays the following options:

Options

Time Frame: Current Period

From: Period 6, (6/1/14) To: Period 6, (6/30/14)

☐ Print Page Numbers Right Margin: 0.250 Inches

☐ Show Zero Amounts Left Margin: 0.250 Inches

☐ Print All Words Capitalized

☐ Center on Page Number Of Copies: 1

OK Cancel Help

Time Frame: You have the choice of a range of periods, current period, or current three periods. If you select a range, use the From and To list boxes.

Print Page Numbers: Checking this will print page numbers on the top right corner of the page. Both the page number and the number of pages are indicated. For example, if you are looking at page 2 of a 13-page document, it will display on the report as "Page: 2 of 13."

Show Zero Amounts: Select this check box to show accounts with zero amounts.

Print All Words Capitalized: Select this check box if you want the report to print in all capital letters.

Right Margin/Left Margin: Enter the size of the margins you want, in inches.

Center on Page: Select this check box if you want each page of the report to be centered on the page instead of left justified when it is printed.

Number of Copies: Enter the number of copies you want to print. You can enter any number from 1 to 99.

Abc	
Balance Sheet	
June 30, 2014	
ASSETS	
Current Assets	
Total Current Assets	0.00
Property and Equipment	
Total Property and Equipment	0.00
Other Assets	
Total Other Assets	0.00
Total Assets	\$ 0.00
LIABILITIES AND CAPITAL	
Current Liabilities	
Total Current Liabilities	0.00
Long-Term Liabilities	
Total Long-Term Liabilities	0.00
Total Liabilities	0.00
Capital	
Total Capital	0.00
Total Liabilities & Capital	\$ 0.00

Learning Unit 3: Spread Sheet Computation

Overview

In this learning unit, you will learn different concepts involved in creating accounting sheets or ledgers using spreadsheet software by applying different formulas and functions. After completion of this learning unit, you will be able to apply error free logical, mathematical, statistical and financial formulas and functions, and create charts of the given data.

Remember

Use equal (=) sign as prefix to type in formula or function.

1. Difference between Formula and Function

A formula is a method of calculation written by user using arithmetic and logical operators in spreadsheet software. A formula can have values, cell references, defined names and functions too.

For example; =A1+A2+A3

Functions are built into the software by the developer to simplify the complex expressions and also have wizards to help in completely applying them.

For example; =SUM(A1:A3), =AVERAGE(A1:A3)

	A	B	C	D	E
1	4				
2	8				
3	12				
4	24	<<<<==== A1+A2+A3			
5	24	<<<<==== SUM(A1:A3)			
6	8	<<<<==== AVERAGE(A1:A3)			
7					

Do you know!

We can easily nest functions but not formulas.

- To increase an asset account, debit it.
- To decrease an asset account, credit it.
- To increase a liability or equity account, credit it.
- To decrease a liability or equity account, debit it.

Formula & Function

There are many types of built-in functions available in Microsoft Excel. For example; Logical, Mathematical, Financial, Statistical etc.

Function

A premade method of calculation by the software developer is called function.

2. Performing Logical Operations

MS Excel has six logical operators, also called comparison operators. **Logical operators** (=, <, >, <=, >=, <>) are used to compare two values. The result of these logical operators in any given case is either TRUE or FALSE. The following table shows the results returned by these logical operators:

Logic

Logic is reasoning conducted or assessed according to strict principles of validity.

	A	B	C	D	E	F	G	H	I
1	Value 1	Value 2	A2<=B2	A2=B2	A2>=B2	A2<>B2	A2<B2	A2>B2	
2	4	3	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	
3	7	7	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	
4	9	2	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	
5	0	0	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	
6	12	0	TRUE	FALSE	FALSE	TRUE	TRUE	FALSE	
7	11	15	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	
8									

Logical Operators

3. Applying Logical Functions

Any operation or expression involving the use of logical operators and conditions such as AND, OR, <, =, that are applied to the input. Some of the logical functions are explained here.

IF() Function:

In Excel, IF() function is one of the logical functions available, and most popular and useful in calculations having conditional criteria. The syntax is as under:

IF(logical test, [value_if_true], [value_if_false])

The IF function evaluates a condition given in logical_test and returns the value mentioned if the condition is TRUE, and another value if the condition is FALSE.

The following sheet demonstrates the simple workings of IF function.

	A	B	C	D	E	F	G	H
1	Value 1	Value 2	Bigger Value					
2	23	21	Column A					
3	12	66	Column B					
4	31	55	Column B	<<==	=IF(A5>B5,"Column A","ColumnB")			
5	4	3	Column A					
6	45	34	Column A					
7								

The IF() Function

AND() Function:

It returns TRUE if all its arguments evaluate to TRUE otherwise FALSE. The syntax is as under:

AND(logical1, [logical2], ...)

- **logical1** is required. The first condition that you want to test that can evaluate to either TRUE or FALSE.
- **logical2, ...** is optional and so on. Additional conditions that you want to test that can evaluate to either TRUE or FALSE, up to a maximum of 255 conditions.

	A7		
	A	B	C
1			
2	Formula	Returns	
3	=AND(TRUE, TRUE)	TRUE	
4	=AND(TRUE, FALSE)	FALSE	
5	=AND(7+1=8, 6+5=11)	TRUE	
6	=AND(7+1=8, 7+5=13)	FALSE	
7			
8			

AND() Function

NOT() Function:

It returns a reversed or opposite logical value. The syntax is as under:

NOT(logical_value)

- **logical_value** is a required value or expression that can be evaluated to TRUE or FALSE.

OR() Function:

It returns a TRUE if any argument is TRUE and returns FALSE if all arguments are FALSE. The syntax is as under:

OR(logical1, [logical2,])

- **logical1, logical2,** Logical1 is required, subsequent logical values are optional. Additional conditions can be tested to either TRUE or FALSE, up to a maximum of 255 conditions.

TRUE() Function:

It returns a logical value of TRUE. The syntax is as under:

TRUE()

There are no arguments for the TRUE function.

FALSE() Function:

It returns a logical value of FALSE. The syntax is as under:

FALSE()

There are no arguments for the FALSE function.

The following sheet shows the working of above formulas:

	A7	fx	=TRUE()
	A	B	
1			
2	Formula	Returns	
3	=NOT(FALSE)	TRUE	
4	=NOT(2-3=-1)	FALSE	
5	=OR(False, True, False)	TRUE	
6	=OR(3+3=2, 4+2=5, 3<4)	TRUE	
7	=TRUE()	TRUE	
8	=FALSE()	FALSE	
9			

Logical Formulas

IFERROR() Function:

It returns a specified value if a formula evaluates to an error, otherwise returns result of the formula. This function is used to handle errors in a formula. The syntax is as under:

IFERROR(value, value_if_error)

- **Value** is required argument that is checked for an error.
- **Value_if_error** is required value to return if the formula evaluates to an error. The following error types are evaluated: #N/A, #VALUE!, #REF!, #DIV/0!, #NUM!, #NAME?, or #NULL!.

	B7	fx		
	A	B	C	D
1				
2	Formula	Returns	Value1	Value2
3	=IFERROR(c3/d3, "Error")	5	10	2
4	=IFERROR(c3/d3, "Error")	Error	5	0
5	=IFERROR(c3/d3, "Error")	4.8	24	5
6	=IFERROR(c3/d3, "Error")	0	0	4

IFERROR() Function

4. Applying Mathematical Formulas

ABS() Function:

It returns the absolute value of a number. The syntax is as under:

ABS(number)

- **number** is required value to calculate its absolute value.

PRODUCT() Function:

It multiplies all the number(s) given as argument(s). The syntax is as under:

PRODUCT(number1, [number2], ...)

- **number1, number2,** Number1 is required, subsequent number arguments or ranges are optional. Additional numbers or ranges can be multiplied, up to a maximum of 255 arguments.

SUM() Function:

It adds all the number(s) or a range(s) of cells given as argument(s).

The syntax is as under:

SUM(number1, [number2, ..., number_n])

- **number1, number2,** A numeric value or range of cells that is required to be added.

AVERAGE() Function:

It returns arithmetic mean of all the number(s) or a range(s) of cells given as argument(s). The syntax is as under:

AVERAGE(number1, [number2, ..., number_n])

- **number1, number2,** are numeric values or range of cells, arrays up to 30 values.

MIN() Function:

It returns minimum or smallest value from all the number(s) or a range(s) of cells given as argument(s).

The syntax is as under:

MIN(number1, [number2, ..., number_n])

- **number1, number2,** are numeric values or range of cells, arrays up to 30 values.

MAX() Function:

It returns maximum or largest value from all the number(s) or a range(s) of cells given as argument(s).

The syntax is as under:

MAX(number1, [number2, ..., number_n])

- **number1, number2,** are numeric values or range of cells, arrays up to 30 values.

LOG() Function:

It returns the logarithm of a number to a specified base. The syntax is as under:

LOG(number, [base])

- **number** is a required value that must be greater than 0.
- **base** is optional and used to calculate the logarithm, if omitted; it will use a base of 10.

MOD() Function:

It returns the remainder after dividing by a divisor. The syntax is as under:

MOD(number, divisor)

- **number** is a required value whose remainder to be found.
- **divisor** is used to divide the number parameter. If the divisor is 0, then it will return #DIV/0! error.

POWER() Function:

It returns the result of a number raised to a power. The syntax is as under:

POWER(number, power)

- **number** is a required base value from any real number.
- **power** is a required exponent to which the base number is raised.

The following sheet shows the execution of all above mathematical formulas.

	A	B	C	D
1	Formula	Returns	Value1	Value2
2	=ABS(c3)	10	-10	2
3	=ABS(-45)	45		
4	=PRODUCT(c5, d5)	120	24	5
5	=PRODUCT(6, 6)	36		
6	=SUM(c7:d7)	85	75	10
7	=SUM(7:7)	14		
8	=AVERAGE(c9:d9)	17.5	23	12
9	=AVERAGE(9,13)	11		
10	=MIN(C3:D10)	-10		
11	=MIN(3, 7, 1, 2)	1		
12	=MAX(C3:D10)	75		
13	=MAX(3, 7, 1, 2)	7		
14	=LOG(3, 2)	1.585		
15	=LOG(3)	0.477		
16	=MOD(7, 4)	3		
17	=MOD(C18, D18)	0	14	2
18	=POWER(5, 2)	25		
19	=POWER(5, 3/2)	11.18		
20	=POWER(3.5, 7.8)	17528		

Mathematical Formulas

5. Applying Statistical Formulas

MEDIAN() Function:

It returns the median of the numbers provided. The syntax is as under:

MEDIAN(number1, [number2, ..., number_n])

- **number1** is a numeric value that can be a number, named range, array, or reference to a number.
- **number2, ..., number_n** are numeric values or range of cells, arrays up to 30 values.

AVERAGE() Function:

It returns arithmetic mean of all the number(s) or a range(s) of cells given as argument(s). The syntax is as under:

AVERAGE(number1, [number2, ..., number_n])

- **number1, number2,** are numeric values or range of cells, arrays up to 30 values.

MODE() Function:

It returns the most frequently occurring, or repetitive, value in an array or range of data. The syntax is as under:

MODE(number1, [number2], ...)

- **number1** is required first number argument whose mode is to be calculated.
- **number2** is optional number arguments from 2 to 255.

VAR() Function:

It returns the variance based on a sample of a population. The syntax is as under:

VAR(number1, [number2], ...)

- **number1** is required first number argument corresponding to a sample of a population.
- **number2** is optional number arguments from 2 to 255.

Standard Deviation:

The **standard deviation** is a measure of how widely values are dispersed from the average value.

STDEV() Function:

It calculates the standard deviation based on a sample. The syntax is as under:

STDEV(number1, [number2], ...)

- **number1** is required first number argument corresponding to a sample of a population.
- **number2** is optional number arguments from 2 to 255.

STDEVP() Function:

It calculates the standard deviation based on the entire population given as arguments. The syntax is as under:

STDEVP(number1, [number2], ...)

- **number1** is required first number argument corresponding to a population.
- **number2** is optional number arguments from 2 to 255.

STDEVA() Function:

It calculates the standard deviation based on a sample. The syntax is as under:

STDEVA(Value1, [value2], ...)

- **value1, value2...** value1 is required, subsequent values are optional. 1 to 255 values corresponding to a sample of a population.

STDEV.S() Function:

It calculates the standard deviation based on a sample, but ignores logical values and text in the sample. The syntax is as under:

STDEV.S(number1, [number2], ...)

- **number1** is required first number argument corresponding to a sample of a population.
- **number2** is optional number arguments from 2 to 255.

The following sheet shows the execution of statistical functions described above.

	A	B	C	D
1	43			
2	42	42.5	<<==	=MEDIAN(A1:A10)
3	56	39.2	<<==	=AVERAGE(A1:A10)
4	12	43	<<==	=MODE(A1:A10)
5	23	296.4	<<==	=VAR(A1:A10)
6	67	17.21627137	<<==	=STDEV(A1:A10)
7	53	16.33278911	<<==	=STDEVP(A1:A10)
8	32	17.21627137	<<==	=STDEVA(A1:A10)
9	21	17.21627137	<<==	=STDEV.S(A1:A10)
10	43			

Statistical Functions

6. Applying Financial Formulas

PV() Function:

It calculates the present value of a loan or an investment, based on a constant interest rate. You can use PV with either periodic, constant payments (such as a mortgage or other loan), or a future value that's your investment goal. The syntax is as under:

PV(rate, nper, pmt, [fv], [type])

The PV function syntax has the following arguments:

- **Rate** is required. The interest rate per period. For example, if you obtain an automobile loan at a 10 percent annual interest rate and make monthly payments, your interest rate per month is 10%/12, or 0.83%. You would enter 10%/12, or 0.83%, or 0.0083, into the formula as the rate.
- **Nper** is required. The total number of payment periods in an annuity. For example, if you get a four-year car loan and make monthly payments, your loan has 4*12 (or 48) periods. You would enter 48 into the formula for nper.
- **Pmt** is required. The payment made each period and cannot change over the life of the annuity. Typically, pmt includes principal and interest but no other fees or taxes. For example, the monthly payments on a RS10,000, four-year car loan at 12 percent are RS263.33. You would enter -263.33 into the formula as the pmt. If pmt is omitted, you must include the fv argument.
- **Fv** is optional. The future value or a cash balance you want to attain after the last payment is made. If fv is omitted, it is assumed to be 0 (the future value of a loan, for example, is 0). For example, if you want to save RS50,000 to pay for a special project in 18 years, then RS50,000 is the future value. You could then make a conservative guess at an interest rate and determine how much you must save each month. If fv is omitted, you must include the pmt argument.
- **Type** is optional. The number 0 or 1 and indicates when payments are due.

The sheet below shows the execution of above function.

A		B
1	Values	Description
2	PKR 500	Money paid out of an insurance annuity at the end of every month.
3	8%	Interest rate earned on the money paid out.
4	20	Years the money will be paid out.
5	Result	Formula
6	(PKR 59,777)	=PV(A3/12, 12*A4, A2, , 0)
7		

PV Function

FV() Function:

It calculates the future value of an investment based on a constant interest rate. You can use FV with either periodic, constant payments, or a single lump sum payment. The syntax is as under:

FV(rate, nper, pmt, [pv], [type])

The FV function syntax has the following arguments:

- **Rate** is required. The interest rate per period.
- **Nper** is required. The total number of payment periods in an annuity.
- **Pmt** is required. The payment made each period; it cannot change over the life of the annuity. Typically, pmt contains principal and interest but no other fees or taxes. If pmt is omitted, you must include the pv argument.
- **pv** is optional. The present value, or the lump-sum amount that a series of future payments is worth right now. If pv is omitted, it is assumed to be 0 (zero), and you must include the pmt argument.
- **Type** is optional. The number 0 or 1 and indicates when payments are due. If type is omitted, it is assumed to be 0.

The sheet below shows the execution of above function.

A		B
1	Values	Description
2	0.06	Annual interest rate
3	10	Number of payments
4	-200	Amount of the payment
5	-500	Present value
6	1	Payment is due at the beginning of the period (0 indicates payment is due at end of period)
7	Result	Formula
8	PKR 2,431	=FV(A2/12, A3, A4, A5, A6)

FV function

RATE() Function:

It calculates the interest rate per period of an annuity. RATE is calculated by iteration and can have zero or more solutions. If the successive results of RATE do not converge to within 0.0000001 after 20 iterations, RATE returns the #NUM! error value. The syntax is as under:

RATE (nper, pmt, pv, [fv], [type], [guess])

The FV function syntax has the following arguments:

- **Nper** is required. The total number of payment periods in an annuity.
- **Pmt** is required. The payment made each period; it cannot change over the life of the annuity. Typically, pmt contains principal and interest but no other fees or taxes. If pmt is omitted, you must include the fv argument.
- **pv** is required. The present value, the total amount that a series of future payments is worth now.
- **fv** is optional. The future value or a cash balance you want to attain after the last payment is made. If fv is omitted, it is assumed to be 0 (the future value of a loan, for example, is 0). If fv is omitted, you must include the pmt argument.
- **Type** is optional. The number 0 or 1 and indicates when payments are due. If type is omitted, it is assumed to be 0.
- **guess** is optional. Your guess for what the rate will be.
 - If you omit guess, it is assumed to be 10 percent.
 - If RATE does not converge, try different values for guess. RATE usually converges if guess is between 0 and 1.

The sheet below shows the execution of above function.

	A	B
1	Values	Description
2	4	Years of the loan
3	-200	Monthly payment
4	8000	Amount of the loan
5	Result	Formula
6	1%	=RATE(A2*12, A3, A4)

RATE Function

NPV() Function:

It calculates the net present value of an investment by using a discount rate and a series of future payments (negative values) and income (positive values). The syntax is as under:

NPV(rate, value1, [value2],.....)

The NPV function syntax has the following arguments:

- **Rate** is required. The rate of discount over the length of one period.
- **Value1, value2, ...** Value1 is required, subsequent values are optional. 1 to 254 arguments representing the payments and income.
 - Value1, value2, ... must be equally spaced in time and occur at the end of each period.

- NPV uses the order of value1, value2, ... to interpret the order of cash flows. Be sure to enter your payment and income values in the correct sequence.
- Arguments that are empty cells, logical values, or text representations of numbers, error values, or text that cannot be translated into numbers are ignored.
- If an argument is an array or reference, only numbers in that array or reference are counted. Empty cells, logical values, text, or error values in the array or reference are ignored.

The sheet below shows the execution of above function.

A7		fx	Result
	A	B	
1	Values	Description	
2	0.15	Annual discount rate	
3	-8000	Initial cost of investment one year from today	
4	3800	Return from first year	
5	5000	Return from 2nd year	
6	5500	Return from 3rd year	
7	Result	Formula	
8	PKR 2,349.05	=NPV(A2, A3, A4, A5, A6)	

NPV Function

Internal Rate of Return:

The **internal rate of return** is the interest rate received for an investment consisting of payments (negative values) and income (positive values) that occur at regular periods.

IRR() Function:

It calculates the internal rate of return for a series of cash flows represented by the numbers in values. These cash flows do not have to be even, as they would be for an annuity. However, the cash flows must occur at regular intervals, such as monthly or annually. The syntax is as under:

IRR(values, [guess])

The IRR function syntax has the following arguments:

- **Values** is required. An array or a reference to cells that contain numbers for which you want to calculate the internal rate of return.
 - Values must contain at least one positive value and one negative value to calculate the internal rate of return.
 - IRR uses the order of values to interpret the order of cash flows. Be sure to enter your payment and income values in the sequence you want.
 - If an array or reference argument contains text, logical values, or empty cells, those values are ignored.
- **Guess** is optional. A number that you guess is close to the result of IRR.

- Microsoft Excel uses an iterative technique for calculating IRR. Starting with guess, IRR cycles through the calculation until the result is accurate within 0.00001 percent. If IRR can't find a result that works after 20 tries, the #NUM! error value is returned.
- In most cases you do not need to provide guess for the IRR calculation. If guess is omitted, it is assumed to be 0.1 (10 percent).
- If IRR gives the #NUM! error value, or if the result is not close to what you expected, try again with a different value for guess.

The sheet below shows the execution of above function.

	A	B
1	Values	Description
2	(120,000)	Initial cost of a business
3	8,000	Net income for the 1st year
4	11,000	Net income for the 2nd year
5	16,666	Net income for the 3rd year
6	25,000	Net income for the 4th year
7	Result	Formula
8	-20%	=IRR(A2:A6)

IRR Function

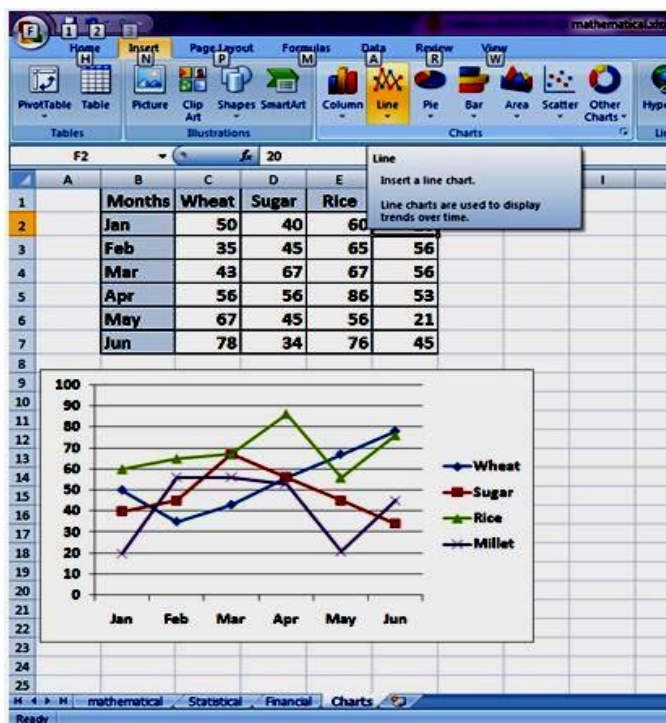
7. Drawing Charts

Charts are the graphical representation of a series of numeric data to understand large quantities of data easily.

Microsoft Excel no longer provides the chart wizard. Instead, you can create a basic chart by clicking the chart type that you want on the **Insert** tab in the **Charts** group. To create a chart that displays the details that you want, you can then continue with the next steps of the following step-by-step process.

Activity to Create a Line Chart:

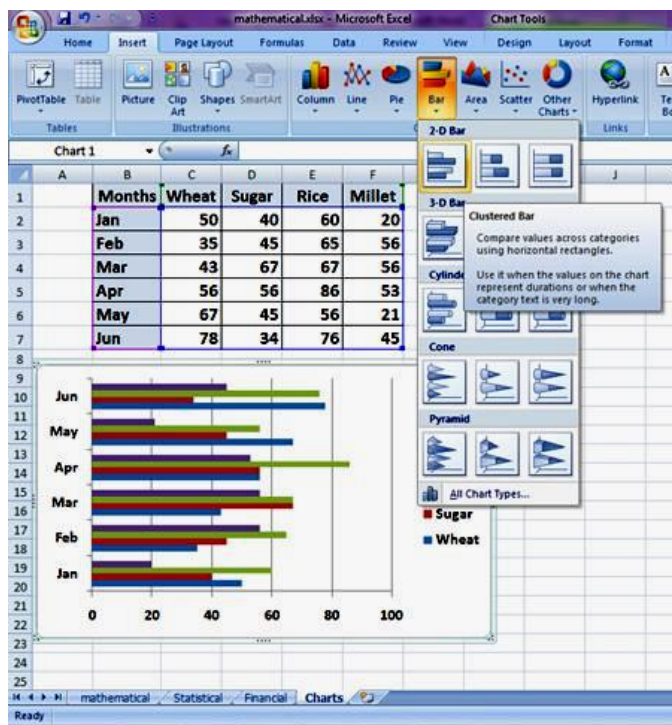
1. Insert data as per below sheet
2. Select the range B1:F7
3. Choose Insert tab, in the Chart group, select Line, and then Line with Markers.
4. The chart will be created as given below.



A Line Chart & its Data

Change Chart Type:

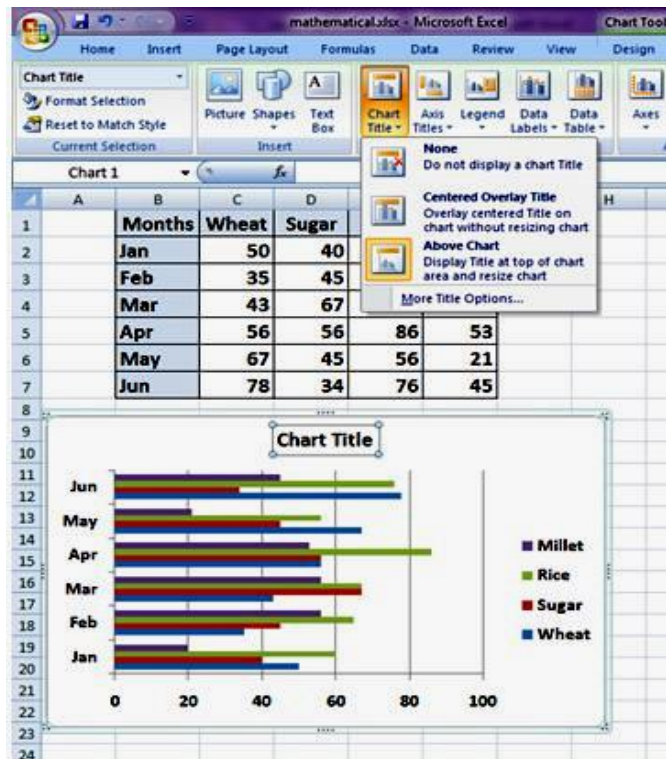
1. Choose the chart.
2. On the Insert tab, in the charts group, select Bar, and then Clustered Bar.
3. The type will be changed and appear as below.



Bar Chart & its Data

Add Chart Title:

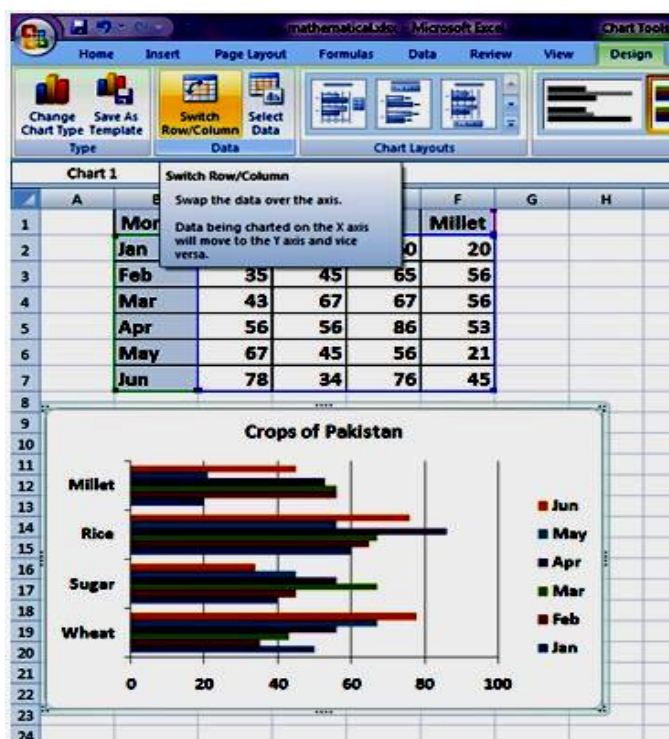
1. Choose the chart.
2. Select Layout tab, click Chart Title and then Above Chart.
3. Chart Title will appear above the chart as shown below and then give a chart title as per your desire.



Adding a Chart Title

Changing Row/Column Data:

1. Choose the chart.
2. Select Design tab, click Switch Row/Column from Data Group.
3. The following chart will be displayed showing the switched Row and Column data.

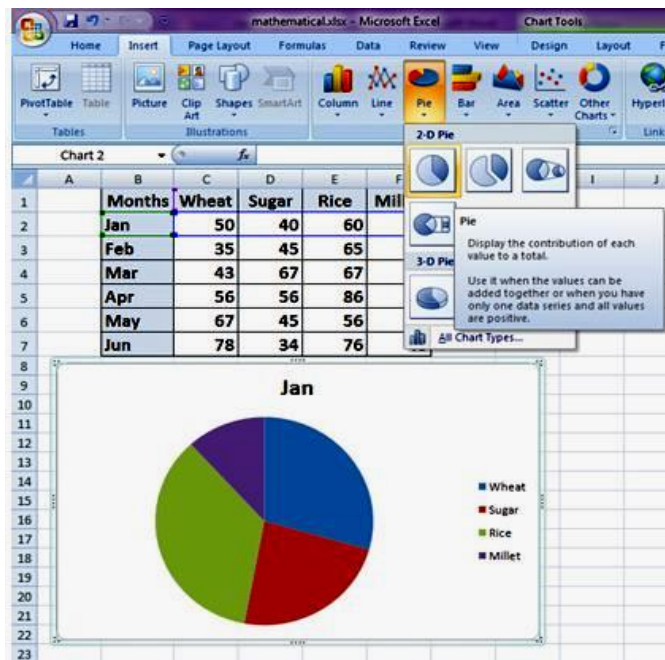


Changing Row/Column Data

Creating a Pie Chart:

Pie charts are used to display the contribution of each value (slice) to a total (pie). Create a Pie chart by following the below mentioned steps:

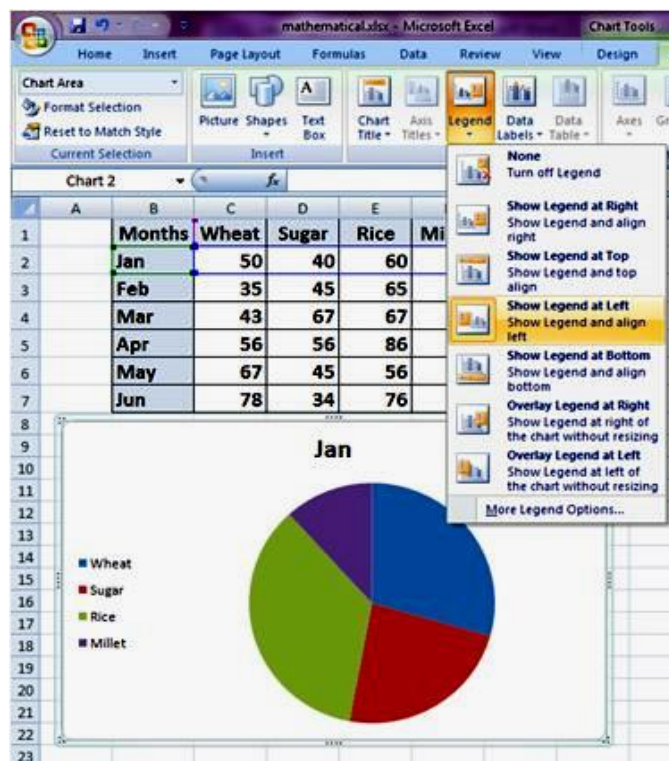
1. Select the range B1:F2
2. Choose Insert tab and from the Chart group, Select Pie and Choose the Pie.
3. The Pie chart will be shown as below.



Pie Chart

Switching Legend Position:

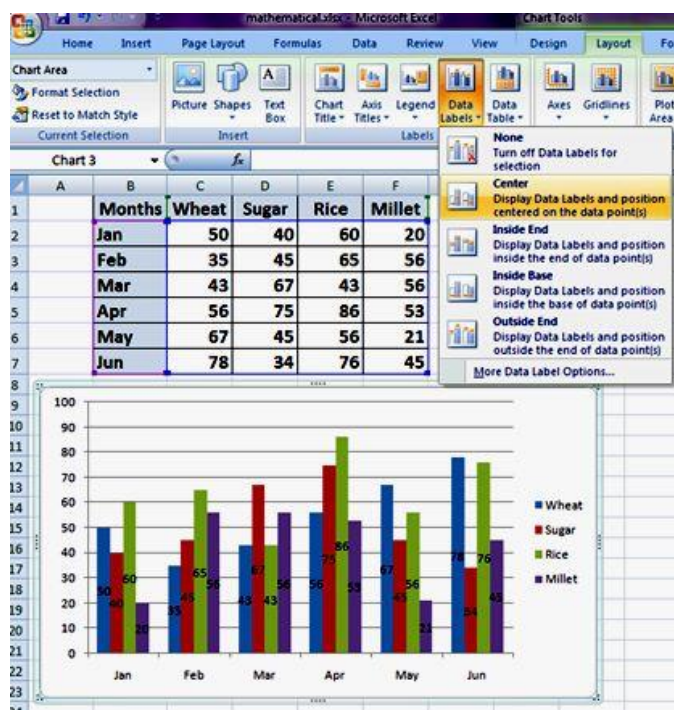
1. Choose the chart. The contextual tab of Chart Tools will be activated.
2. Select Layout tab, choose Legend and select Show Legend at Left.
3. The legend will be displayed on the left as shown below.



Legend Position

Data Labels:

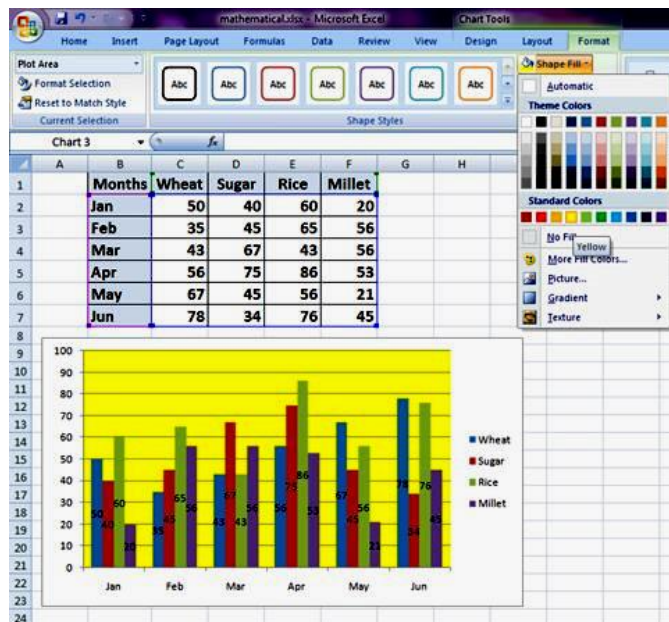
1. Select the Chart.
2. Choose the Layout Tab, click Data Labels from Labels Group, and select Center.
3. Data Labels will be displayed in the center of each bar as shown below.



Data Labels

Changing Colors:

1. Choose the Chart.
2. Select the Plot area of the chart by clicking at the back of Bars.
3. Choose Format tab, click Shape Fill from Shape Styles Group, and select the desired color.
4. The color of the Plot area of the Chart will be shown as below.



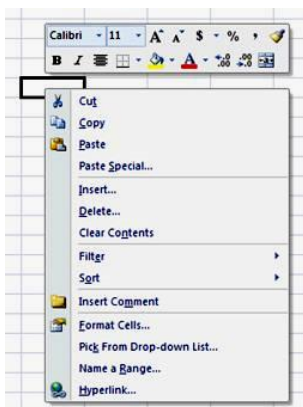
Colored Plot Area

8. Text Editing

Text editing in a cell can be made directly. Type the text in a cell or change the cell contents in edit mode or by typing in the formula bar. When you edit the contents of a cell, Excel is operating in Edit mode. Some Excel features work differently or are unavailable in Edit mode.

Text editing in Excel is the process of inserting, deleting and changing of cell contents. If you want to insert text or numbers just select the cell and type the desired text or numbers and press enter key.

Similarly, press DEL key to delete the contents simply and if you want to change the cell contents, click in the formula bar or double click within the cell, and change the cell contents as per your desire.



Right Click Menu

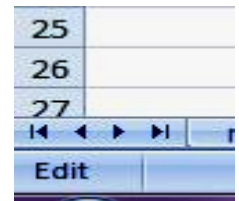
Apart from above, if you want to move or copy the cell contents to another location, right click the mouse button on a cell, the following contextual menu will appear.

Right Click Menu

Select the cell whose contents to be moved to other location, right click and choose Cut from the menu and right click on other location and select Paste. The contents of the cell moved from its original location to other. Similarly, follow the same procedure by choosing the Copy instead of Cut option from the menu.

9. Enable Cell Editing

Text editing is always done in a cell Edit Mode. To enable cell editing, Just press F2 key or Click in the formula bar or double click in the cell. The word Edit will be displayed at the bottom left corner as shown below.

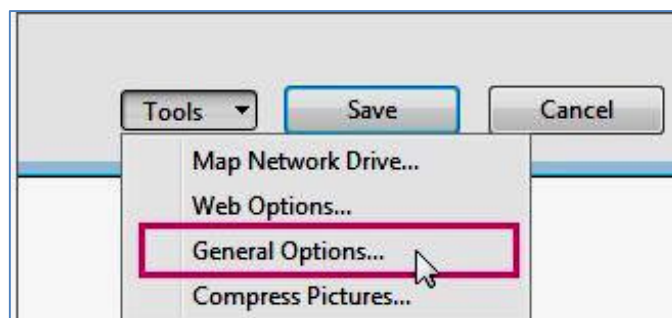


Edit Mode

10. Protecting an Excel Document

In Microsoft Office system, you can use passwords to help prevent other people from opening or modifying your documents, workbooks, and presentations. **Keep in mind that Microsoft cannot retrieve forgotten passwords.** To set the Password:

1. Open the Excel Document
2. Click **File** menu
3. Choose **Save As**
4. In the **Save As** dialog box, open the Tools list and click General Options as shown below.



5. Type either of two passwords here, one to open the file, another to change the file as shown in the picture below.



6. Now the Excel document is Password protected.

Summary of Module

- To understand financial accounting system and accounting cycle basic accounting terminologies e. g credit, debit, revenue, expense, taxation, invoice, receipt, capital, assets, liabilities, equity, journal, ledger, trail balance, income statement , balance sheet, charts of account are basic key concept to work in computerized accounting software like Peachtree.
- Depreciation is a systematic and rational process of distributing the cost of tangible assets over the life of assets.
- The General Journal is used to enter those types of transactions that are not readily categorized in the **Tasks** menu. Typical General Journal entries include chart of account beginning balances, depreciation, and account transfers.
- The Balance Sheet lists all assets, liabilities, and capital of a business entity as of a specific date, such as the last day of an accounting period or the last day of the year.
- To start working in Peachtree setting company profile, creating charts of Account, post entries in ledger and calculate balance sheet using Peachtree are basic level operation.
- Learner must have expert level skill in MS Excel create different types of sheets; apply formulas e. g mathematical, logical, computational and statistical and proficient in creating charts.

Frequently Asked Questions (FAQs)

FAQ 1: What is formula?

Answer A self or user made method of calculation within a spreadsheet is called Formula. For example; =A1+C3/4-D2

FAQ 2: What do you mean by Function?

Answer A premade or built-in method of calculation within the spreadsheet is called Function? For example; MODE(A1:D4), AVERAGE(C3:D6)

FAQ 3: What is Internal Rate of Return?

Answer The Internal Rate of Return is the interest rate received for an investment consisting of payments (negative values) and income (positive values) that occur at regular periods. The IRR() function in the spreadsheet is used to calculate Internal Rate of Return.

FAQ 4: Define Standard Deviation?

Answer The Standard Deviation is a measure of how widely values are dispersed from the average value (arithmetic mean). The STDEV() function in the spreadsheet is used to calculate Standard Deviation.

FAQ 5: Define Pie chart?

Answer A graphic representation of quantitative information by means of a circle divided into sectors, in which the relative sizes of the areas (or central angles) of the sectors correspond to the relative sizes or proportions of the quantities. Pie Charts are always used to display one data series.

FAQ 6: What do you mean by a Debit entry in accounting?

Answer A debit is an accounting entry that either increases an asset or expense account, or decreases a liability or equity account. It is positioned to the left in an accounting entry.

FAQ 7: What do you mean by a Credit entry in accounting?

Answer A credit is an accounting entry that either increases a liability or equity account, or decreases an asset or expense account.

FAQ 8: Define financial reporting?

Answer Financial reporting tells the real positions of a business. It consists of Profit & Loss Account, Balance Sheet and Cash flow.

FAQ 9: What is Balance sheet?

Answer A statement of the assets, liabilities, and capital of a business or other organization at a particular point in time, detailing the balance of income and expenditure over the preceding period.

FAQ 10: What is Journal in accounting?

Answer In accounting and bookkeeping, a journal is a record of financial transactions in order by date. A journal is often defined as the *book of original entry*. Manual systems usually had a variety of journals such as a sales journal, purchases journal, cash receipts journal, cash disbursements journal, and a general journal.

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

1. **To insert a function in Excel, Select _____.**
 - a. Insert tab, Insert Function Button
 - b. Formulas tab, Insert Function
 - c. Home tab, Insert
 - d. All of the above

2. **Which of the following is not the correct method of editing the cell content?**
 - a. Press the Alt key
 - a. Press the F2 key
 - b. Click in the Formula bar
 - b. Double click cell

3. **A function within another function is called _____.**
 - a. Round Function
 - a. Sum Function
 - b. Text Function
 - b. Nested Function

4. **Peachtree Accounting is the part of _____.**
 - a. Financial Accounting
 - b. Advanced Accounting
 - c. Computerized Accounting
 - d. Cost Accounting

5. **The cell reference for cell range of C1 to X8 is _____.**
 - a. C1;X8
 - b. C1.X8
 - c. C1,X8
 - d. C1:X8

6. Which of the following is not the correct syntax of a SUM Function?

- | | |
|-----------------------|-----------------|
| a. =SUM(D1, F3) | b. =SUM(D1:F3) |
| c. =SUM(D1:D3, F1:F3) | d. =SUM(D1' F3) |

7. Which of the following is used to insert new line in the same cell?

- | | |
|---------------|----------------|
| a. Enter | b. Alt+Enter |
| c. Ctrl+Enter | d. Shift+Enter |

8. Which of the following is used to add two cells (A1 and A2)?

- | | |
|---------------------|----------------|
| a. =A1 + A2 | b. =Add(A1+A2) |
| c. =together(A1:A2) | d. A1 plus A2 |

9. The advantage of using a spreadsheet is:

- | | |
|--|---|
| a. Calculations can be done automatically. | b. Changing data automatically updates calculations |
| c. More flexibility | d. All of the above |

10. Which of the following is a Mathematical Function?

- | | |
|-----------|----------------------|
| a. MODE() | b. AND() |
| c. MOD() | d. None of the above |

Answer Key

MCQ Number	Correct Answer
1	b
2	a
3	d
4	c
5	d
6	d
7	b
8	a
9	d
10	c

OFFICE - ASSISTANT



Module-5

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 5: Business Functional Process Area (Inventory Control-Store Keeping)

Learning Outcomes

After completion of this learning module, you will be able to:

- Understand the different commonly known terminologies.
- Understand different warehousing techniques.
- Familiar with applicable depreciation rules.
- Suggest and Implement safety parameters for protection of Inventory.
- Keep record of entry and exit dates for each and every item.
- Post (Input) the stock entries in any database tool e.g. Microsoft Access table/form.
- Apply different search criteria (query) on data.
- Generate stock report(s).
- Import report to different formats.
- Understand the functionality of “Create” tab.
- Create table in Microsoft Access.
- Design form for a table.
- Design different queries applicable for a table.
- Design and generate (Produce) reports from a table.

Learning Unit 1: Basic Terminologies of Store Keeping

Overview

Store-keeping includes the receipts and issues of materials, their recording, movements in and out of the store and safeguarding of materials. There are different terminologies used for store keeping like Stock, JIT, FMCG, Cost of Goods, Freight, Supply chain system and many others. This learning unit will cover the basic terminologies about store keeping, use of warehouses, depreciation and its types. After completion of this learning unit you will be able to describe the store keeping strategies, different warehousing techniques and depreciation and its types.

Remember

The basic job of the Stores Manager hence is to receive the goods and act as a caretaker of the materials and issue them as and when Production demands it.

1. Terminologies of Store Keeping

Store Keeping

A store refers to “raw materials” work-in-progress and finished goods remaining in stock. Store-keeping means the activities relating to purchasing, issuing, protecting, storing and recording of the materials. Store-keeping includes the receipts and issues of materials, their recording, movements in and out of the store and safeguarding of materials. The store is a service department headed by a store-keeper who is responsible for a proper storage, protection and issue of all kinds of materials. Many terminologies are used for store keeping which are given below:

Do you know!

FMCG's are all the things you buy regularly and probably like soap, shampoo, anything you need.

1. Stock

Stocking is the process of filling the store's shelves and displays with merchandise for sale, commonly referred to as "stock." Stocking can also refer to the process of storing goods in the store's backroom or warehouse.

Stock

The goods or merchandise kept on the premises of a shop or warehouse and available for sale or distribution.

2. Just In Time (JIT)

JIT or Just In time is an inventory strategy that companies employ to increase efficiency and decrease waste by receiving goods only as they are needed in the production process, thereby reducing inventory costs. Just in time inventory is intended to avoid situations in which inventory exceeds demand and places increased burden on business to manage the extra inventory.

3. FMCG (Fast Moving Consumer Goods)

Fast-moving consumer goods (**FMCG**) or consumer packaged goods (CPG) are products that are sold quickly and at relatively low cost. It includes non-durable goods such as soft drinks, toiletries, processed foods and many other consumables.

Do you know!

The just-in-time inventory model allows companies to reduce their overhead expenses. re their products.



Work Cycle of FMCG

4. Cost of Goods

There are two types of cost of goods that is necessary to consider. These are given below:

Remember

Cost of goods sold is the *cost* of the merchandise that was *sold* to customers.

Cost of Goods Sold

Cost of goods sold (COGS) is the direct costs attributable to the production of the goods sold by a company. This amount includes the cost of the materials used in creating the good along with the direct labor costs used to produce the good. COGS appear on the income statement and can be deducted from revenue to calculate a company's gross margin. Also referred to as "cost of sales."

$$\begin{array}{c}
 \text{COST OF GOODS SOLD} \\
 \text{(Cost of Sales)}
 \end{array}
 =
 \begin{array}{c}
 \text{OPENING} \\
 \text{INVENTORIES}
 \end{array}
 +
 \begin{array}{c}
 \text{PURCHASES}
 \end{array}
 -
 \begin{array}{c}
 \text{CLOSING} \\
 \text{INVENTORIES}
 \end{array}$$

Cost of Goods Sold Formula

Cost of Goods Manufactured

Cost of goods manufactured is based on the amount of work-in-process completed. This work-in-process includes costs of direct materials put into production, plus direct labor and overhead.

COST OF GOODS MANUFACTURED

FORMULA



Cost of Goods Manufactured Formula

5. Freight

Freight is a charge paid for carriage or transportation of goods by air, land, or sea. Goods may be transported on freight-prepaid or freight -collect basis:

If the freight is paid by the consignor, the goods remain the consignor's property until their delivery is taken by the consignee upon their arrival at the destination, and payment of the consignor's invoice.

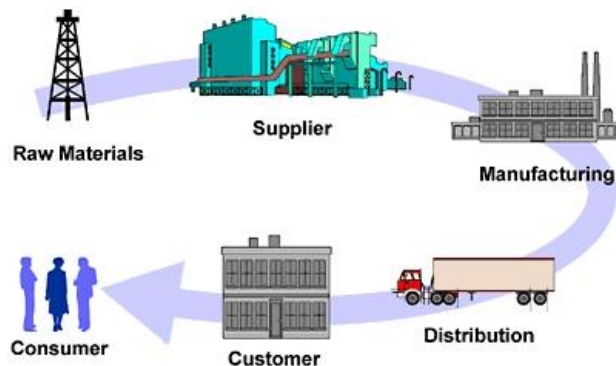
If freight is paid by the consignee, the goods become the consignee's property when handed over to the carrier against a bill of lading.

6. Supply-Chain System

Supply chain management (**SCM**) is the system of the flow of goods and services. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. Supply chain management has been defined as the "design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally.

Supply Chain

A supply chain is a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer.



Supply chain System

7. Periodic Maintenance Schedule

Significant activities carried out regularly to maintain the condition or operational status of a building, equipment, machine, plant, or system. Also called time based maintenance. A complete schedule of

maintenance can be created and automatically added to a specific Service Calendar. Maintenance schedules can even be divided by “route”.

8. Expiry Date

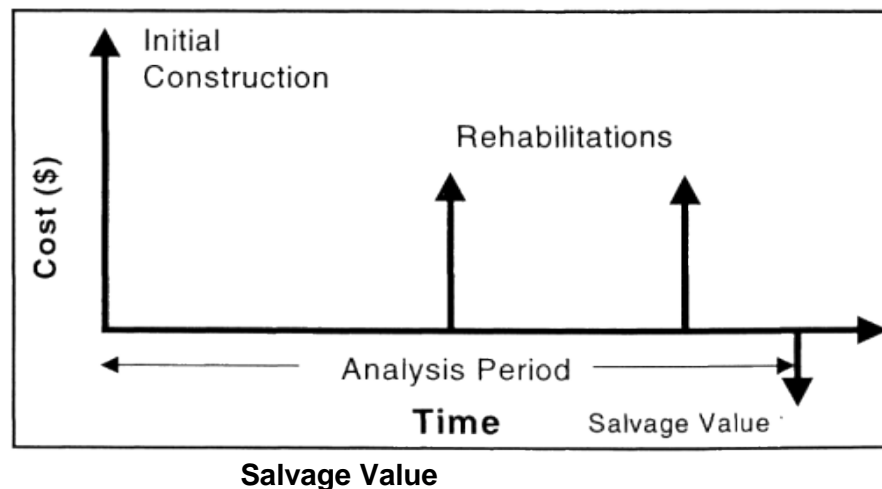
The date on which something comes to an end, can no longer be used, or is no longer safe to be eaten is called its expiry date.

9. Salvage Value

Salvage value is the estimated resale value of an asset at the end of its useful life. Salvage value is subtracted from the cost of a fixed asset to determine the amount of the asset cost that will be depreciated. Thus, salvage value is used as a component of the depreciation calculation.

Remember

Salvage value is the estimated resale value of an asset at the end of its useful life.



2. Warehouse

Warehouse is a commercial building for storage of goods. Warehouses are used by manufacturers, importers, exporters, wholesalers, transport businesses, customs, etc. They are usually large buildings in industrial areas of cities, towns and villages. They usually have loading docks to load and unload goods from trucks. Sometimes warehouses are designed for the loading and unloading of goods directly from railways, airports, or seaports.

Warehouse Management System

Warehouse Management System (**WMS**) is a software application that supports day-to-day operations in a warehouse. WMS programs enable centralized management of tasks such as tracking inventory levels and stock locations. WMS systems may be standalone applications or part of an Enterprise Resource Planning (ERP) system.

Warehousing Techniques

Proper warehousing techniques can lead to achieving the company goals. But it requires a fine-tuned combination of strategic actions, organizational capabilities, and enabling technologies.

1. Focus on the Long Term

Concentrating on the short-term effects of a warehouse management system can cause a business to fixate too closely on the upfront deployment costs. Projecting what the organization will look like five to ten years down the road can help decision-makers find a solution that responds to its greatest

perceived challenges. If uncertainty persists, it's important to find an option that is adaptable and versatile enough to change as the business does.

2. Establish a Project Team

It allows for a dedicated team to concentrate on implementation as their main activity, instead of as a side project. It also diversifies the input that goes into the selection process. Thinking long term, it establishes a group of employees well-versed in the solution selected and able to articulate its business case to other personnel.

3. Recognize the Value of a Business Partnership

The warehouse management solutions provider should be a company that can readily accommodate every need. Forming an alliance can help the organization better communicate its warehousing challenges and objectives. This enables the provider to customize its management solution to address the areas that need the most short- and long-term attention.

Learning Unit 2: Data Management

Overview

Remember

There are many other software used for database management like Oracle, My SQL but MS Access is easy to use for its users.

The most important asset of any organization is data. It is necessary to keep the data in manageable form so it can take no time to keep or retrieve it. This learning unit covers the data management in a database software like MS Access. After completion of this learning unit you will be able to create database, tables / forms, Report generating and exporting it in other format, Encrypting a database using password in MS Access 2013.

1. Creating Database and Table in MS Access

Database

A database is a collection of information that is organized so that it can easily be accessed, managed, and updated.

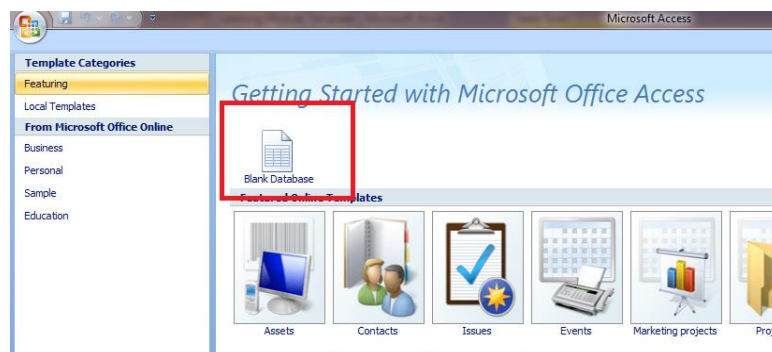
MS access is one of the most popular and user friendly database tool. MS Access database hold the actual data records inside tables. The user can add, edit, and delete records directly from these tables. Databases can include *forms* for entering data, *queries* for searching within it, *reports* for analyzing it, and *tables* for storing it. Whenever a user work with database, She/he is working with many of these objects at once. For entering data in a database in MS Access first create a Database and then create a table in MS Access.

Creating a Database in MS Access

Do you know!

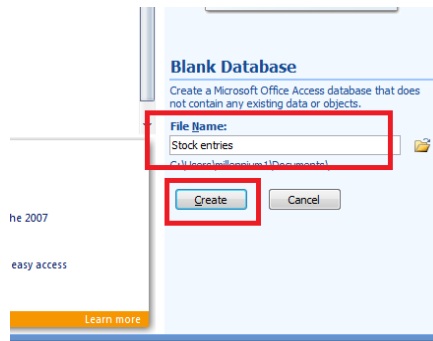
MS Access is one of the most popular and user friendly database tool. MS Access database hold the actual data records inside tables.

1. Open MS Access from the computer.
2. Click on create database option.



Creating database in MS Access

3. Write the name of the database and then click on Create button.



Creating database in MS Access

4. The database will be created.

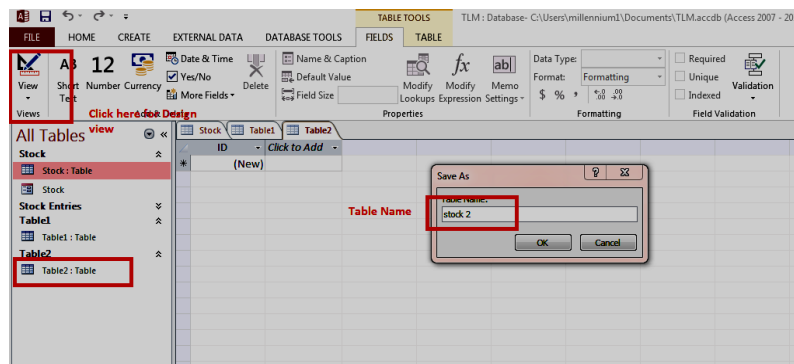
Creating Table in MS Access using Design View

For entering data in database it is necessary to create table/ Form in MS Access. For creating table do the following:

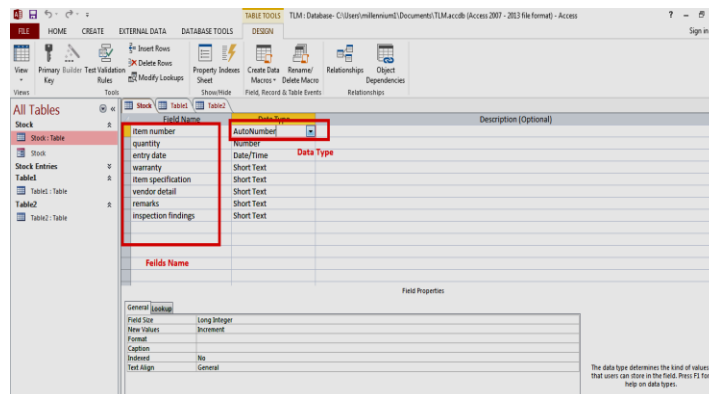
1. In MS Access click on Create Tab and then click on Table.
2. Click on the View button and open the table in *Design View*.

Design View

Design view enables you to design and set up your database (kind of a "behind the scenes" view of your database).



3. Now give the field names that are required.
4. Set the type of data of each field in right side column.



Creating Table in MS Access

5. Enter sample data of each field in each field of the table in *Datasheet View*.
6. The table is created now.

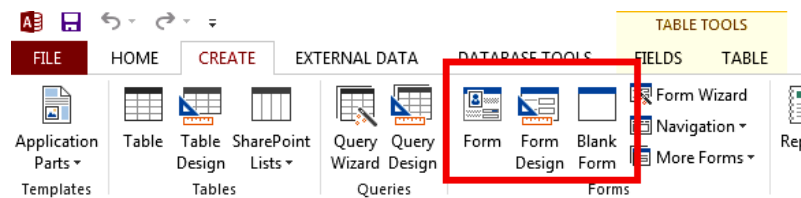
2. Designing a Form in MS Access

Creating *forms* for database can make entering data more convenient. When a form is created, it can design in a way that works with database and that make sense to the user.

Creating a Form

Access makes it easy to create a *Form* from any table in database. Any form that is created from a table will let view the data that's already in that table and add new data. There are different methods of creating forms. Options include using the Form Wizard, Design view, and even starting with a blank form. The option you choose will depend on your own preference and perhaps the type of form that you want to create.

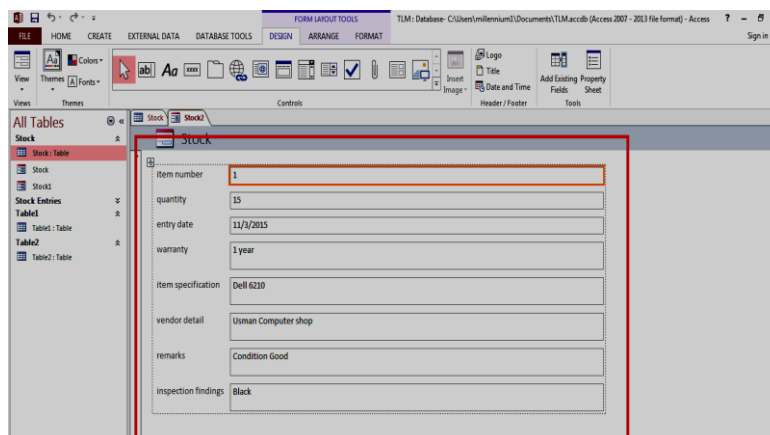
- In the Navigation pane, select the table you want to use to create a form.
- Select the *Create* tab, locate the *Forms* group, and click the *Form* command.



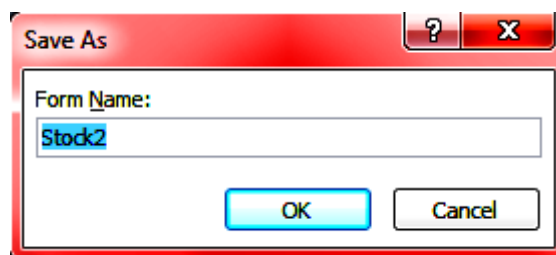
1. Your form will be created and opened in *Layout View*.

Remember

You can also add fields in a Form from different tables.



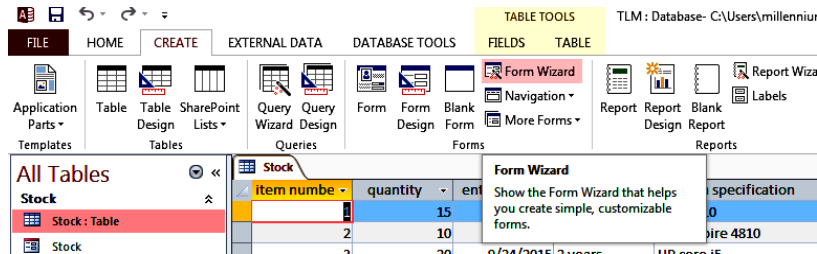
To save the form, click the *Save* command on the *Quick Access Toolbar* or press *CTRL+ S*. When prompted, type a name for the form, then click *OK*.



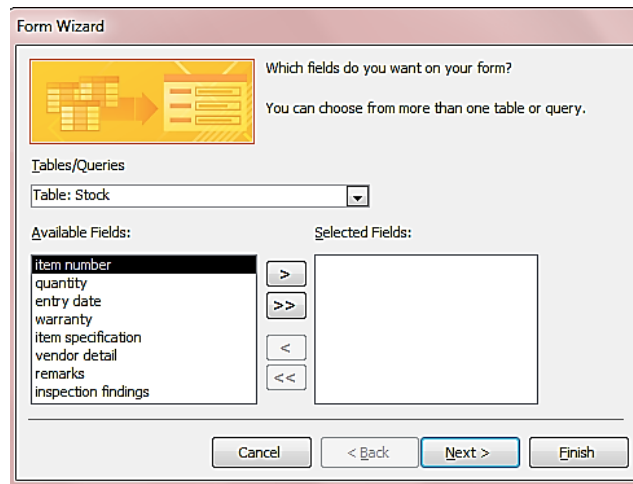
Creating Forms Using Wizard

Form can also be created using Form wizard. For creating forms using wizard do the following:

1. Click on Form wizard under Create Tab.



2. A dialogue box will be open. Select the fields that are required.

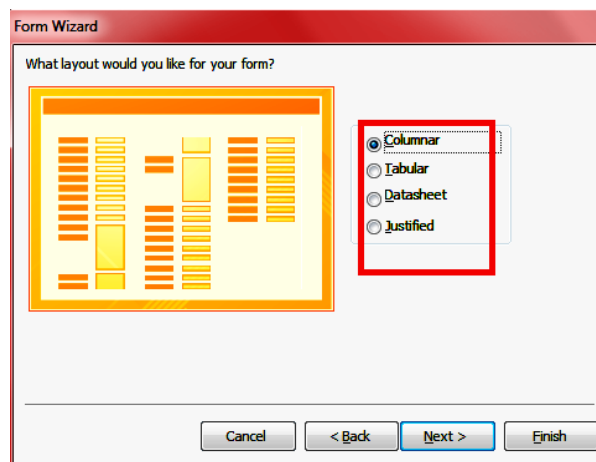


Do you know!

Wizard is the most easy way to create forms in MS Access.

Creating Form using Wizard

3. Click *Next* and select the required View of the form. Tabular, columnar or any other. Then click *Next* button.



Creating Form using Wizard

4. Select the required option in next dialogue box and click Finish button.

The image shows a 'Form Wizard' dialog box. On the left is a yellow graphic with a checkmark. The text inside says: 'What title do you want for your form?' with a text box containing 'Stock2'. Below that, it says: 'That's all the information the wizard needs to create your form. Do you want to open the form or modify the form's design?'. There are two radio buttons: 'Open the form to view or enter information.' (which is selected) and 'Modify the form's design.'. At the bottom are buttons for 'Cancel', '< Back', 'Next >', and 'Finish'.

Creating Form using Wizard

5. Your form will be added and open in *Layout View*.

3. Inserting Data into the Form

After creating the forms it is very easy to enter data into the form. For entering data into the form do the following:

1. When the form is created in Layout view of the Form click on the required field in which you want to enter the data.

Do you know!

You can insert data in a form using datasheet view of that table also.

The image shows a form titled 'Stock2' in 'Layout View'. It has several sections: 'item number' (with value 7), 'quantity' (with value 20), 'entry date' (with value 11/16/2015), 'warranty', 'item specification' (with value 'Lenovo core i5'), 'vendor detail' (with value 'Ati'), 'remarks', and 'inspection findings'. Red boxes highlight the 'quantity' and 'entry date' fields in the top section, and the 'vendor detail' field in the bottom section.

Inserting Data in Form

2. Enter the data in all the fields.

The image shows the bottom of the form, specifically the record navigation bar. It displays 'Record: 7 of 7' and several navigation buttons (back, forward, first, last, etc.). A red box highlights the navigation buttons.

- For inserting new record click on the **aero** button in search field at the bottom. The new record will be inserted.

Stock2		
item number	quantity	entry date
(New)		
warranty		
item specification		
vendor detail		
remarks		
inspection findings		

Remember

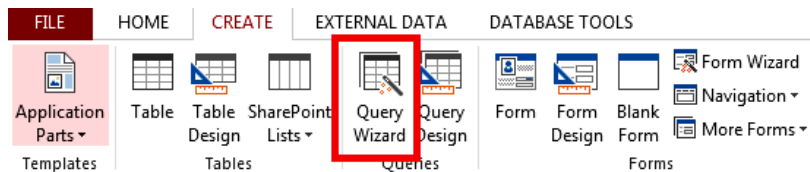
Query can be created using one table and two or more tables also.

Adding New Record in Form

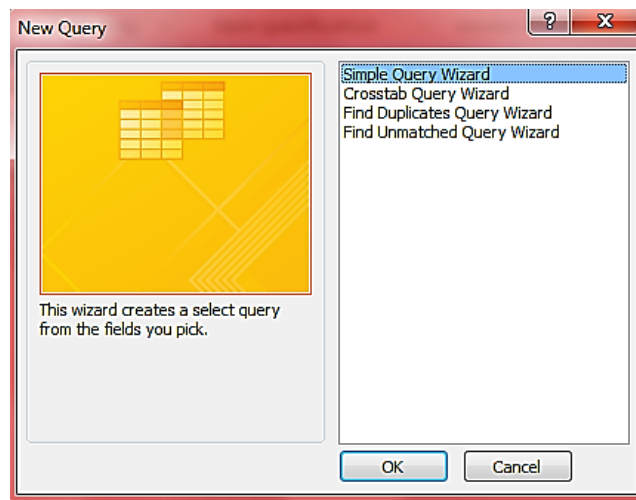
4. Designing a Simple Query

Queries allow you to get information from one or more tables based on a set of search conditions you define. The real power of a relational database lies in its ability to quickly retrieve and analyze your data by running a query. Creating query using wizard is easy.

- Select the **Create** tab on the Ribbon, and locate the **Queries** group.

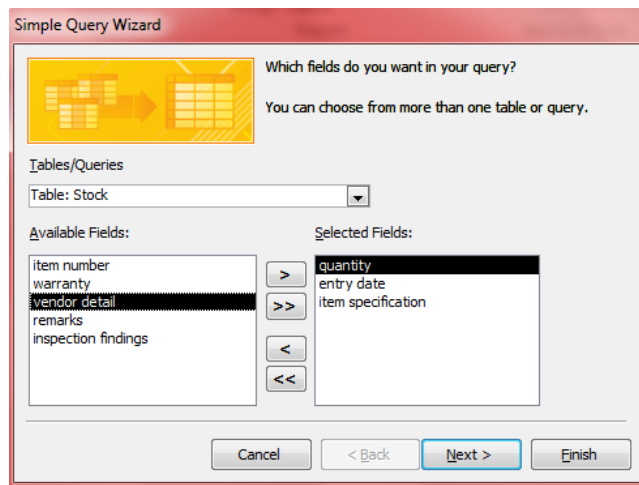


- A dialogue box will appear select the simple Query option and then click **Ok**.



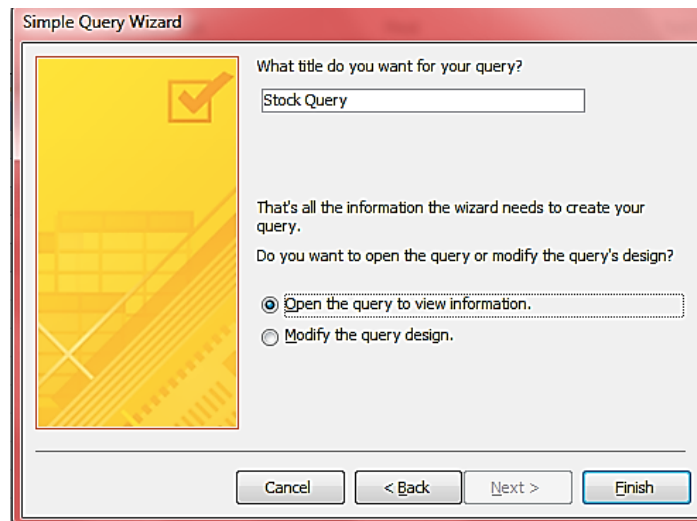
Creating Simple Query Using Wizard

3. Another dialogue box will appear select the columns from the table from which you want to generate *Query*. Click *Next*.



Creating Simple Query Using Wizard

4. Again in the next dialogue box it will ask would you like to detail or summary Query. Select your required option and click next.
5. In next dialogue box it will ask about query *Title* and option to *Open* the query or *Modify* it in design view.
6. Select the option you want and click *Finish*.



Remember

Query is asking a question about something, especially in order to express one's doubts about it or to check its validity or accuracy.

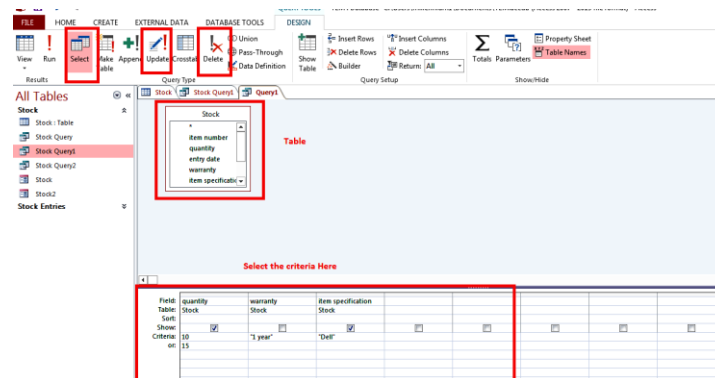
Creating Simple Query Using Wizard

- The Query will be created. Save the query using save command or CTRL+ S.

Sort & Filter		Records	
Stock	Stock Query		
quantity	entry date	item specification	
15	11/3/2015	Dell 6210	
10	11/4/2015	acer aspire 4810	
20	9/24/2015	HP core i5	
15	10/30/2015	Lenovo core i5	
20	11/1/2015	HP core i3 laptops	
20	11/10/2015	HP core i7	
20	11/16/2015	Lenovo core I5	
*			

Creating Simple Query Using Wizard

- You can Insert, Delete and Update a query to open it in Design View.



Edit a Query

- Select the required fields from the table in design view and give criteria to run any query (Insert, Delete, Update) and click on Run command in the ribbon. The query will be created.

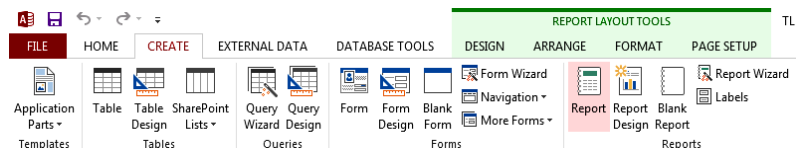
quantity	item specification
15	Dell 6210
15	Lenovo core i5
*	

Query Result

5. Designing and Generating Report form a Table

Reports give the ability to present components of the database in an easy-to-read, printable format. Access let the user to create reports from both tables and queries.

1. Open the table or query you want to use in your report.
2. Select the Create tab on the Ribbon. Locate the Reports group, then click the Report command.



Report Button

1. It's likely that some of the data will be located on the other side of the page break. To fix this, resize the fields. Simply select a field, then click and drag its edge until the field is the desired size. Repeat with additional fields until all of your fields fit.

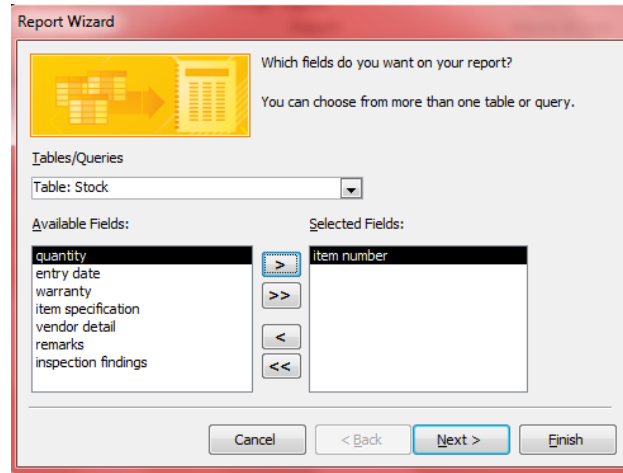
quantity	entry date	item specification
15	11/3/2015	Dell 6210
10	11/4/2015	acer aspire 4810
20	9/24/2015	HP core i5
15	10/30/2015	Lenovo core i5
20	11/1/2015	HP core i3 laptops
20	11/10/2015	HP core i7
20	11/16/2015	Lenovo core i5

Resizing Report Fields

Organizing the Report

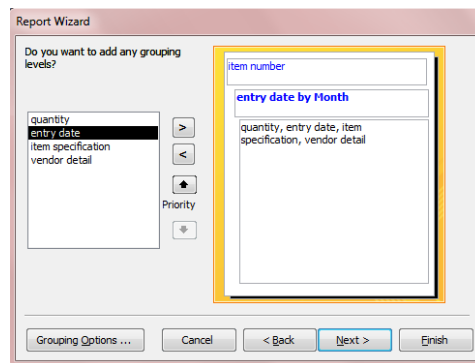
Information is often easier to understand when it is divided into groups. Microsoft Office Access 2013 makes working with grouped reports easy. You can create a basic grouped report by using the Report Wizard, you can add grouping and sorting to an existing report, or you can revise grouping and sorting options that have already been defined. For setting group levels and order of fields:

1. Click on Report Wizard button under Create Tab.
2. The Report Wizard will appear.
3. Click the drop-down arrow to select the table or query that contains the desired field(s).
4. Select a field from the list on the left, and click the right arrow to add it to the report.



Report Wizard Selecting Table and Fields

5. Click Next when you are satisfied with the basic organization of your data.
6. If you're not satisfied with the way your data is organized, you can now modify the grouping levels. Select a field from the list, and click the right arrow to add it as a new level.



Adding Grouping Levels

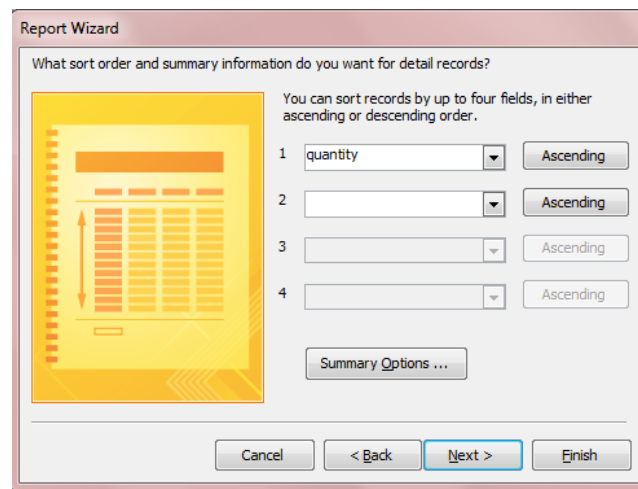
Remember

Depending on the grouping you have chosen for your data, your sorting options may be limited.

7. If necessary, modify the order of your grouped fields by selecting a field and clicking the up or down Priority arrow to move it up or down a level.

Sorting Report Data

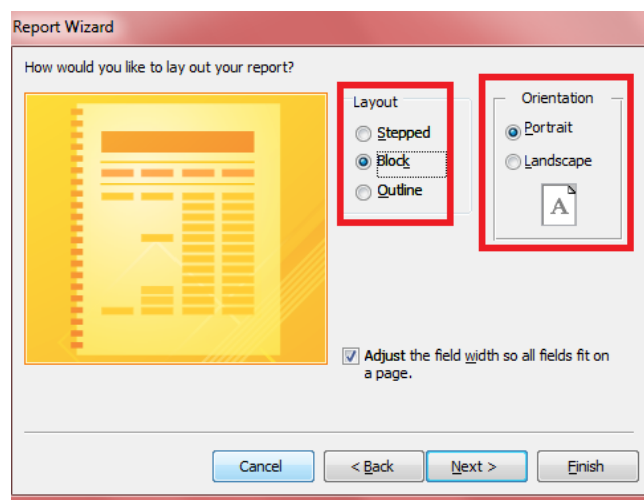
1. Click the top drop-down arrow, and select the name of the first field you want to sort.
2. Click the button on the right to change the sort to ascending or descending.



Apply Sorting

Selecting a layout and Orientation

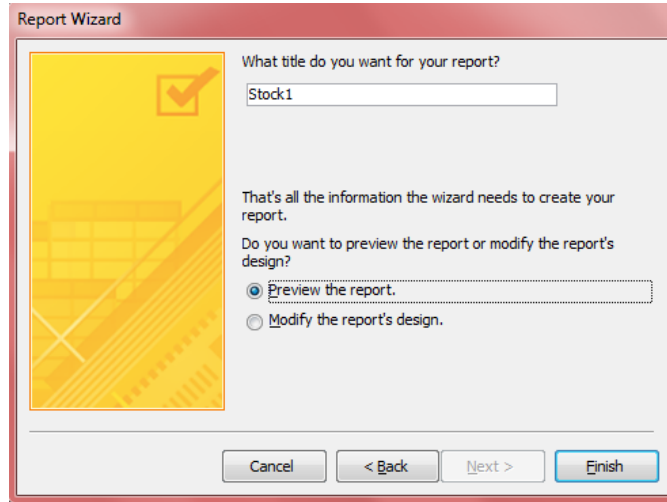
1. Click the various layout options to see how they look, then select one to use in your report.
2. Select either a portrait (tall) or landscape (wide) orientation for your report. Click Next.



Selecting Layout and Orientation

3. Select the text box, and type the title you would like for your report.

4. Select whether you want to preview the report or modify its design, then click Finish.



Selecting Title for the Report

5. The report will be created and saved.

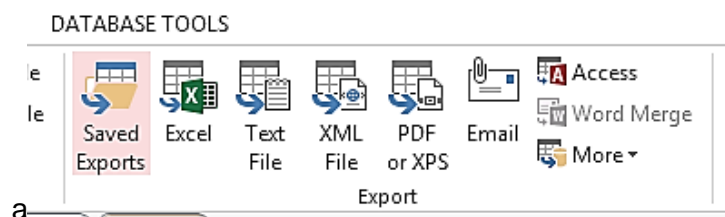
Item number	entry date	Item specification
1	11/3/2015	Dell 6210
2	11/4/2015	acer aspire 4810
3	9/24/2015	HP core i5
4	10/30/2015	Lenovo core i5
5	11/1/2015	HP core i3 laptops
6	11/10/2015	HP core i7
7	11/16/2015	Lenovo core i5

Report Preview

6. Exporting Report in Other Formats

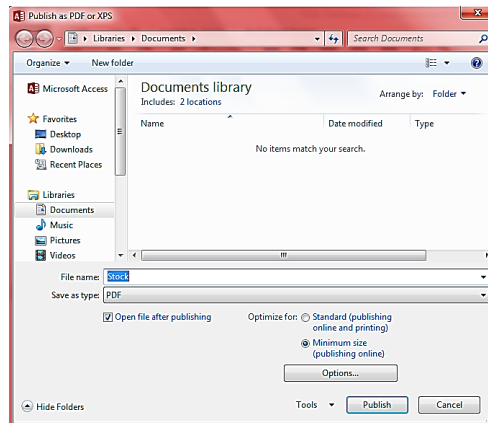
For exporting report in other formats, you need to follow the steps given below:

1. From the Home tab, click the View command, then select Print Preview from the drop-down list.
2. Locate the Data group on the Ribbon.
3. Select one of the file type options, or click *More* to see options to save your report as a Word or HTML file.



Database Exporting Options

4. A dialog box will appear. Select the *location* where you want to save the report.
5. Enter a *file name* for the report, then click *Publish*.



Saving and Publishing a Report

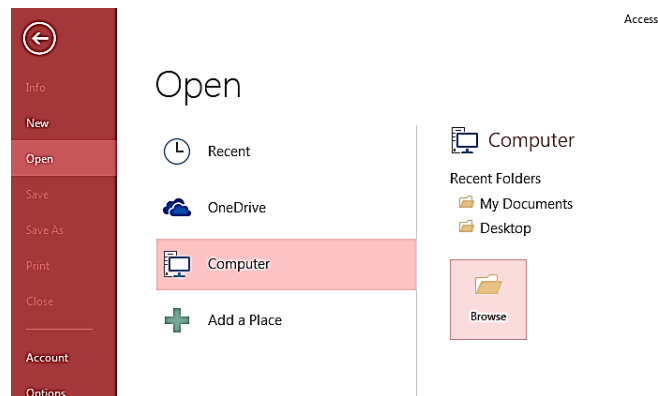
6. A dialog box will appear to notify you that your file has been successfully saved. Click Close to return to your report.

7. Protecting an Access Document with a Password

Encrypt a Database by using a password

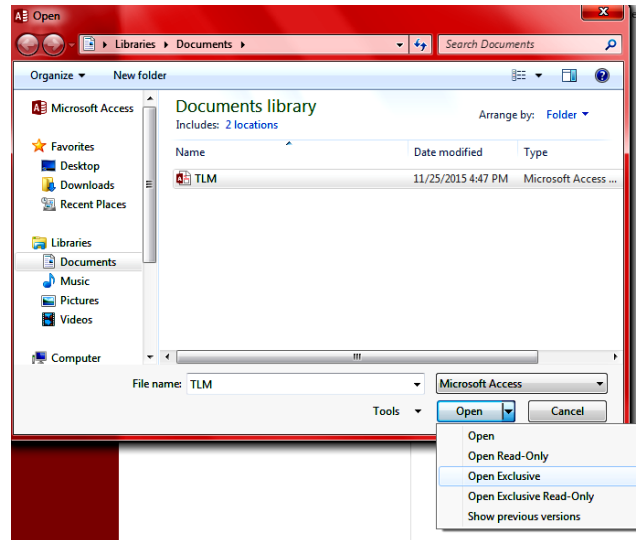
To create and apply a password to an Access 2013 database, use the following steps:

1. Open the database in Exclusive mode.
2. On the File tab, click Open.
3. In the Open dialog box, browse to the file that you want to open, and then select the file.



Browsing and Opening a Document

4. Click the arrow next to the Open button, and then click Open Exclusive.

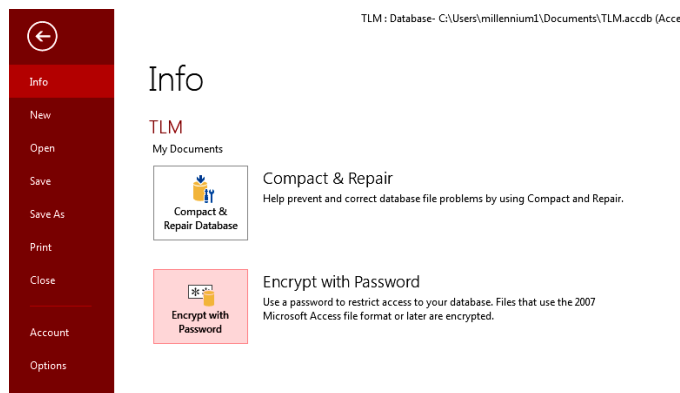


Data encryption

Data encryption is the act of changing electronic information into an unreadable state by using algorithms or ciphers.

Browsing and Opening a Document

5. On the File tab, click Info, and then click Encrypt with Password.



Encrypting a Document

6. The Set Database Password dialog box appears.
7. Type your password in the Password box, type it again in the Verify box, and then click OK.

Learning Unit 3: Stock Entries

Overview

This learning unit will cover the procedure for creating database creating form or tables and make stock entries in database, apply different searching techniques on this database creating reports. After completion of this learning unit you will be able to create database, creating Tables/ forms, searching data in database like create query and generating reports.

1. Stock Keeping of Inventory in MS Access

Create a database and then create a table/ form for stock entries according to the following instructions:

Description: This activity will be performed by the individual to create a database and table/ Form of stock entries.

- Develop a table in MS Access with following fields Item no. , Quantity, Entry date, Warranty, Item Specification, Vendor Data, Remarks, Inspection findings.
- Design form for above designed table
- Make at least 20 entries using form in above designed table
- Search data based on following criteria on item whose weight are less than 2 KG and having green color.
- Generate report of table data and export in other format like .pdf, word and excel.

Time Guideline: This activity will take 2 and half hours.

Presentation: After the completion of activity instructor will check individual work.

Summary of Module

- A store refers to “raw materials” work-in-progress and finished goods remaining in stock. Store-keeping means the activities relating to purchasing, issuing, protecting, storing and recording of the materials.
- The goods or merchandise kept on the premises of a shop or warehouse and available for sale or distribution.
- Fast-moving consumer goods (FMCG) or consumer packaged goods (CPG) are products that are sold quickly and at relatively low cost. It includes non-durable goods such as soft drinks, toiletries, processed foods and many other consumables.
- The just-in-time inventory model allows companies to reduce their overhead expenses on their products.
- Cost of goods sold (COGS) is the direct costs attributable to the production of the goods sold by a company. This amount includes the cost of the materials used in creating the good along with the direct labor costs used to produce the good.
- Freight is a charge paid for carriage or transportation of goods by air, land, or sea.
- Salvage value is the estimated resale value of an asset at the end of its useful life. Salvage value is subtracted from the cost of a fixed asset to determine the amount of the asset cost that will be depreciated.
- A warehouse is a commercial building for storage of goods. Warehouses are used by manufacturers, importers, exporters, wholesalers, transport businesses, customs, etc. They are usually large buildings in industrial areas of cities, towns and villages.
- Depreciation is the gradual decrease in the economic value of the capital stock of a firm or other entity, either through physical depreciation, changes in the demand for the services of the capital in question.
- MS access is one of the most popular and user friendly database tool. MS Access database hold the actual data records inside tables. The user can add, edit, and delete records directly from these tables.
- Creating forms for database can make entering data more convenient. When a form is created, it can design in a way that works with database and that make sense to the user

Frequently Asked Questions (FAQs)

FAQ 1: What is the maximize size of an Access database?

Answer The maximum size of an Access database is two (2) gigabytes. This limit applies to both .mdb files and the newer Access database format files .accdb. For Access databases that have reached this limit, you have a number of options.

FAQ 2: What is store management?

Answer Store Management includes various responsibilities such as receiving the raw material, protecting the raw materials protecting from damage, spoilage and keep the finished goods until the goods are dispatched. Store management also includes distribution of material in right quantity at the right time and at the right place.

FAQ 3: What is JIT Management system?

Answer *Just in time (JIT)* inventory is a management system in which materials or products are produced or acquired only as demand requires.

FAQ 4: What is the purpose of Depreciation?

Answer The purpose of depreciation is to charge to expense a portion of an asset that relates to the revenue generated by that asset. This is called the matching principle, where revenues and expenses both appear in the income statement in the same reporting period, which gives the best view of how well a company has performed in a given accounting period.

FAQ 5: What are the Characteristics of FMCG?

Answer

- Frequent purchase
- Low involvement (little or no effort to choose the item)
- Low price
- Short shelf life
- Must use for daily consumption

FAQ 6: What is Warehouse Management system?

Answer A warehouse management system (WMS) is a part of the supply chain and primarily aims to control the movement and storage of materials within a warehouse and process the associated transactions, including shipping, receiving, put away and picking.

FAQ 7: Is the Residual value and salvage value is the same?

Answer Residual value, salvage value and scrap value are three terms that refer to the expected value at the end of the useful life of the property, plant and equipment used in a business.

FAQ 8: What is the residual value of an asset?

Answer In accounting, residual value is another name for salvage value, the remaining value of an asset after it has been fully depreciated. The residual value derives its calculation from a base price, calculated after depreciation.

FAQ 9: Why MS Access is used?

Answer MS Access is easy to use for its users

FAQ 10: What is Freight?

Answer A freight rate is a price at which a certain cargo is delivered from one point to another.

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

1. **All of the following are the methods of inventory costing except_____.**
 - a. FIFO
 - b. LIFO
 - c. AVCO Average cost
 - d. Stock take
2. **Opening inventory + Net purchases = What?**
 - a. Ending inventory
 - b. Closing stock
 - c. Cost of goods manufactured
 - d. Cost of goods available for sale
3. **An asset possess which of the following?**
 - a. Future economic benefits for the business
 - b. All kind of benefits for the business
 - c. Expenses for the business
 - d. Merits and Demerits for the business
4. **Which of the following is not an inventory?**
 - a. Machines
 - b. Raw material
 - c. Finished products
 - d. Consumable tools
5. **What is depreciation?**
 - a. Cost of a fixed asset
 - b. Cost of a fixed asset's repair
 - c. The residual value of a fixed asset
 - d. Portion of a fixed asset's cost consumed during the current accounting period.
6. **What are the main objects that make up an Access Database?**
 - a. Records, Forms, Queries, and Tables
 - b. Forms, Queries, Records, and Reports
 - c. Forms, Queries, Tables, and Reports
 - d. Records, Tables, and Queries
7. **Ahmad needs to compile a list of all of her customers who have not paid their bill yet. What's the best tool to do this?**
 - a. Forms
 - b. Query
 - c. Table
 - d. Record

8. In Access, the rows and columns of a table are referred to as _____.

- | | |
|---------------------------|--------------------------------|
| a. records and fields | b. records and categories |
| c. filters and categories | d. placeholders and categories |

9. Air freight is costly, but its speed may create savings because of:

- | | |
|---------------------------------|--|
| a. Lower Inventory | b. Getting to store shelves before water carriers. |
| c. Lower costs created by FIFO. | d. Other transportation modes take more time. |

10. A supply chain is essentially a sequence of linked:

- | | |
|------------------------------|------------------------------------|
| a. customer and prospects | b. suppliers and customers |
| c. supplier and manufacturer | d. events in the marketing process |

Answer Key

MCQ Number	Correct Answer
1	d
2	d
3	a
4	d
5	d
6	c
7	b
8	a
9	a
10	b

OFFICE - ASSISTANT



Module-6

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 6: Business Functional Process Area (HRM)

Learning Outcomes

After completion of this learning module, you will be able to:

- Understand the working of Human Resource management Information System.
- Keep Employees record updated.
- Provide assistance in calculation of Payroll of the company.
- Design and Create Organization's employee database.
- Update daily attendance (Punctuality, Regularity) record of each worker in database.
- Keep the accounts related information of each employee.
- Maintain the performance assessment of every individual.

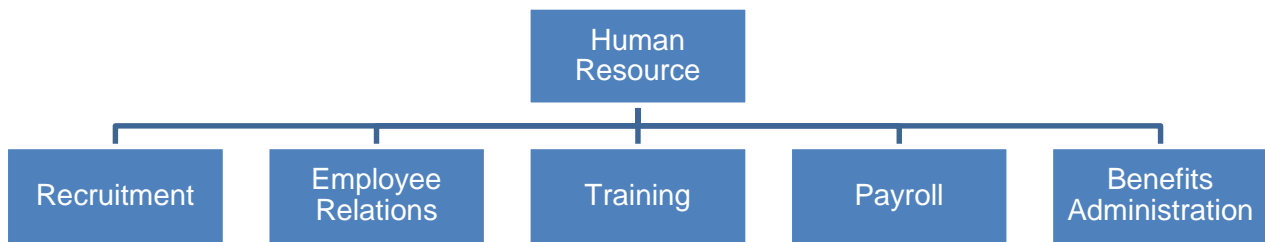
Learning Unit 1: Familiarity with HRM

Overview

In this learning unit, you will learn the working of Human Resource Management Information System, Employees record updation and calculation of Payroll of the company. After completion of this Learning unit you will be able to demonstrate HRIS, maintain employee record & payroll of company.

1. Common Human Resource Management Terminologies

Human Resource Management (HRM) is the process of hiring and developing employees so that they become more valuable to the organization. Human resource management includes conducting job analyses (TNA), planning personnel needs, recruiting the right people for the job, orienting and training, managing wages and salaries, providing benefits and incentives, evaluating performance, resolving disputes, and communicating with all employees at all levels. Examples of core qualities of HR management are extensive knowledge of the industry, leadership, and effective negotiation skills. Formerly called personnel management.



Human Resource Management Functions

Employee Retention

An effort by a business to maintain a working environment which supports current staff in remaining with the company. Many employee retention policies are aimed at addressing the various needs of employees to enhance their job satisfaction and reduce the substantial costs involved in hiring and training new staff. The advantages of high employee retention are as follows:

A lot of investment is needed to train an employee and to make him productive. If such an employee leaves the organisation; they lose the money invested and also an employee who could have contributed significantly to the organisation.

If a person employed in a critical role leaves, then it disturbs the functioning of the organisation. Also, to replace such an employee involves huge costs.

Human Resources Information System (HRIS)

A Human Resources Information System (HRIS) is software or online solution that is used for data entry, data tracking and the data information requirements of an organization's human resources (HR) management, payroll and bookkeeping operations. A HRIS is usually offered as a database.

HRIS is geared toward enhancing the capacity of HR management to:

- Absorb new and promising technologies
- Simplify workflow
- Optimize precision, stability and credibility of workforce data
- Simplify the deployment and collection of data

An efficient HRIS provides:

Remember

An efficient HRIS provides an organization with information on virtually anything required to monitor and examine staff/applicant data.

- Administration of all staff data
- Reporting and evaluation of staff data
- Company-related records, including staff handbooks, disaster evacuation methods and security recommendations
- Rewards management, such as enrolment, status modifications and updating of personal data
- Comprehensive integration with payroll, in addition to other accounting systems and financial software
- Applicant monitoring and resume administration

An efficient HRIS helps an organization track:

- Paid time off (PTO) and attendance
- Pay scale history
- Positions and pay grades
- Overall performance development strategies
- Coaching obtained
- Disciplinary actions
- Personal staff data
- Key staff succession plans
- Identification of prospective staff
- Applicant administration, including interview process and selection

An organization can select and customize a HRIS it to meet its requirements. An efficient HRIS provides an organization with information on virtually anything required to monitor and examine staff/applicant data. A customized HRIS helps HR train staff to execute administrative tasks, allowing HR to focus on other strategic functions.

In addition, information required for knowledge development, equal treatment, staff management and career growth is provided. Also, managers can gain access to the information required to efficiently and legally assist the success of their direct reports.



HRIS Functions

Below are tools and employee retention tips for communicating with staff:

- Toilet notices and notices in lifts
- Electronic
- SMS
- Telephone campaign
- Email
- Surveys
- Questionnaires
- Climate surveys
- Quarterly feedback session
- Desk drops
- Fun email surveys questions with fun surveys email people and my space bulletin surveys
- Create online calendars
- Bookmark template
- Letterhead templates
- Creative presentation idea
- Ice breakers staff meetings
- Goody bag idea
- Strange unique gifts

Fringe Benefits

Fringe benefits are tools used by human resources to hire and retain top talent and to help create a motivated workforce.

Fringe Benefits

The term fringe benefits refer to the extra benefits provided to employees in addition to the normal compensation paid in the form of wage or salary. Many years ago, benefits and services were labeled “fringe” benefits because they were relatively insignificant or fringe components of compensation. However, the situation now is different, as these have, more or less, become important part of a comprehensive compensation package offered by employers to employees.

Purpose

Fringe benefits are a major consideration in a total compensation package. Salaries are important, but employees often accept or leave a job based on the quality of fringe benefits. Health insurance costs have become very expensive and employees that may have previously left a job more likely stay for these benefits. Fringe benefits are tools used by human resources to hire and retain top talent and to help create a motivated workforce.

Do you know!

Google: Perks include free food, massages, offsite trips to places like Vegas and Hawaii, and a flexible work schedule, although according to one senior software engineer the company environment is so outstanding that "you don't really want to leave campus."

Examples of fringe benefits includes:

- Retirement benefit plans
- Group health insurance
- Medical, prescription, dental, and vision plans
- Long-term care insurance plans
- Life insurance coverage
- Relocation assistance
- Legal assistance plans
- Transportation benefits
- Child care benefits
- Adoption assistance
- Employee discounts (e.g. wellness programs, hotels and resorts, movie theaters, theme parks, business establishments, etc.)

2. Provide Assistance in Developing and Approving Company Policies

The following steps summaries the key stages involved in developing policies:

1. Identify Need

Policies can be developed:

- In anticipation of need (e.g. child protection policies should be in place once an organization starts to work with children or young people); and
- In response to need (e.g. a policy on a government strategy may be developed once proposals are published).

The company needs to constantly assess its activities, responsibilities and the external environment in order to identify the need for policies and procedures

2. Identify who will Take Responsibility

Delegate responsibility to an individual, working group, sub-committee or staff members, according to the expertise required. (More on the management committee's role in policy development).

3. Gather Information

Do you have any legal responsibilities in this area? Is your understanding accurate and up to date? Have other organizations tackled the same issue? Are there existing templates or examples that you could draw on? Where will you go for guidance?

4. Draft Policy

Ensure that the wording and length or complexity of the policy is appropriate to those who will be expected to implement it.

5. Consult with Appropriate Stakeholders

Policies are most effective if those who are consulted are supportive and have the opportunity to consider and discuss the potential implications of the policy. Depending on whether you are developing internal or external policies, you may wish to consult, for example:

- Supporters;
- Staff and volunteers;
- Management Committee members; and
- Service users or beneficiaries

Consult with stakeholders

Policies are most effective if those who are consulted with stakeholders.

6. Finalize / Approve Policy

Who will approve the policy? Is this a strategic issue that should be approved by the Management Committee or is the Committee confident that this can be dealt with effectively by staff? Bear in mind that, ultimately, the Management Committee is responsible for all policies and procedures within the organization.

7. Consider whether Procedures are Required

Procedures are more likely to be required to support internal policies. Consider whether there is a need for clear guidance regarding how the policy will be implemented and by whom. (e.g. a policy regarding receiving complaints will require a set of procedures detailing how complaints will be handled). Who will be responsible for developing these procedures? When will this be done? What will be the processes for consultation, approval and implementation?

8. Implement

How will the policy be communicated and to whom? Is training required (for internal policies)? Should the organization produce a press release (for external policies)?

9. Monitor and Review

What monitoring and reporting systems are in place to ensure that the policy is implemented and to assess usage and responses? On what basis and when will the policy be reviewed and revised (if necessary)?

3. Update the Employee Records

Remember

No surprises, opinions, or personal notes about the employee should ever be placed in an employee personnel file. Just the facts, no speculative thoughts, belong in an employee personnel file.

The employee personnel file is the main employee file that contains the history of the employment relationship from employment application through exit interview and employment termination documentation. Only Human Resources staff and the employee's immediate supervisor and manager may have access to the information in the employee personnel file, and it never leaves the Human Resources office.

The employee personnel file is generally stored in a locked, fire-proof file cabinet in a locked location that is accessible to Human Resources staff. The confidentiality of the employee information in the personnel file is of paramount importance.

Of all the company-kept employee files, the employee personnel file is most frequently accessed day-to-day for information by the employer, supervisor, or Human Resources staff.

4. Considerations about Employee Personnel File Content

Employment Contract

Any contract, written agreement, receipt, or acknowledgment between the employee and the employer (such as a non compete, an employment contract

The fundamental principles and questions to consider when filing any document in an employee personnel file are these.

- Will the employer need a particular document to justify decisions if the employer was sued? Would the employer need the document in a court of law?
- Does the employee know and understand that the document will be filed in his or her personnel file? In most cases, employers ought to have the employee sign the document, not to signify agreement with the contents of the document, but to acknowledge that they are aware of and have read the document.
- No surprises, opinions, or personal notes about the employee should ever be placed in an employee personnel file. Just the facts, no speculative thoughts, belong in an employee personnel file.

5. Contents of an Employee Personnel File

Following are recommendations about the documentation that an employer should keep in an employee personnel file.

Employment History includes the following:

- Job application
- Resume
- Resume cover letter
- Education verification
- Employment verification
- Rejection letter
- Position job description

- Job analysis records
- Job offer letter or employment contract
- Employment agency or temp agency agreement, if used
- Emergency contact information
- Signed employee handbook acknowledgment form showing receipt of employee handbook
- Checklist from new employee orientation showing topics covered and by whom
- Any relocation agreements and documentation
- Any contract, written agreement, receipt, or acknowledgment between the employee and the employer (such as a non-compete agreement, an employment contract, or an agreement relating to a company-provided car), for example Life of employment official forms including: requests for transfer, promotion, internal job applications, and so forth
- Any other documentation related to employment.

Employee performance development and improvement includes the following documents:

1. Copies of any performance appraisal used or employee development plans
2. Employee self-assessments
3. Records from any formal counseling sessions
4. Notes on attendance or tardiness
5. Performance improvement plan documentation
6. Disciplinary action reports
7. Employee recognition presented such as certificates, recognition letters, and so forth
8. Employee formal suggestions and recommendations, organization responses
9. Training records
10. Requests for training
11. Competencies assessment
12. Training class or session notifications or schedules
13. Needs assessments signed
14. Training expense reports
15. Complaints from customers or coworker

Employment Termination Records

- Employee resignation letter
- Exit interview documentation
- Cobra notification
- Employment ending checklist
- Final accounting for all aspects of the employee's employment such as final paycheck, vacation pay, return of company property, and so forth.

Learning Unit 2: HRM Record Keeping

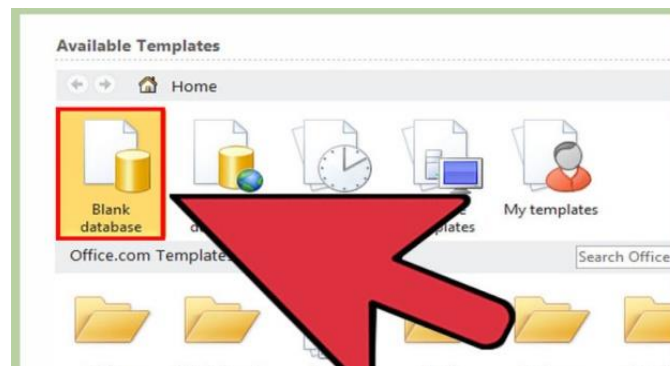
Overview

In this learning unit you will be learn to Organization's Employee database, update daily attendance (Punctuality, Regularity) record of each worker in database, keep the accounts related information of each employee & maintain the performance assessment of every individual. After completion of this learning unit you will be able to design and create organisation's employees database, calculation of staff salaries using different excel formulas & maintain the staff performance appraisal.

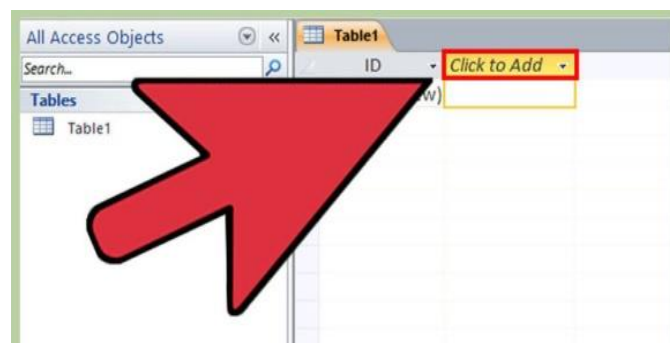
1. Procedures of Developing Simple Database to Keep Employees Record in MS Access

The procedure of designing a database using MS Access is elaborated using the following illustrations:

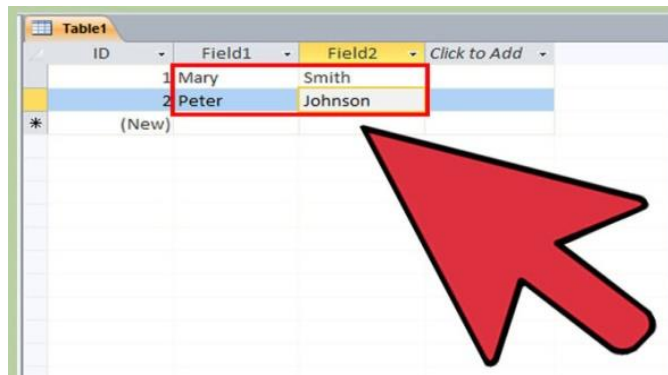
1. Click Microsoft Access from Start button or from desktop shortcut.
2. Click on Blank Database Button as shown below.



3. Now click on table and create field as shown in below illustration.

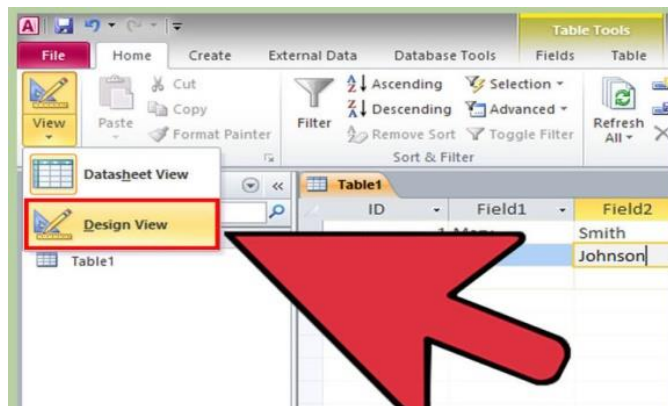


4. Now fill data in datasheet view as illustrated below.

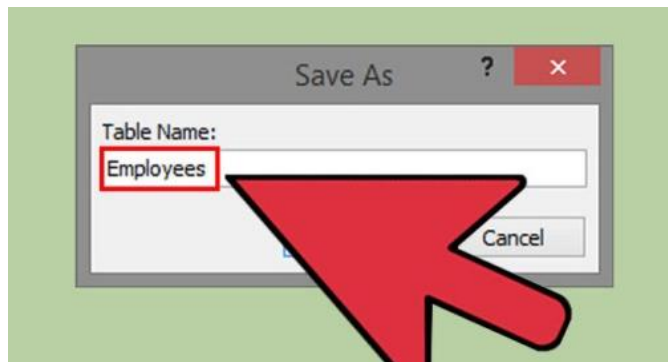


ID	Field1	Field2	Click to Add
1	Mary	Smith	
2	Peter	Johnson	
*	(New)		

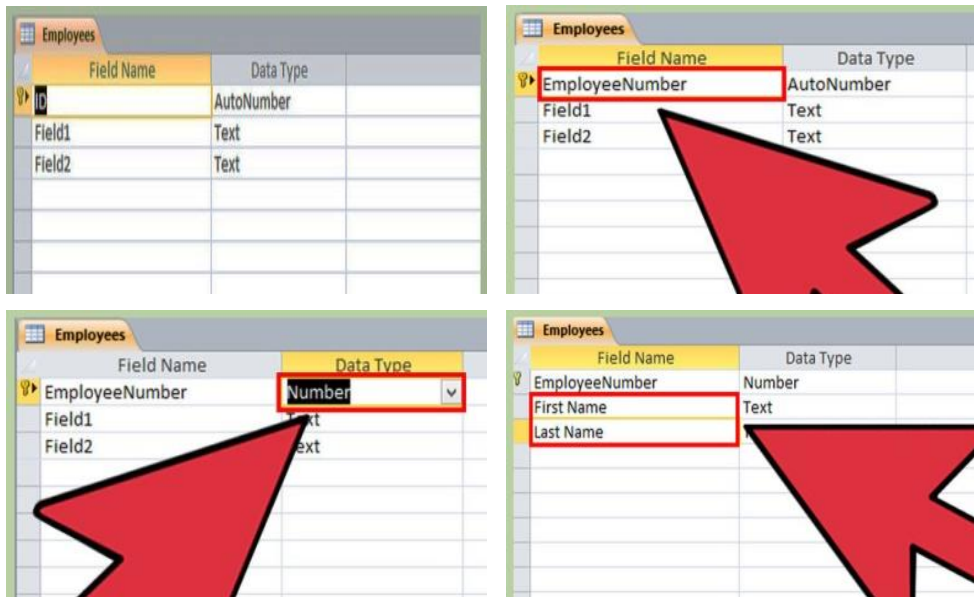
5. Now click on design view of table as shown below.



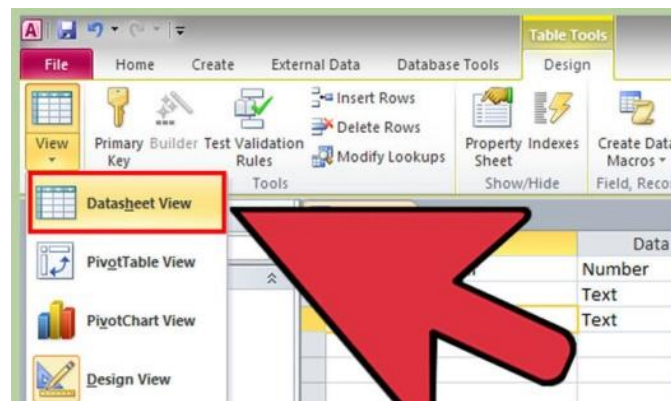
6. Save table title Employee as shown below.



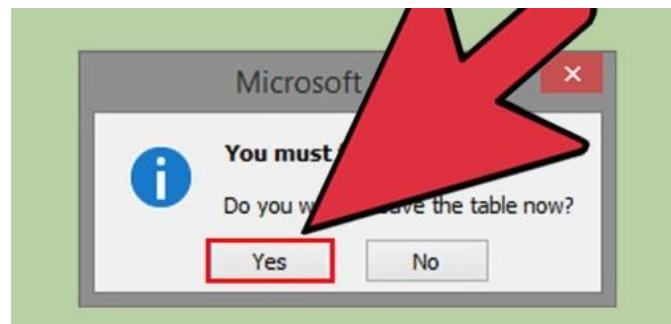
7. Set field name and also data type as shown below.



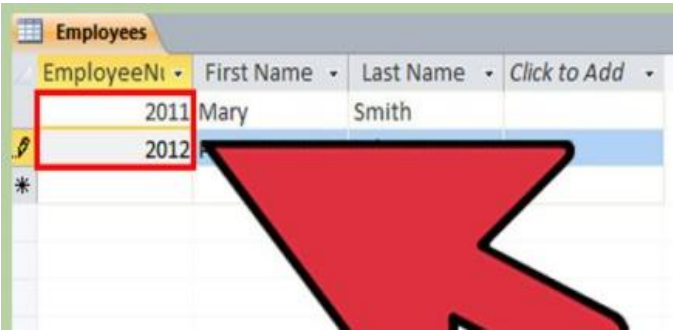
8. Open table in datasheet view as shown below.



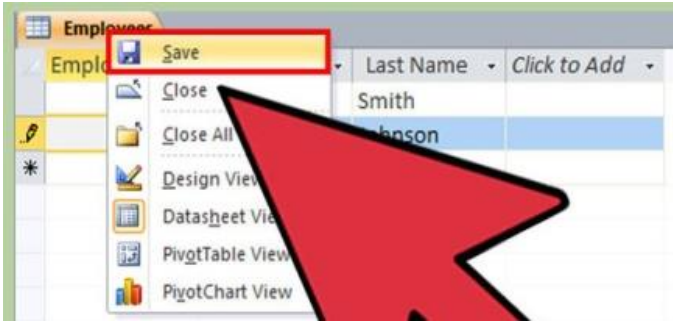
9. Save the table as shown below.



10. Fill Data in employee table as shown below.



11. Save the data using save command as shown below.



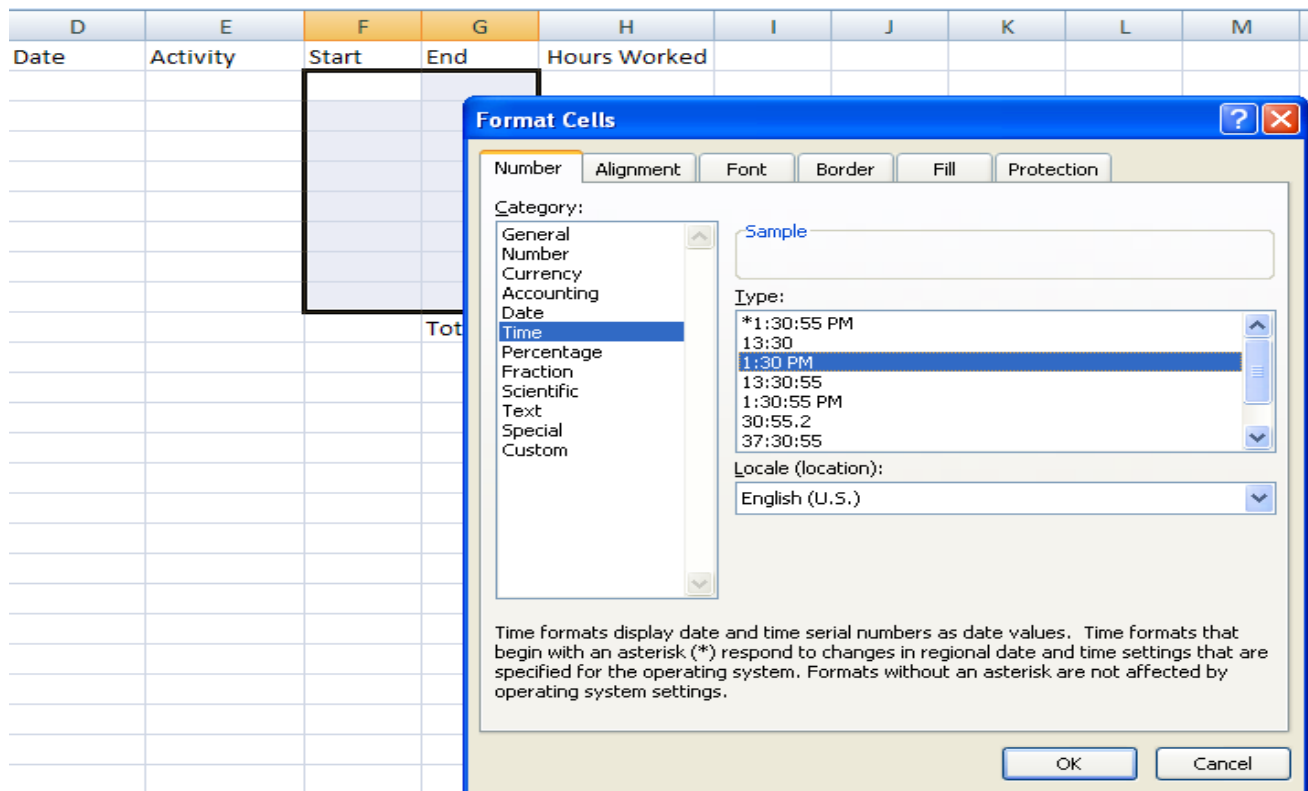
2. Enter Daily Working Hours for Every Worker in an Excel Sheet

Data about daily working hours for every worker can be entered in an Excel Sheet using following steps:

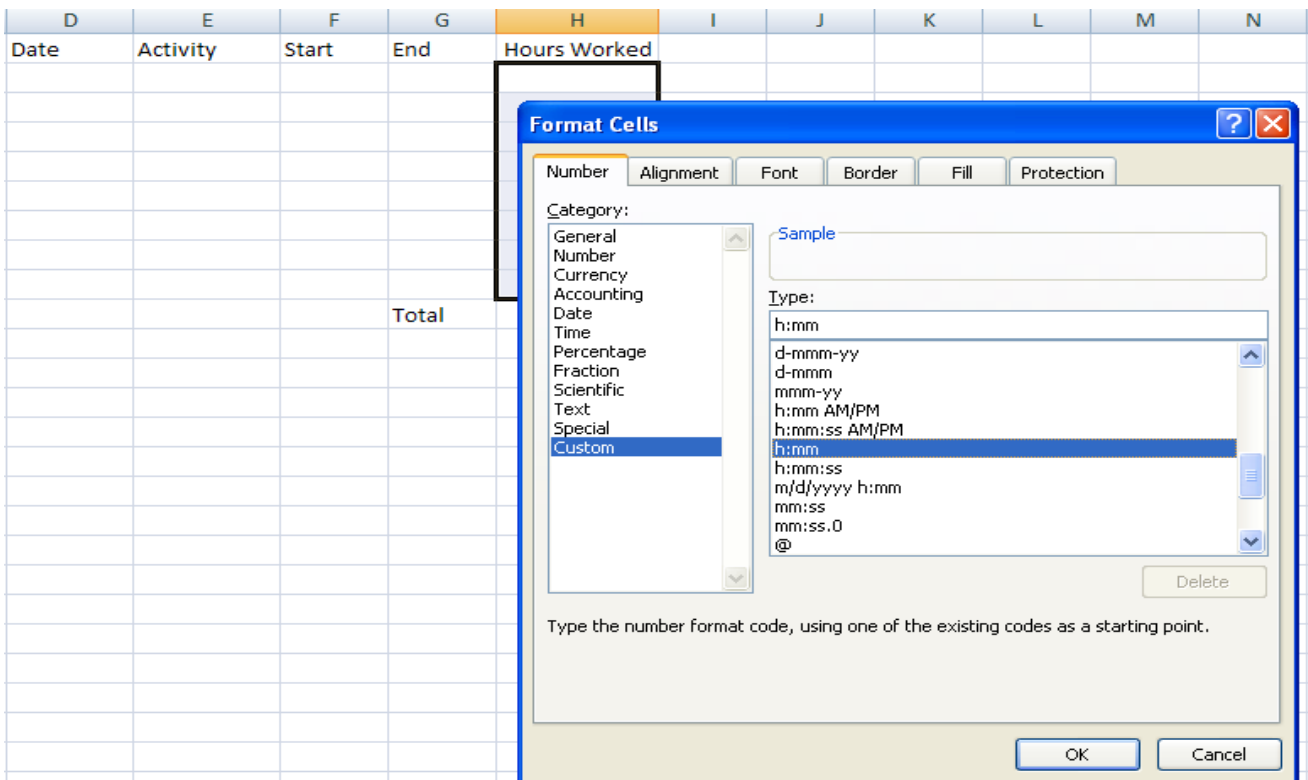
1. Enter the labels for the worksheet as shown below.

C	D	E	F	G	H	I
	Date	Activity	Start	End	Hours Worked	
				Total		

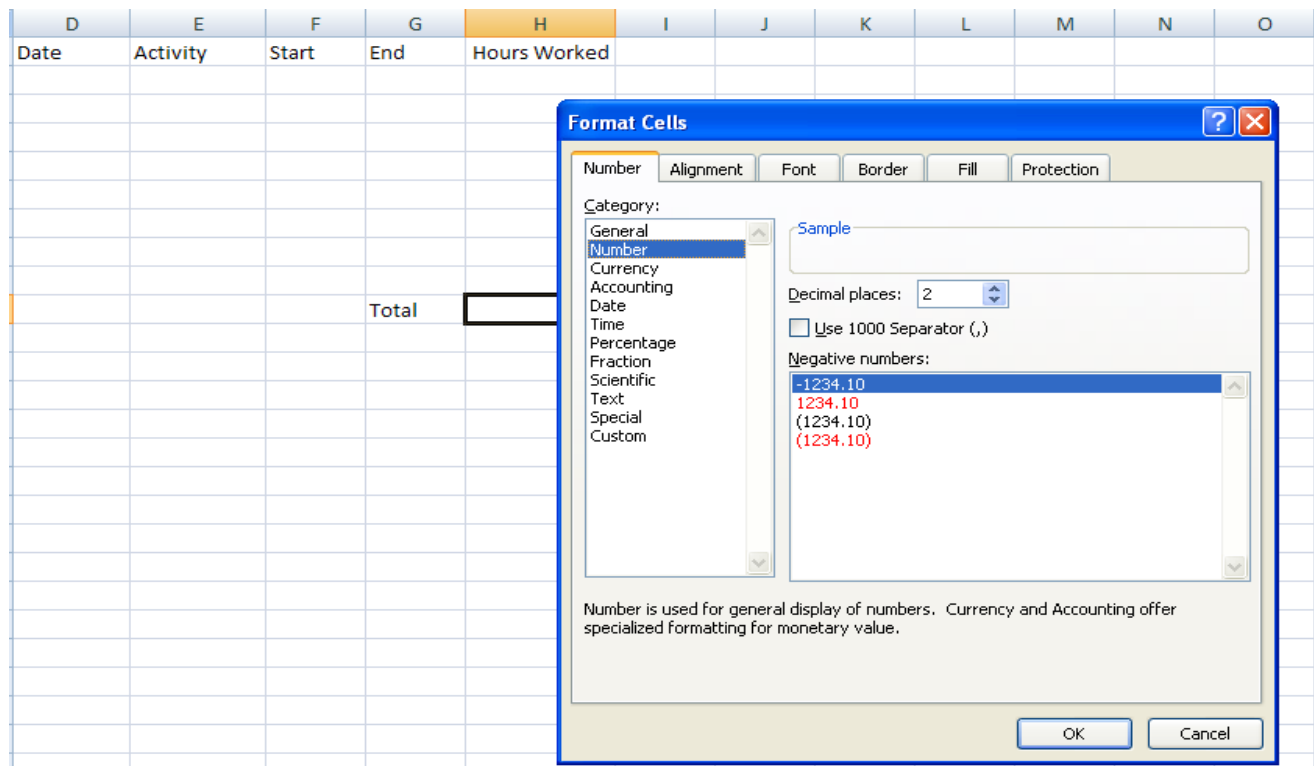
2. Select F2:G9. Right-click the selection and then select Format Cells. Under Category, select Time. Under Type, select 1:30 PM (Click OK).



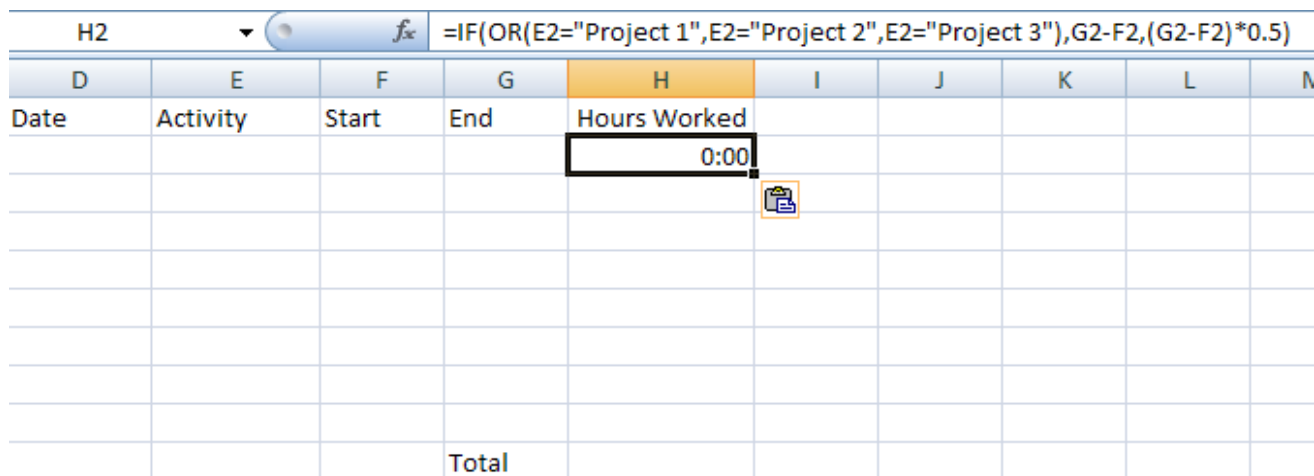
3. Select H2:H9. Right-click the selection and then select Format Cells. Under Category, select Custom. Under Type, select h:mm. Click OK.



4. Right-click H10 and then select Format Cells. Under Category, select Number and click OK.



5. Select H2:H7 and then enter the following function: =IF(OR(E2="Project1",E2="Project2",E2="Project3"),G2-F2,(G2-F2)*0.5)



6. Press Ctrl + Enter.

Enter the data as shown in cells D2:G7

C	D	E	F	G	H	I
	Date	Activity	Start	End	Hours Worked	
	12/15/2008	Admin	8:00 AM	11:00 AM	1:30	
	12/15/2008	Project 1	12:00 PM	5:00 PM	5:00	
	12/16/2008	Project 1	7:00 AM	2:00 PM	7:00	
	12/17/2008	Admin	8:00 AM	12:30 PM	2:15	
	12/18/2008	Project 2	7:00 AM	4:00 PM	9:00	
	12/19/2008	Project 3	9:00 AM	5:00 PM	8:00	
				Total	32.75	

Excel automatically calculates half the time for Admin and full time for the projects. The total number of hours is calculated in H10.

3. Calculate Employees' Salaries using Formula

Steps involved in salary calculation are as under:

Step 1

Open a Microsoft Excel spreadsheet.

Step 2

Click cell "A1" and type "Employee." Press the "Enter" key. Click cell "A2" and type the name of the first employee. Continue entering each employee's name in column A.

Step 3

Click cell "B1" and type "Employee ID." Press "Enter." Click cell "B2" and type the employee ID of the first employee. Continue entering each employee's ID in column B.

Step 4

Click cell "C1" and type "Hourly Rate." Press the "Enter" key. Click cell "C2" and type the hourly rate of the first employee. Continue entering each employee's hourly rate in column B.

Step 5

Click cell "D1" and type "Total Hours." Press the "Enter" key. Click cell "D2" and type the total hours of the first employee. Continue entering each employee's total hours in column C.

Step 6

Click cell "E1" and type "Regular Hours." Press the "Enter" key. Click cell "E2" and type "**=IF(D2>40,40,D2)**." Press the "Enter" key. This formula instructs Excel to display only the employee's regular hours.

Step 7

Click cell "E2" and place your mouse at the lower-right corner of the cell. Your mouse pointer changes to a "+" sign. Click the corner of cell "E2" and drag your mouse to copy the formula for each employee.

Step 8

Click cell "F1" and type "Regular Salary." Press "Enter." Click cell "F2" and type "**=E2*C2**" in the cell. Press the "Enter" key. This formula multiplies the employee's regular hours by his hourly rate.

Step 9

Click cell "F2" and place your mouse at the lower-right corner of the cell. Your mouse pointer changes to a "+" sign. Click the corner of cell "F2" and drag your mouse to copy the formula for each employee.

Step 10

Click cell "G1" and type "Overtime Hours." Press "Enter." Click cell "G2" and type "**=IF(D2>40,D2-40,0)**" in the cell. Press the "Enter" key. This formula evaluates the employee's total hours and displays only hours over 40. If the employee has less than 40 hours, the cell displays a "0."

Step 11

Click cell "G2" and place your mouse at the lower-right corner of the cell. Your mouse pointer changes to a "+" sign. Click the corner of cell "G2" and drag your mouse to copy the formula for each employee.

Step 12

Click cell "H1" and type "Overtime Salary." Press the "Enter" key. Click cell "H2" and type "**=(C2*1.5)*G2**" in the cell. Press "Enter." This formula multiplies the employee's overtime hours by the general overtime rate of time and a half.

Step 13

Click cell "H2" and place your mouse at the lower-right corner of the cell. Your mouse pointer changes to a "+" sign. Click the corner of cell "H2" and drag your mouse to copy the formula for each employee.

Step 14

Click cell "I1" and type "Gross Salary." Press "Enter." Click cell "I2" and type "**=H2+F2**" in the cell. Press the "Enter" key. This formula adds the employee's regular salary and any overtime.

Step 15

Click cell "I2" and place your mouse at the lower-right corner of the cell. Your mouse pointer changes to a "+" sign. Click the corner of cell "I2" and drag your mouse to copy the formula for each employee.

Step 16

Click cell "C2" and drag your mouse to highlight each employee's hourly rate. Click the "Home" tab and click the "\$" sign in the "Number" group to format the cells to include a dollar sign and increase the number to two decimal places. Apply this format to the dollar amounts in column "F," "H" and "I."

Step 17

Click cell "A1" and drag your mouse to cell "I1." Click the "Home" tab and click the "B" sign in the "Font" group to apply bold formatting to the cells.

Simple Excel Formula for Salary Calculation

Excel 2010

	A	B
1	Salary	5000
2	Working Days	26
3	Leave days	3
4	Pay	4423.08

Worksheet Formulas

Cell	Formula
B4	=ROUND(B1*((B2-B3)/B2),2)

Example Salary Calculation & Use of IF Function

Employee Code No = keep it same like in picture

Name = keep it same like in picture

Designation = keep it same like in picture

Basic Salary = keep it same like in picture - See more at:

	A	B	C	D
	Employee Code No	Name	Designation	Basic Salary
2	E001	A	Excutives	50000
3	E002	B	Officers	70000
4	E003	C	Assistant	10000
5	E004	D	Excutives	65000
6	E005	E	Officers	35000
7	E006	F	Assistant	14000
8	E007	G	Excutives	78000
9	E008	H	Officers	25000
10	E009	I	Assistant	23000
11	E010	J	Excutives	15000
12	E011	K	Officers	25632
13	E012	L	Assistant	14560
14	E013	M	Excutives	78000
15	E014	N	Officers	45000
16	E015	O	Assistant	47800
17	E016	P	Excutives	14000
18	E017	Q	Officers	10000
19	E018	R	Assistant	5000
20	E019	S	Excutives	25600
21	E020	T	Officers	25800

Now calculate some ALLOWANCES based on assumptions

	A	B	C	D	E	F	G
	Employee Code No	Name	Designation	Basic Salary	HOUSE RENT Allowance	Dearness Allowance	Medical Allowance
2	E001	A	Excutives	50000	2000	12500	1000
3	E002	B	Officers	70000	2000	17500	700
4	E003	C	Assistant	10000	1000	2500	500
5	E004	D	Excutives	65000	2000	16250	1000
6	E005	E	Officers	35000	2000	8750	700
7	E006	F	Assistant	14000	1400	3500	500
8	E007	G	Excutives	78000	2000	19500	1000
9	E008	H	Officers	25000	2000	6250	700
10	E009	I	Assistant	23000	2000	5750	500
11	E010	J	Excutives	15000	1500	3750	1000
12	E011	K	Officers	25632	2000	6408	700
13	E012	L	Assistant	14560	1456	3640	500
14	E013	M	Excutives	78000	2000	19500	1000
15	E014	N	Officers	45000	2000	11250	700
16	E015	O	Assistant	47800	2000	11950	500
17	E016	P	Excutives	14000	1400	3500	1000
18	E017	Q	Officers	10000	1000	2500	700
19	E018	R	Assistant	5000	500	1250	500
20	E019	S	Excutives	25600	2000	6400	1000
21	E020	T	Officers	25800	2000	6450	700

House Rent Allowance (HRA) = If 10% of basic salary is higher than Rs 2000, then HRA will Rs 2000.
If 10% of basic salary is lower than Rs 2000, then HRA will 10% of Basic Salary

Formula =IF(D2*10%>2000,2000,D2*10%)

write formula in E2 cell & drag formula to E21 cell,

Dearness Allowance (DA) = DA is 25% on Basic Salary

Formula =D2*25%

write formula in F2 cell & drag formula to F21 cell

Medical Allowance (MA) = Executives get MA Rs 1000, Officers get MA Rs 700 & Assistants get MA Rs 500

Formula =IF(C2="Excutives",1000,IF(C2="Officers",700,500))

write formula in G2 cell & drag formula to G21 cell

H	I	J	K	L	M
GROSS SALARY	Professional Tax	SALARY PAID PER MONTH	ANNUAL SALARY	INCOME TAX	NET SALARY PAYABLE
65500	150	65650	787800	186340	601460
90200	150	90350	1084200	275260	808940
14000	110	14110	169320	8864	160456
84250	150	84400	1012800	253840	758960
46450	150	46600	559200	117760	441440
19400	150	19550	234600	21920	212680
100500	150	100650	1207800	312340	895460
33950	150	34100	409200	72760	336440
31250	150	31400	376800	63040	313760
21250	150	21400	256800	27040	229760
34740	150	34890	418680	75604	343076
20156	150	20306	243672	23734.4	219937.6
100500	150	100650	1207800	312340	895460
58950	150	59100	709200	162760	546440
62250	150	62400	748800	174640	574160
19900	150	20050	240600	23120	217480
14200	110	14310	171720	9344	162376
7250	60	7310	87720	0	87720
35000	150	35150	421800	76540	345260
34950	150	35100	421200	76360	344840

Gross Salary = Total of Basic + HRA + DA + MA

Formula =SUM(D2:G2)

write formula in H2 cell & drag formula to H21 cell

Professional Tax = Upto 5000 = 0, upto 1000 = 60, upto 15000 = 100 & over 15000 = 150

Formula =IF(H2<=5000,0,IF(H2<=10000,60,IF(H2<=15000,110,150)))

write formula in I2 cell & drag formula to I21 cell

Salary Paid Per Month = Gross Salary - Professional Tax

Formula =H2-I2

write formula in J2 cell & drag formula to J21 cell

Annual Salary = Salary Paid Per Month * 12

Formula =J2*12

write formula in K2 cell & drag formula to K21 cell

Income Tax = Upto 100000 = 0, then 50000 = 10%, then 100000 = 20%, over 250000 = 30%

Formula =IF(K2<=100000,0,IF(K2<=150000,(J2-100000)*10%,IF(K2<=250000,(K2-150000)*20%+5000,(K2-250000)*30%+25000)))

write formula in L2 cell & drag formula to L21 cell

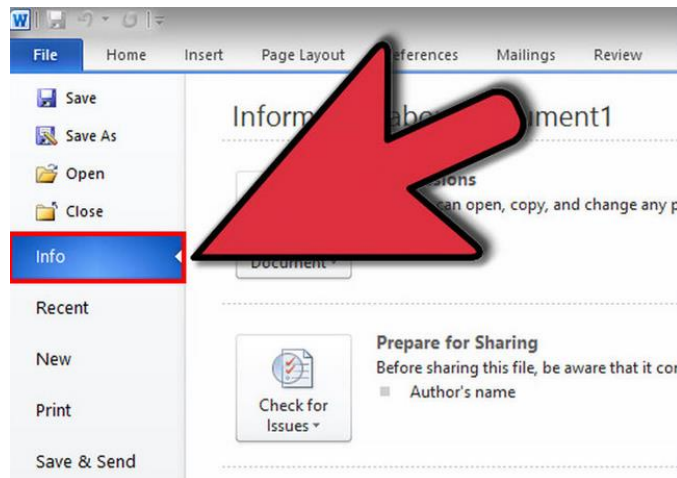
Net Salary Payable = Annual salary - income tax

Formula =M2-M2

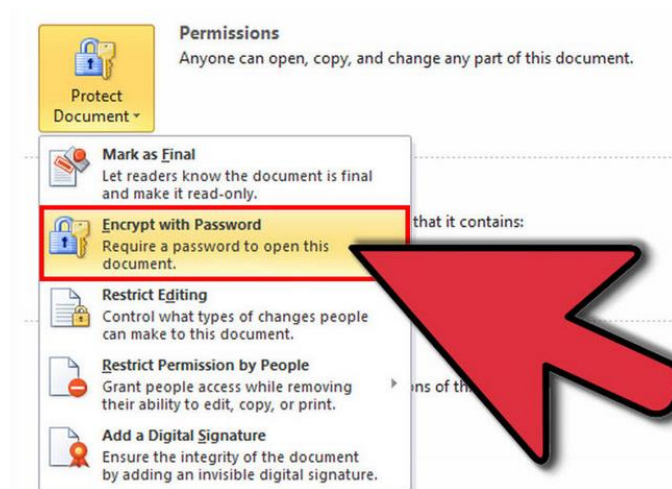
Protecting Word Document

After creation of salary sheet according to attendance there are several files which are most confidential and not for public. These files should be protected to other.

1. Open word file
2. Click on file in 2010 or office button in 2007
3. Click on **info**



4. Click on encryption with password.



5. **Click Protect Document.** This square button is located under the “Information about <document>” section. Click “Encrypt with Password” in the menu that appears.



6. Enter a password. You will be asked to enter the password again to confirm it. You will not be able to retrieve this password if you forget it, so write it down in a safe location. In order for the password to take effect, you must save the file.



7. **Remove your password.** If you want to remove your password, open the document and click the File menu again. Click Protect Document and select "Encrypt with Password". There will be a password in the box, delete it and press OK

Summary of Module

- Defining common Human Resource Management terminologies e.g. employee retention, fringe benefits, Responsibility Assignment Matrix.
- Provide due assistance in developing and approving company policies including Compensation policy, leave policy, Training assessment and writing of ACR.
- Updating the Employee records and Provide assistance to accounts department for Salary calculations against entries in attendance system.
- Design a generic database in access form (may have more than one table) to keep the employee records from their respective profiles.
- You can enter daily working hours for every worker in an excel sheet.
- Calculate employees' salaries by applying different mathematical formulas, e.g. per hour work rate, calculation of daily allowance, etc.
- Maintaining quantitative performance assessment in confidential protecting word documents.

Frequently Asked Questions (FAQs)

FAQ 1: What is Human Resource Management?

Answer Human Resource Management (HRM) is the function within an organization that focuses on recruitment of, management of, and providing direction for the people who work in the organization.

FAQ 2: What is meaning Human Resources Information System (HRIS) mean?

Answer A Human Resources Information System (HRIS) is software or online solution that is used for data entry, data tracking and the data information requirements of an organization's human resources (HR) management, payroll and bookkeeping operations.

FAQ 3: What do you mean by term fringe benefits?

Answer The term fringe benefits refer to the extra benefits provided to employees in addition to the normal compensation paid in the form of wage or salary.

FAQ 4: What is meant by the acronym RACI?

Answer Responsible, Accountable, Consulted and Informed

FAQ 5: What is ACR?

Answer ACR stands for Annual Confidential Report. This is an annual assessment report of subordinate staffs maintained by Human Resources Department of the concerned institution/company.

FAQ 6: What are Employment Termination Records?

Answer Employee resignation letter, Exit interview documentation Cobra notification, Employment ending checklist, Final accounting for all aspects of the employee's employment such as final paycheck, vacation pay, return of company property, and so forth.

FAQ 7: What are Types of Formal Training?

Answer Orientation training, remedial training and advance or upgrading training

FAQ 8: What is employment contract?

Answer Any contract, written agreement, receipt, or acknowledgment between the employee and the employer (such as a non-compete, an employment contract

FAQ 9: What is Human Resource Management Services Role?

Answer Determine skills employees need, the organizational structure, technological requirements and services required for organization.

FAQ 10: What are Seven Cs?

Answer Context, Consistency, Completeness, Control, Compliance, Correctness, and Clarity

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

- 1. Which of the following is NOT a part of fringe benefits?**

a. Retirement benefit plans	b. Long-term care insurance
c. Group health insurance	d. Basic salary

- 2. What is meant by ACR _____?**

a. Annual control report	b. Anonymous covering report
c. Annual clerical report	d. Annual confidential report

- 3. Pay Performance compensation policy based upon _____.**

a. Employee leaves record	b. Employees education
c. Employee performance	d. Employee technical skills

- 4. What is meaning of acronym HRM _____.**

a. Humane Resource Management	b. Human Resource Management
c. Humanistic Resource Management	d. Human Relations Management

- 5. Which of the following terms was also used before the language of modern HRM?**

a. Labour relations	b. Personnel management
c. Personal management	d. Industrial relations

- 6. Which of the following is not a function normally performed by the HR department?**

a. Employee relations	b. Training and development
c. Recruitment and selection	d. Accounting

- 7. What you mean by KPIs?**

a. Key Performance indication	b. Key Performance Indicators
c. Key personal Intelligence	d. Key Personal Information

8. Which of the following is not a reason why performance appraisal is used by organizations?

- | | |
|----------------------------------|------------------------------------|
| a. To determine promotion | b. To motivate employees |
| c. To allocate financial rewards | d. Because it is legal requirement |

9. Performance appraisal involves all the following except:

- | | |
|-----------------------------------|---|
| a. Setting work standards | b. Comparing performance to standards |
| c. Providing feedback to employee | d. Preparing job descriptions for groups of job |

10. Employee Personal file comprises all the following except:

- | | |
|---|---|
| a. History of the employment relationship | b. Exit Interview record |
| c. Employee Financial record | d. Employment termination documentation |

Answer Key

MCQs No.	Correct Answer
1	d
2	d
3	c
4	b
5	b
6	d
7	b
8	d
9	d
10	c

OFFICE - ASSISTANT



Module-7

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 7: Business Functional Process Area (Administration)

Learning Outcomes

After completion of this learning module, you will be able to:

- Maintain Office Records.
- Manage Company files/folders (Soft copy).
- Provide assistance for Electronic Office / Digital Work Flow Environment.
- Provide assistance in preparing the corporate presentations.
- Create slides.
- Apply animation and transition effects on slides.
- Import Picture and Video Graphic effects.
- Incorporate Audio and Video controls.
- Perform text editing (format) features.
- Familiar with Design, Transition, Animation and Slide Show tabs of the Microsoft PowerPoint.

Learning Unit 1: Administrative Skills

Overview

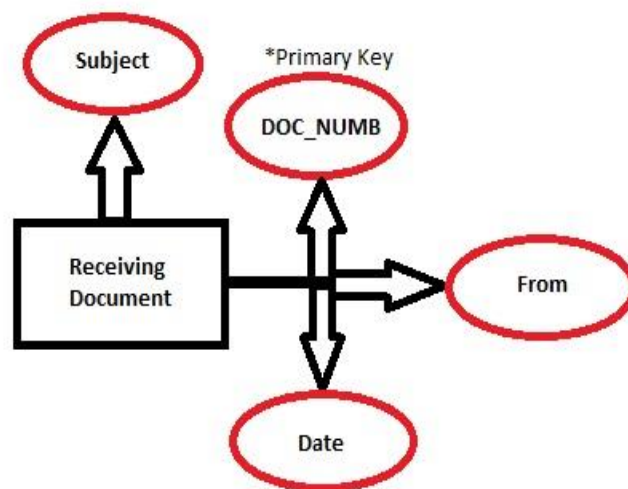
In this learning unit, you will learn to develop company database to keep the official correspondence records for receive and issuance of signed letters, applications, Reports, Maintain the soft copies of the company official data and ensure its confidentiality, Integrity and availability.

1. Design and Develop Company Database

Required Outputs of Project

- Signed received documents can be accessed by Subject, Document Number and Sender Name + Date.
- Signed issued documents can be accessed by subject, Document Number and Sender Name + Date.
- Signed reports can be accessed by subject, report Number and Date.

ER-Diagram



ER- Diagram for Received Document

Remember

A Database Management System is a collection of programs that are used to create and maintain data.

Do you know!

Microsoft Access 2013 is an Object Based Data Model.

ER-Model

ER-Relationship model is a logical representation of data in an organization. It consists of Entity, Attributes and relationships.

Entity

An entity is a person, place, thing or event for which data is collected and maintained.

Primary Key

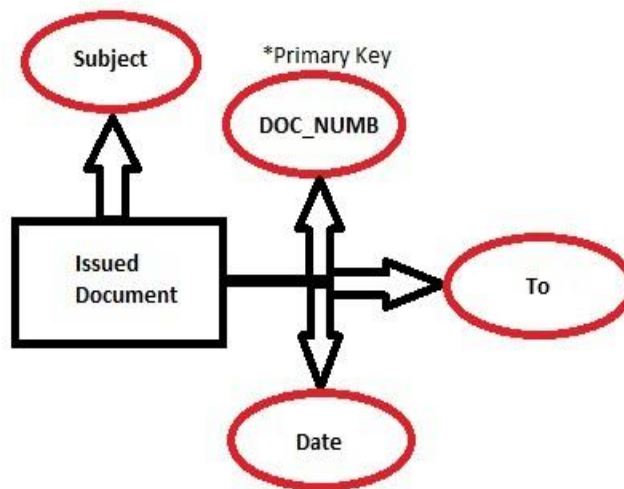
A primary key is a field or set of fields that can uniquely identify a row of a table. Duplicate values are not allowed.

Forms

A window that consists of visual component is called form. Forms are used to interact with database.

Queries

Query is a statement that extracts specific information from database. A query is created by specifying fields to display from a table or another query.



ER-Diagram for Issued Document

List of Tables Required

Receiving Table: This table will store details about the file received e.g. Recv_Doc_Numb, Subject etc.

Issuance Table: This table will store details about the file received e.g. Issu_Doc_Numb, Subject etc.

Reports Table: This table will store details about the file received e.g. Report_Numb, Subject etc.

List of Forms Required

Receiving Form: This form will be used to add information of received document into the database or Delete information from the record.

Issuance Form: This form will be used to add information of issued documents into the database or Delete information from the record.

Reports Form: This form will be used to add information of reports into the database or Delete information from the record.

List of Queries Required

- Search the required document by Document Number.
- Search the required document by Sender and Date
- Search the required document by Subject

List of Reports Required

- Subject wise Document File
- Date and Sender or Receiver wise Document File
- Document Number wise Document File

Steps to Complete the Project

Create a Database

You can create a new blank database file using MS Access 2013 by any name e.g. record keeping, Signed document etc.

Create Tables

- Create three tables i.e. Receiving, Issuance, Report.
- Add the following Attributes to the table:
 - Attachment Attribute As Attachment type
 - Subject Attribute As Long Text
 - Document Number Attribute As Long Text
 - Date Attribute As Date and Time Type
 - Sender or Receiver Attribute As Long Text
- Declare an attribute as a Primary key

Create Forms

- Forms can be created using Form wizard.
- Form can be designed using Design View Mode.
- All fields of the table will be displayed automatically related to the tables.
- Create a 3 New Buttons and name it as ADD New Record, Save, Clear Form.

Create Queries

- Queries can be created from Query Wizard.
- Queries can be viewed in Design View.
- Select the field from Receiving Table and ADD the desired fields. E.g. Recv_Doc_Numb etc.

Create Reports

- Reports can be created using Report Wizard
- Select the Tables and queries from the given list
- ADD the required fields using ADD button

Reports

Reports are the outputs of a database application. Different types of reports can be generated by manipulating the data.

Remember

Layout view is a more visually-oriented view than Design view. Useful view for setting the size of controls and displays real data.

Do you know!

SQL stands for Structured Query Language. It is a Non-Procedural Language.

Remember

Design view gives you a more detailed view of the structure of the form. Header, Detail, and Footer sections can be viewed.

2. Confidentiality and Integrity

Security

The protection of the database from unauthorized users, which may involve password and access restriction.

Integrity

Integrity of information refers to protecting information from being modified by unauthorized users.

Encryption

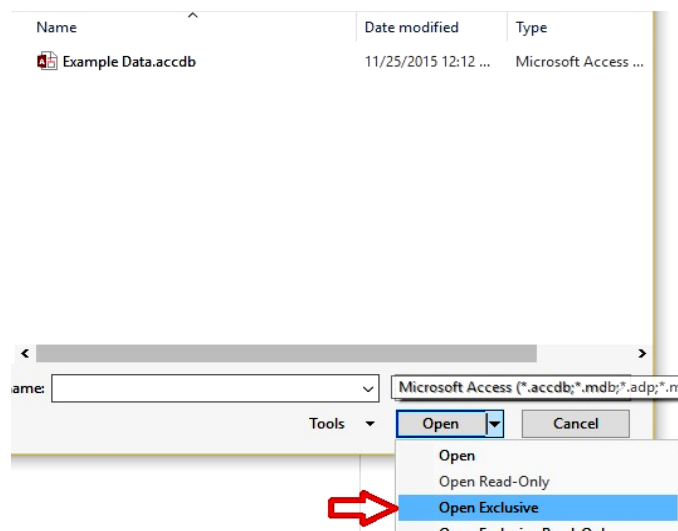
Encryption is the most effective way to achieve data security. To read an encrypted file, you must have access to a secret key or password that enables you to decrypt it.

Confidentiality of information is protecting the information from disclosure to unauthorized parties. Information has value, especially in today's world. It is responsibility of employee to ensure confidentiality are undertaken to prevent sensitive information from reaching the wrong people, while making sure that the right people can in fact get it. Integrity involves maintaining the consistency, accuracy, and trustworthiness of data over its entire life cycle. Data must not be changed in transit, and steps must be taken to ensure that data cannot be altered by unauthorized people (for example, in a breach of confidentiality).

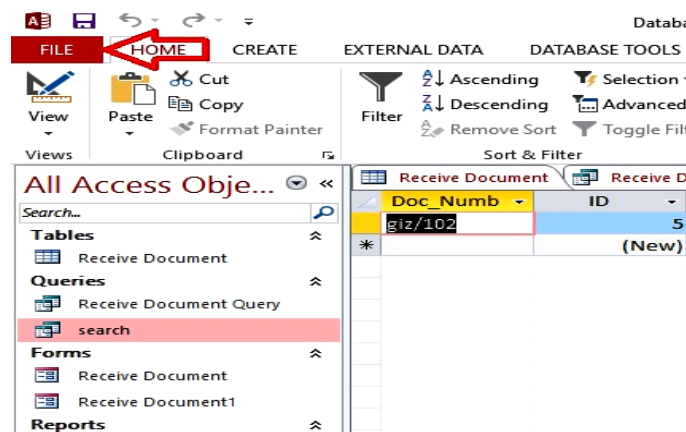
Encrypt a Database by Using a Password

Following are the steps used for encrypting a file in Microsoft Access 2013:

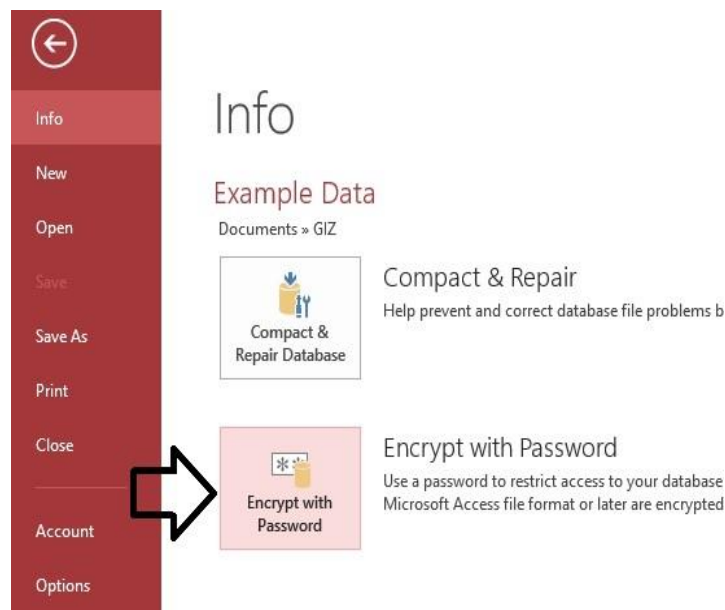
1. Open the Access file in **Exclusive Mode**



2. Click on **FILE** at top left corner.



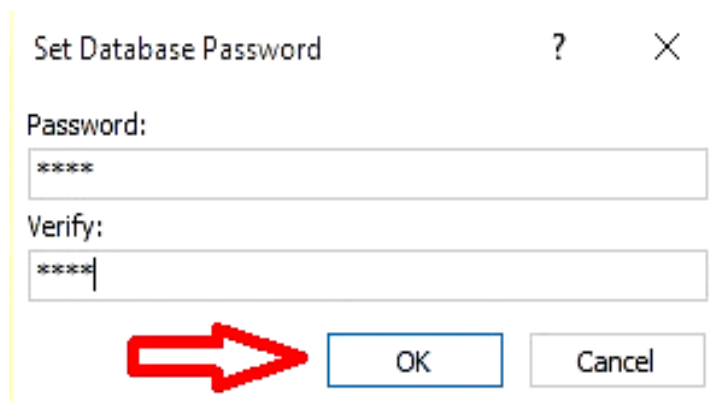
3. Click on **Encrypt with Password**.



Remember

Device driver is a program that controls a particular type of device that is attached to your computer.

4. Enter the Password and Click **OK**. Your File is secured with password.



3. Scanning and Printing

Scanning is a process of converting paper documents such as letters, forms, receipts, contracts and other documents into digital/soft copy which can be easily integrated as a part of database document in home or office computers or may be added to a central database

Scanning

Document scanning involves both document scanning software and machinery. You need to install the device drivers so use the scanner for scanning the documents.

Benefits of Documentation Scanning or Digitization

- Digitization of paper records increases productivity of the workers
- After digitization, file searching, sharing of documents and protecting becomes much easier.

Do you know!

Optical Character Recognition enables you to convert scanned Papers into editable format.

- large volumes of paperwork not required resulting in saving of trees

Steps involved in Scanning

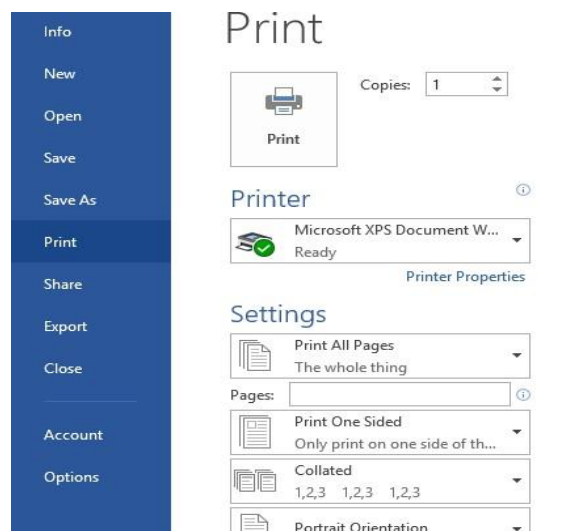
1. **Check the contents of the box**
 - a. The contents might vary by country/region. See the packaging for a list of items shipped in the box.
2. **Remove the packaging**
 - a. Place the scanner in a sturdy, well-ventilated, dust-free place.
 - b. Raise the scanner lid, and then remove any packaging.
 - c. Remove any plastic film from the outside of the scanner and from the scanner glass.
 - d. Recycle the packing materials.
3. **Install the software**
 - a. After you complete the previous hardware setup steps, you can install the scanner software using a CD.
 - b. Turn the computer on and log in.
 - c. Insert the scanner CD into the CD drive of the computer, and then wait a few seconds for the software installer to start.
 - d. If the installer does not start automatically, click or tap and hold the bottom left corner of the screen, click or tap **File Explorer**, and then double-click or double-tap the CD or DVD drive.
 - e. In the installation window, Click **Go Online** or **No thanks**, I prefer the **CD** installation.
 - f. Follow the on-screen instructions to install the software.

Printing

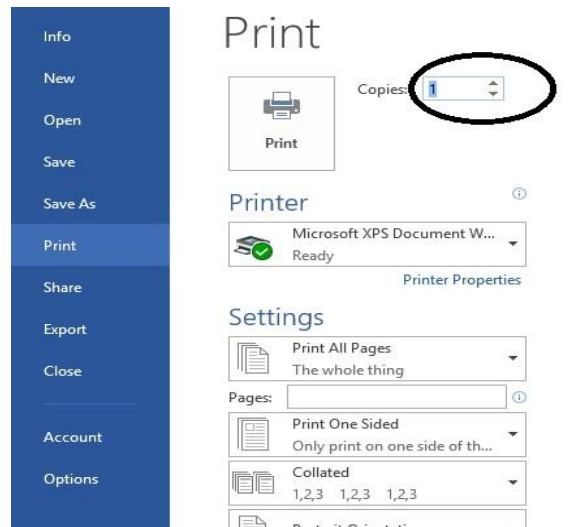
Printing is a process for reproducing text and images using a master form or template. A printer is a peripheral which makes a persistent human readable representation of graphics or text on paper or similar physical media.

Steps involved in Printing

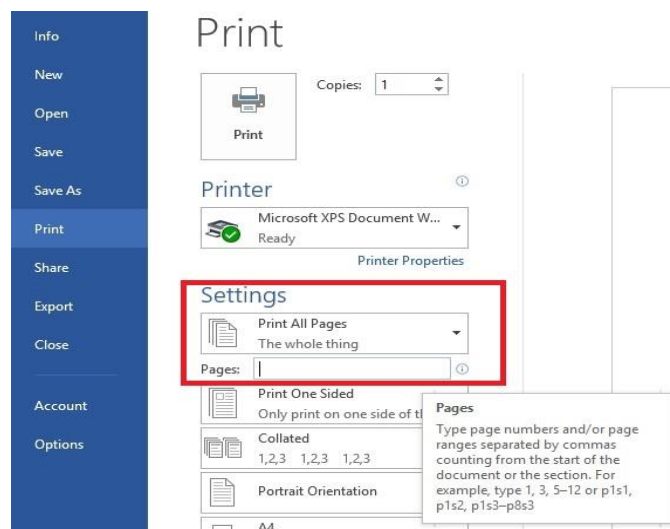
1. Once you've completed your document and are ready to print, click File in the top left-hand corner of your document.
2. Move down and click Print in the menu. This will bring up the 'Print' dialogue box.



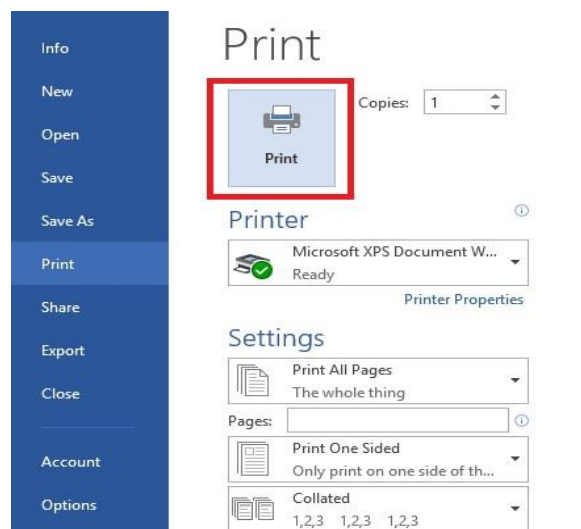
- Choose how many copies of your document you need.



- Depending on your printer options, you can choose other printing features such as whether you want to print all pages or only certain pages.



- When you're happy with your settings, Click **Print**. The document will now start printing on your printer.



Learning Unit 2: Preparing a Presentation

Overview

In this learning unit, you will learn to select appropriate slide layout, apply different animation effect on text or objects, adjust audio and video controls on a slide, play slide show by selecting different transitions, text formatting features and protecting the presentation file. After completion of this learning unit, you will be able to create slides layouts, animation effects on text or objects, audio video controls on slide, slide transition, text formatting and protecting the presentation.

1. Design and Selection of Slide Layout

Slide layouts contain formatting, positioning, and placeholders for all of the content that appears on a slide. There are different slide layouts available in Microsoft Power Point 2013. Following are the names of slide layouts.

1. Title
2. Title and Content
3. Section Header
4. Two contents
5. Comparison
6. Title Only
7. Content and Caption
8. Picture with Caption

Adjusting slide layouts

When you insert a new slide, it will usually have placeholders. Placeholders can contain different types of content, including text and images. Some placeholders have placeholder text, which you can replace with your own text.

Insert a new slide

1. Start a new presentation; it will contain one slide with the Title Slide layout. You can insert as many slides as you need from a variety of layouts.



2. Choose the desired slide layout from the menu that appears.

Title Slide

Slide titles are used to define the information on the slide as well as create a navigational outline.

Do you know!

Slide layout contains placeholders for text, videos, pictures, charts, shapes, clip art and background.

Section Header

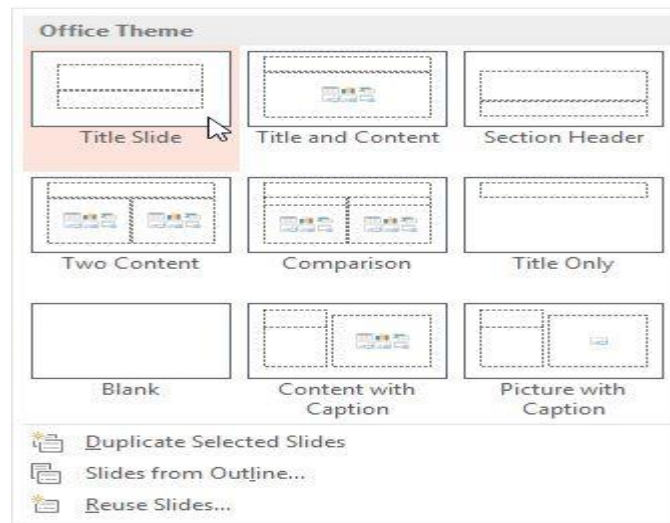
Section headers helps divide information and let users know when topics are changing.

Caption

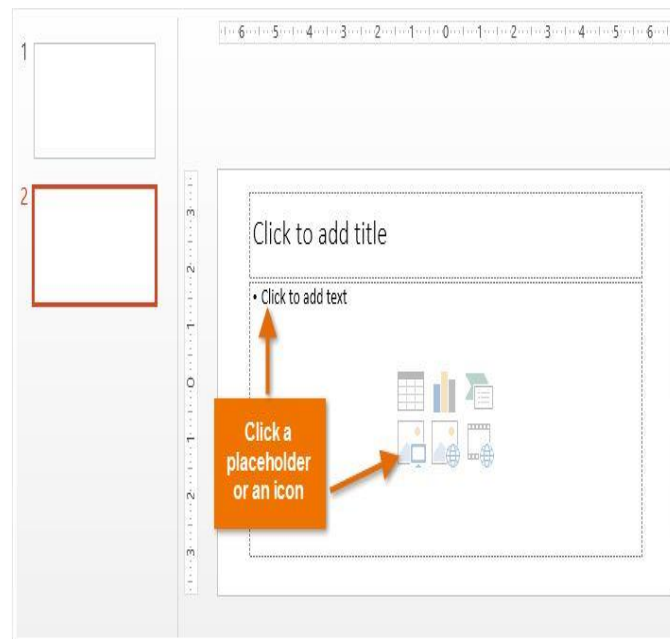
A series of words superimposed on the bottom of a presentation that communicate dialogue.

Do you know!

Placeholders are the Objects on the slide that holds the Text.



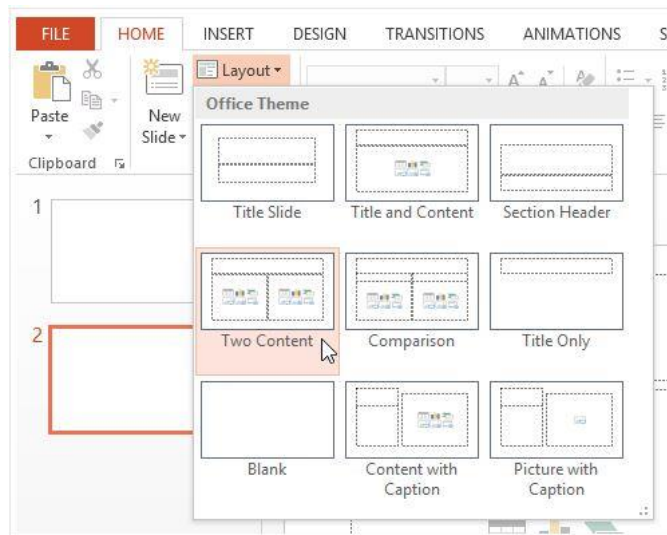
3. The new slide will appear. Click any Placeholder and begin typing to add text. You can also click an icon to add other types of content, such as a picture or a chart.



Do you know!

Animation is a set of effects which can be applied to objects in PowerPoint so that they will animate in the Slide Show.

4. To change the layout of an existing slide, click the **Layout Command**, then choose the desired layout



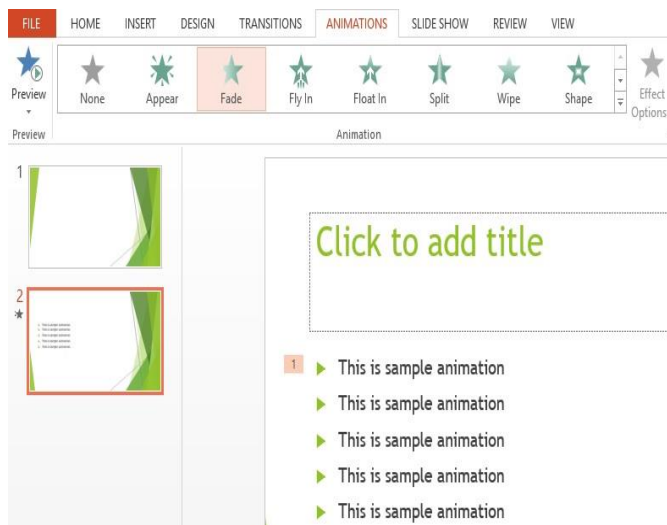
2. Applying Animation Effects

Animation can help make a Microsoft PowerPoint 2013 presentation more dynamic, and help make information more memorable. The most common types of animation effects include entrances and exits.

Apply entrance and exit animation effects

Following are the steps to add animation to text or objects:

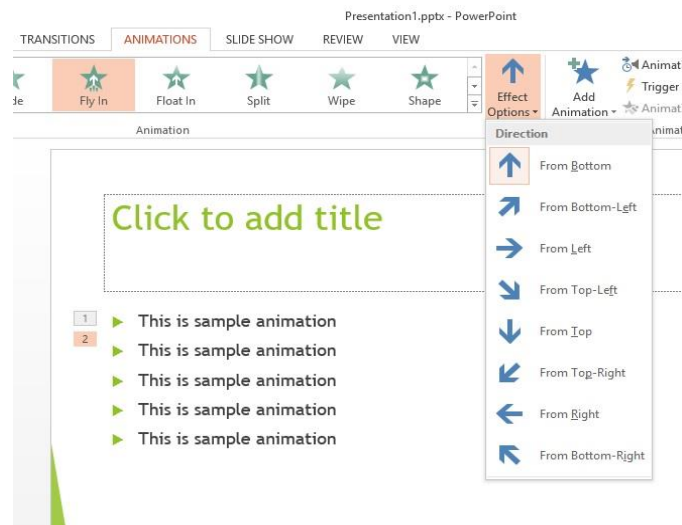
1. Select the text or object that you want to animate
2. On the **Animations** tab, in the **Animation group**, click an **Animation Effect** from the gallery. Click the **More** arrow to see more options.



3. To alter your selected text animates, click **Effect Options** and then click what you want the animation to do.

Remember

The Animation Pane allows you to view and manage all of the effects and can modify and reorder effects directly.

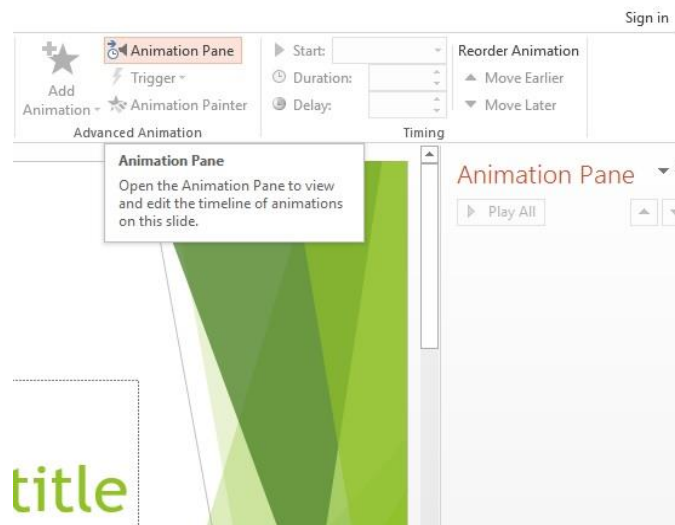


4. To specify the timing of the effects, on the Animations tab, use the commands in the Timing group.

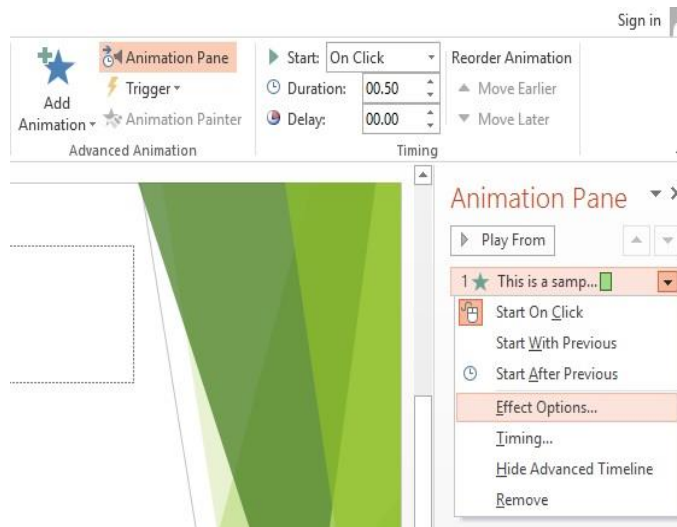
3. Applying Audio and Video Controls

To add sound to the animated text or object do the following things:

1. On the Animations Tab, in the Advanced Animation Group, click Animation Pane. The Animation Pane opens on the side of the workspace pane, showing the order, type and duration of animation effects applied to text or objects on a slide.



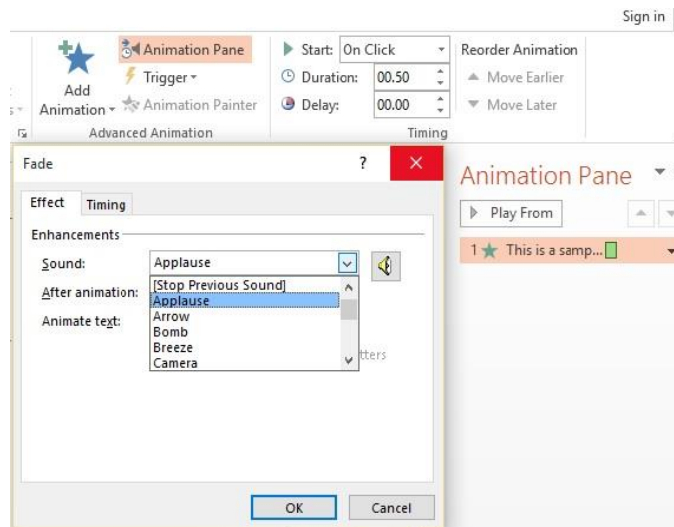
2. Locate the effect to which you want to add sound, click the Down Arrow and then click Effect Options.



Transitions

Transitions are the animation-like effects that occur in Slide Show view when you move from one slide to the next during on-screen presentation.

- On the Effect Tab, under Enhancements, in the Sound Box, click the arrow to open the list and then do one of the following:



Remember

Exciting transitions are more visually interesting than Subtle transitions, adding too many can make your presentation look less professional.

- Repeat for each bullet of text to which you want to add a sound effect
- To preview all the animation and sound applied to a slide, in the Animation Pane, click Play.

4. Applying Transitions

There are three categories of unique transitions to choose from, all of which can be found on the Transitions tab:

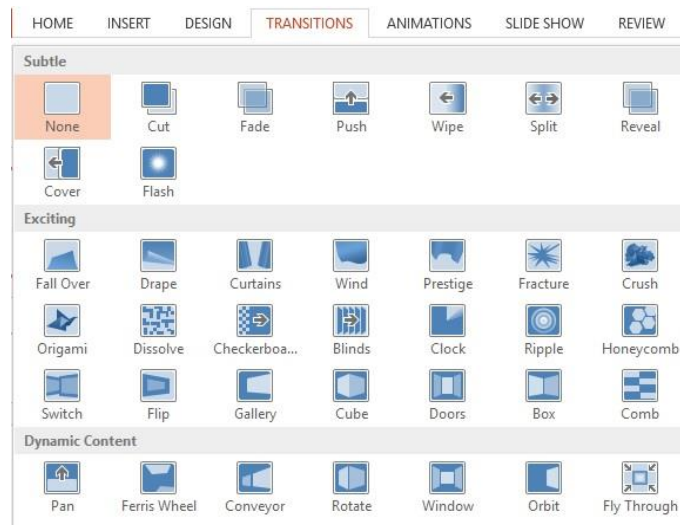
- Subtle
- Exciting
- Dynamic Content

Do you know!

Transiting between two slides that use similar slide layouts, Dynamic transitions will move only the placeholders.

Remember

Text formatting feature in Power Point are same as they are in MS Word.



Add the same slide transition to all of the slides

For adding the same slide transition to all the slides, use following steps:

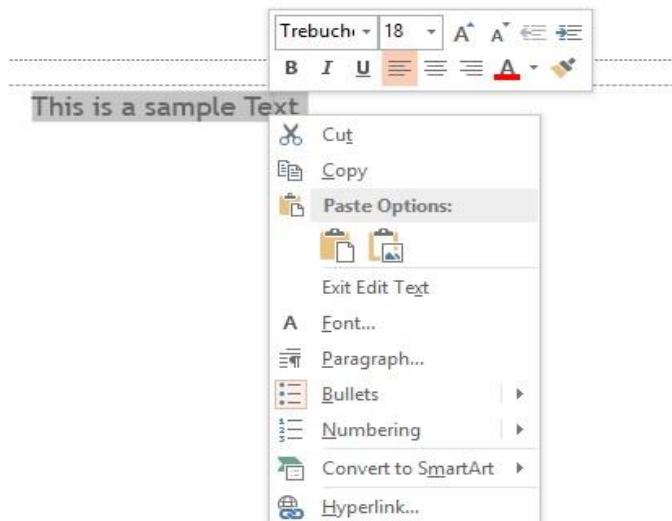
1. On the Menu Bar Click on Transition Tab.
2. Select the Slide Thumbnails of the slides that you want to apply slide transitions to.
3. On the Animations tab, in the Transition To This Slide group, click a Slide Transition Effect
4. To set the slide transition speed between the current slide and the next slide, in the Transition to this Slide group, click on Timing group to control speed of slides.
5. In the Transition to this Slide group, click Apply to All.

Add different slide transitions to the slides

Procedure of adding different transition same as above but you have to individually add the transition to that slide.

5. Features of Text Formatting

The functions for formatting text in PowerPoint are very similar with other Microsoft programs, especially Microsoft Word. Select the text you want to format and Right Click.

**Do you know!**

Document Inspector gives users an easy way to examine documents for personal or sensitive information, text phrases, or other document contents.

Icons from Right to Left

1. **Font:** Change the writing style of text
2. **Font Size:** Change the size of Text
3. **Increase Font Size:** Increase Text size
4. **Decrease Font Size:** Decrease Text size
5. **Decrease Indent:** Decrease Line spacing
6. **Increase Indent:** Increase Line spacing
7. **Bold:** Making the Text Bold
8. **Italic:** Changing the Text to Italic style
9. **Underline:** Underlines the Text
10. **Right Align:** Aligns the Text to right side
11. **Center Align:** Aligns the Text to right side
12. **Left Align:** Aligns the Text to left side
13. **Font Color:** Changes the color of Text
14. **Format Painter:** Copies the format of selected text to the other text

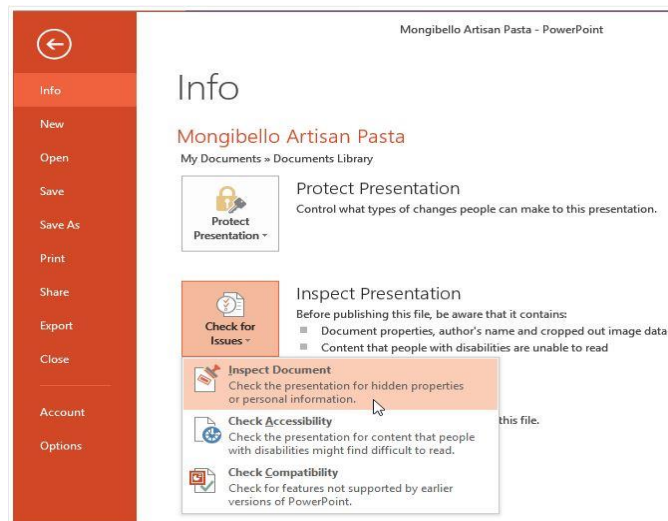
6. Protecting a Power Point Presentation

There are ways of protecting slides as follows:

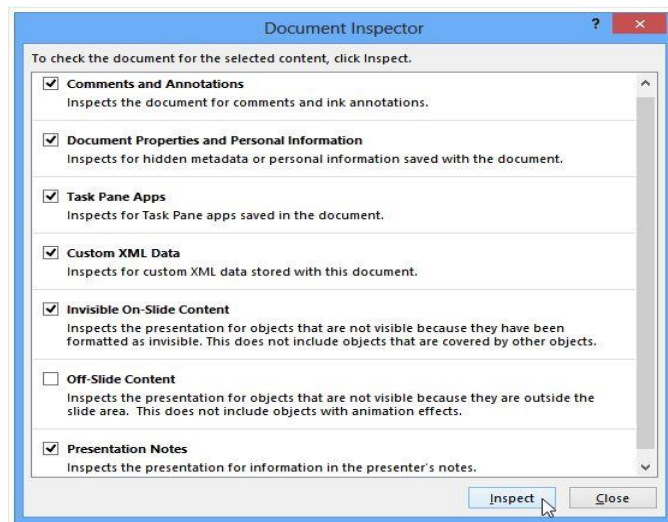
Document Inspector

You create or edit a presentation, certain personal information may be added to the file automatically. You can use the Document Inspector to remove this type of information before sharing a presentation with others.

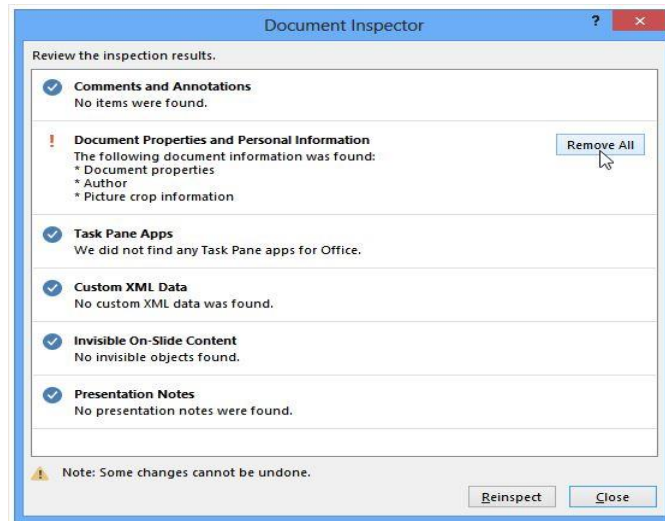
1. Click the File tab to go to backstage view.
2. From the Info pane, click Check for Issues, then select Inspect Document from the drop-down menu.



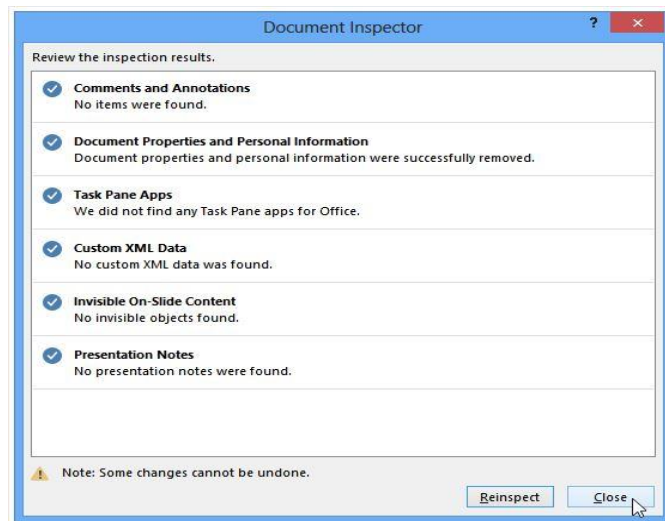
3. The Document Inspector will appear. Check or uncheck the boxes, depending on the content you want to review, then click Inspect. In our example, we'll use the default selections.



4. The inspection results will show an exclamation mark for any categories where it found potentially sensitive data, and it will also have a Remove All button for each of these categories. Click Remove All to remove the data.



5. When you're done, click Close.



Password Protection

Password can be protected using following method:

1. Click the File tab to go to backstage view.
2. From the Info pane, click Check for Issues, then select Protect Document a drop-down menu will appear select Encrypt with Password.



3. Enter the password and click OK.



4. Your presentation is password protected.

Summary of Module

- Steps for Designing and developing a company data base in MS Access 2013.
- ER-Relationship Model was used to draw the basics of company's data base.
- Tables, forms, Queries and reports were created to complete the database in MS Access.
- Different built in data types were used e.g. Long Text, Attachment, Date and Time etc.
- Data integrity, security and confidentiality was achieved using encryption and password option both in MS PowerPoint and MS Access.
- Procedures for Scanning and Printing of a document and storing it in proper file and folders was studied.
- Introduction of MS Power Point 2013. Creation of new files, saving the file and closing the presentation file.
- Transition effect were applied to the text and Object to make the presentation more interactive to gather the viewers' attention.
- Animations were added to the slides using animation pane, Advanced animation options and Timing Menu.
- Applied different text formatting options available in MS PowerPoint to the written Text.

Frequently Asked Questions (FAQs)

FAQ 1: How to insert a New Slid?

Answer New slide can be inserted from the Slides Tab →New Slide Or Ctrl+N from Keyboard a new slide will be added.

FAQ 2: Which layout is used for Introduction of topic?

Answer Tittle slide layout is used for introduction of topic.

FAQ 3: What are the steps to add animation to text or Object?

Answer Select the Text or Object you want to add animation to. Then click on Transition Tab in Main Menu. Select the desired animation.

FAQ 4: Can we encrypt the presentation file?

Answer Yes, you can encrypt the file in power point using Encrypt with Password from File Tab

FAQ 5: What is Query?

Answer Query is a statement that extracts specific information from database. Query is created by specifying fields to display from a table or another query

FAQ 6: Is there any option to add files in MS Access?

Answer Files can be attached in MS Access using Attachment type while adding the fields

FAQ 7: What is a relationship?

Answer A relationship is a logical connection between different entities.

FAQ 8: Can a Primary Key contain duplicate values?

Answer No, Primary key cannot contain duplicate values. As Primary Key is identified uniquely

FAQ 9: How we can interact with database to add data?

Answer Forms are used to interact and add data to the tables in MS Access.

FAQ 10: Extension of Power Point and MS Access file?

Answer The extension of PowerPoint is .pptx and extension of MS Access is .accdb

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

1. **Properties that describe the entity's characteristic are called_____.**
 - a. Attributes
 - b. Entity
 - c. Identifier
 - d. Relationship
2. **File should be opened in _____ mode to be encrypted.**
 - a. Encryption Mode
 - b. Exclusive Mode
 - c. Normal Mode
 - d. None of the Above
3. **Which of the following is not present in Query Mode?**
 - a. Data Sheet View
 - b. SQL View
 - c. Design View
 - d. Layout View
4. **What field type is used to store picture in a table?**
 - a. Memo
 - b. OLE
 - c. Hyperlink
 - d. None
5. **Which short cut key inserts a new slide in current presentation?**
 - a. Ctrl+N
 - b. Ctrl+S
 - c. Ctrl+M
 - d. Ctrl+V
6. **Format painter is used?**
 - a. To paint pretty pictures on your slides
 - b. To copy formatting from one text and then apply on other
 - c. To change the background color of your slides
 - d. To paint pretty pictures on background of slides

7. Slide show tab options include all of the following except:

- | | |
|-----------------------|----------------------|
| a. From Current Slide | b. Custom Slide Show |
| c. Setup Slide Show | d. Reset Slides |

8. Which option can be used to add custom timing for slide presentation?

- | | |
|------------------|------------------|
| a. Slide Timings | b. A and C Both |
| c. Rehearse time | d. None of Above |

9. The slide that is used to introduce a topic and set the tone for the presentation is called _____.

- | | |
|-----------------|----------------|
| a. Table Slide | b. Graph slide |
| c. Bullet slide | d. Title slide |

10. Objects on the slide that hold text are called _____.

- | | |
|-----------------|-------------------|
| a. Placeholders | b. Object holders |
| c. Auto layouts | d. Text holders |

Answer Key

MCQ Number	Correct Answer
1	a
2	c
3	d
4	b
5	a
6	b
7	d
8	c
9	d
10	a

OFFICE - ASSISTANT



Module-8

LEARNING GUIDE

National Vocational Certificate Level 2

Version 1 - July 2013

Module 8: Project

Learning Outcomes

After completion of this learning module, you will be able to study, analyze and develop an automated system (Management Reporting System) for an enterprise for Accounts, Inventory, Human Resource management business areas.

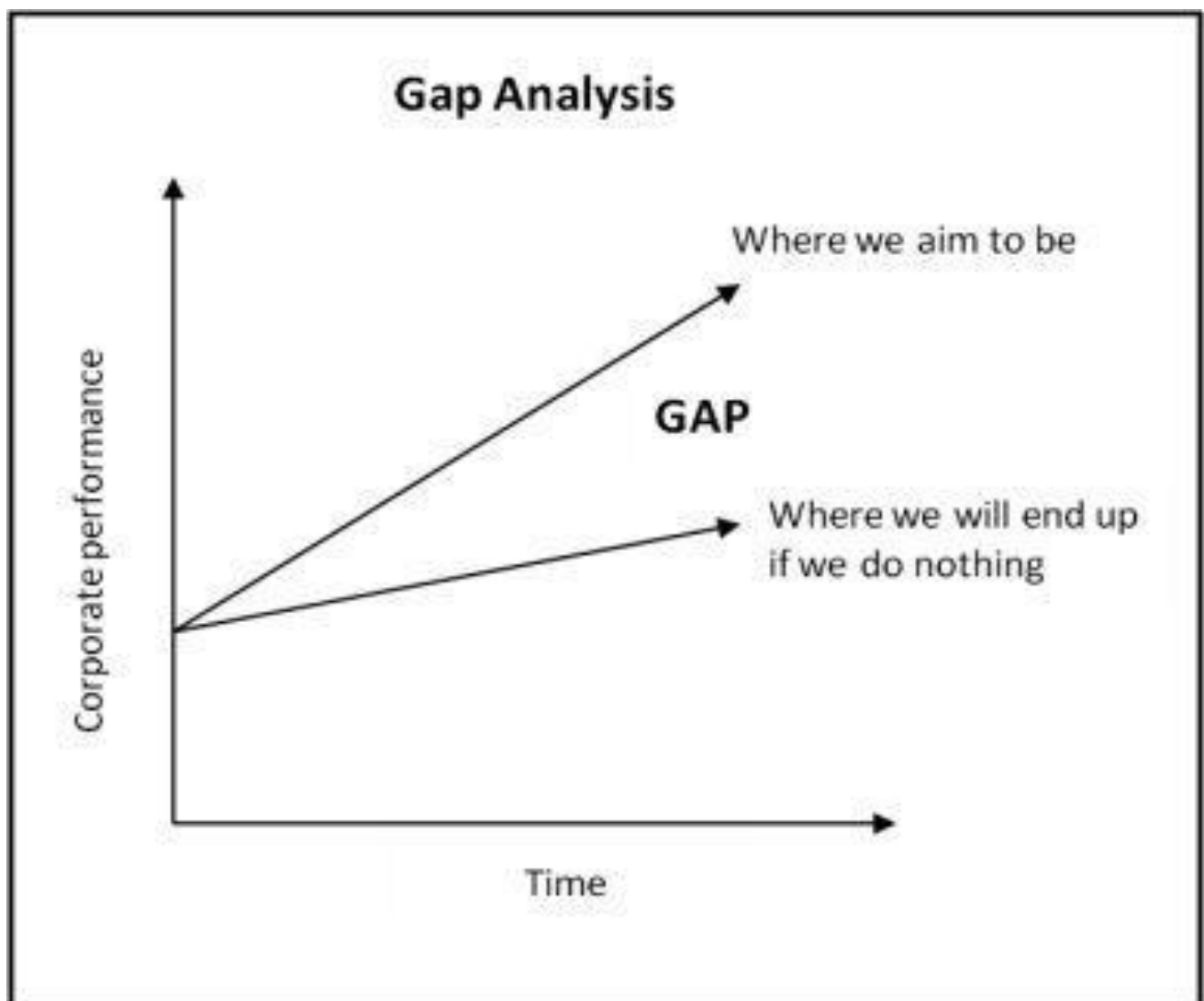
Learning Unit 1: Project

Overview

In this module, you will learn how to study, analyze and develop an automated system (Management Reporting System) for an enterprise for Accounts, Inventory, Human Resource management business areas. After completion of this learn unit, you will be able to provide a lead for the potential job opportunity for the executer.

1. Gap Analysis

A gap analysis is a method of assessing the differences in performance between a business information systems or software applications to determine whether business requirements are being met and, if not, what steps should be taken to ensure they are met successfully. *Gap* refers to the space between "where we are" (the present state) and "where we want to be" (the target state). A gap analysis may also be referred to as a needs analysis, needs assessment or need-gap analysis.



Gaps can exist in three primary categories:

1. Human resource, for example, resources lacking the right skill set, or roles that aren't clearly defined.
2. Processes, such as excessive redundancies in business processes, or unclear handoffs between steps in a process.
3. Technology, like missing technological capability or incompatible systems.

2. Conduct a Gap Analysis

To conduct a Gap Analysis for your project, follow these three steps:

1. Identify Your Future State

First, identify the objectives that you need to achieve. This gives you your future state – the "place" where you want to be once you've completed your project.

Simple example:

Future State	Current Situation	Next Actions/ Proposals
Answer 90 per cent of calls within 2 minutes.		

2. Analyze Your Current Situation

For each of your objectives, analyze your current situation. To do this, consider the following questions:

- Who has the knowledge that you need? Who will you need to speak with to get a good picture of your current situation?
- Is the information in people's heads, or is it documented somewhere?
- What's the best way to get this information? By using brainstorming workshops? Through one-to-one interviews? By reviewing documents? By observing project activities such as design workshops? Or in some other way?

Simple example:

Future State	Current Situation	Next Actions/ Proposals
Answer 90 per cent of calls within 2 minutes.	Approximately 50 per cent of calls are answered within 2 minutes.	

3. Identify How You will Bridge the Gap

Once you know your future state and your current situation, you can think about what you need to do to bridge the gap and reach your project's objectives.

Simple example:

Future State	Current Situation	Next Actions/ Proposals
Answer 90 per cent of calls within 2 minutes.	Approximately 50 per cent of calls are answered within 2 minutes.	<ol style="list-style-type: none"> 1. Develop a call volume reporting/queue modeling system to ensure that there are enough staff during busy periods. 2. Recruit any additional people needed. 3. Develop a system that allows callers to book a call back during busy periods.

Gap Analysis to provide an appropriate amount of detail. If you present too much detail, people will be overwhelmed, but if you don't give enough detail, you won't tell them what they need to know to sign the project off.

When you analyze your future situation and current state, use metrics where information can be quantified (such as "costs of the product."), and general statements when metrics aren't available (such as "creativity is valued within the organization.")

3. Develop and Maintain Accounts Record of any Business using Peachtree

Peachtree is an accounting application for small and medium-sized businesses (SMBs) made by Sage Software. Peachtree enables comptrollers and managers to automate and manage numerous accounting tasks.

Learning Activities

Description:

This activity will be performed by the individual to develop computerized accounting system using Peachtree. To keep record of all transactions is common problem for all domains. Therefore, each individual will select different real time business domain under the supervision of instructor and shift company manual system into Peachtree and will perform following task using software:

- Reconciling accounts payable and receivable.
- Creating financial statements check invoices.
- Importing and manipulating spreadsheets.

Remember

Propose of I.T Assistant course is produced User of system, not the developer of system. Instructor will guide regarding systems development.

Time Guideline:

This activity will take 6 hours daily during a week

Presentation:

After the completion of project, each student will present before class.

4. Inventory Management System in MS Access

Inventory Management System sufficiently to determine the feasibility and usability of a finished system. The core concept is to track the sale of items from the cash registers with additional features for interpreting the data.

Remember

Open source code for application development may be used.



Learning Activity

Description:

This activity will be performed by the individual inventory management is common problem for all domain. Therefore, each individual will select different domain under the instruction of instructor.

- Generate your inventory list, with Economic Order Quantity (EOQ) modeling feature. We calculate the re-order point and get the optimal order quantities by using built in EOQ model. It helps the business owners manage their inventory items in an optimal mode and cut down their business cost.
- Inventory items images and manufacturer lot tracking.
- Inventory items multi-level categories feature allow you to define multi-level products categories New Update!
- Accounting manager, generate accounting receivable and payable forms, inventory value and sales income balance sheet for business owner to review their current financial situation.

- System will help you generate the purchase order and add the new arrival items to the inventory list. It also saves all your suppliers information and their products list in supplier's information database.
- When you make sales system will help you generate the sales order and automatically reduce inventory items number from your inventory list. Also it will save all your customer's information to customer's database.
- Products RMA recall management, we update the inventory level after received the RMA update, and re-calculate inventory level based on these data.
- Products Return To Vendor (RTV) manager, we update the inventory level after received the RTV update, and re-calculate inventory level based on these data.
- Products order and expiration tracking, we monitoring all the products expiration date and generate report for update status.
- Monitoring product ATP and CTP information based on product ordering status and generate the ATP and CTP reports.
- Managing products by locations tracking ware house management system.
- It comes with your company employee database which allows you to easily track your employee information and their sales track record.
- Generate the cost comparison report for you to review the products cost from different suppliers on each order you made and help you cut down next time order cost.
- Contact management features allow you to manage your customer tracking information and vendors tracking and transactions drill down information.
- Integrated the MS Outlook email and contact feature and link to you supplier and customer management database.
- You can easily generate the report for all sales record, purchase order record, inventory list records based on your need.

Time Guideline: This activity will take 6 hours daily during a week.

Purpose: An inventory-control system is the mechanism within a company that is used for efficient management of the movement and storage of goods and the related flow of information.

Presentation: After the completion of project, each student will present in the class.

5. Human Resource Management System in MS Access

HRMS software allows your human resource team start working more efficiently on utilizing their time and resource. It offers you wide range solutions for your human resource data management needs. For Example, it includes employee data management, job data management, applicant's data management, employee training data management, and company document management.



Learning Activity

Description:

- This activity will be performed by the individual HR Management System is common need for all business. Therefore, each individual will select different domain under the instruction of instructor.
- Domain study.
- Collect the functional requirement.

Employee Data Management

This human resource management system (HRMS) software helps you recording your employee data, with general information, photo, note attachment files, medical information, tax information, monthly timesheet, payroll reports (based on the tax information and timesheet), resume and training records and medical insurance and emergency contacts.

Job Data Management

Human resource job data manager helps you record your company's job opening records.

Applicant Data Management

- Recording all applicants records and contact information

- Applicant's status management
- Applicant reference contact information management
- Applicant interview schedule setup and manage
- Create Employee Application Form and Employee Record Audit Form for all applicants and keep those document records on document management system.

Employee Training Data Management

- List all training program that company has
- Records all the employees training records

HR Documents Data Management

Manage all HR documents in different categories.

Time Guideline: This activity will take 6 hours daily during a week.

Purpose: This Microsoft Access based human resource management system (HRMS) software will be designed for small to medium sized business.

Presentation: After the completion of project, each student will present in the class.

Summary of Module

- A gap analysis is a method of assessing the differences in performance between a business' information systems or software applications to determine whether business requirements are being met and, if not, what steps should be taken to ensure they are met successfully.
- A gap analysis may also be referred to as a needs analysis, needs assessment or need-gap analysis.
- Peachtree is an accounting application for small and medium-sized businesses (SMBs) made by Sage Software. Peachtree enables comptrollers and managers to automate and manage numerous accounting tasks.
- HRMS software allows your human resource team start working more efficiently on utilizing their time and resource.
- An inventory-control system is the mechanism within a company that is used for efficient management of the movement and storage of goods and the related flow of information.

Frequently Asked Questions (FAQs)

FAQ 1: What is GAP Analysis?

Answer A technique that businesses use to determine what steps need to be taken in order to move from its current state to its desired, future state. Also called need-gap analysis, needs analysis, and needs assessment.

FAQ 2: Main Phases of GAP Analysis?

Gap analysis consists of the following phases:

Answer

- listing of characteristic factors (such as attributes, competencies, performance levels) of the present situation ("what is"),
- listing factors needed to achieve future objectives ("what should be"), and then
- Highlighting the gaps that exist and need to be filled. Gap analysis forces a company to reflect on who it is and ask who they want to be in the future.

FAQ 3: What is Peachtree?

Answer Peachtree is an accounting application for small and medium-sized businesses (SMBs) made by Sage Software. Peachtree enables comptrollers and managers to automate and manage numerous accounting tasks.

FAQ 4: What is QuickBooks?

Answer QuickBooks is Intuit Inc's set of software solutions designed to manage payroll, inventory, sales and other needs of a small business. The software's features include marketing tools, merchant services, product and supplies, training solutions. Each solution is developed according to different industries and their needs.

FAQ 5: What is benefit of using MS Access HRM solution?

Answer If you are a small business, and you need to setup a database for your human resource management but don't have a big budget to build it up, MS Access HR software is perfect for you because small businesses have unique requirements for human resource management software that demand full capabilities without complexity and want to see quick return with investment.

FAQ 6: Why Use Microsoft Access Solution?

Answer As we all know, Microsoft Access is the most widely used desktop database system in the world. Microsoft Access is part of Microsoft Office so there is a common interface and lots of developers and support options available. It pretty much covers all the functionalities for small business needs. And it is significant less expensive than SQL Server or Oracle. For small businesses, this is the fastest and least expensive database solution to get your goals accomplished.

FAQ 7: What is ERD?

Answer An entity-relationship diagram (ERD) is a graphical representation of an information system that shows the relationship between people, objects, places, concepts or events within that system. An ERD is a data modeling technique that can help define business processes and can be used as the foundation for a relational database.

FAQ 8: What is inventory management?

Answer *Inventory Management System* sufficiently to determine the feasibility and usability of a finished system. The core concept is to maintain different kind of stock item or non-stock items with the help of LIFO, FIFO and Average Methodology. It is used to track the sale of items from the cash registers with additional features for interpreting the data.

Test Yourself!

Please mark the correct one from the given options. You can check your answer with the Answer Key at the end of this module.

1. **What are the different views to display a table?**
 - a. Datasheet View
 - b. Design View
 - c. Pivot Table & Pivot Chart View
 - d. All Of Above
2. **Which key Uniquely identifies each record _____?**
 - a. Primary Key
 - b. Key Record
 - c. Field Name
 - d. Unique Key
3. **Which of the following is not a type of Microsoft Access Database Object?**
 - a. Table
 - b. Form
 - c. Worksheets
 - d. Modules
4. **Query can be used to select data from is called _____.**
 - a. Single Table
 - b. Multiple Tables
 - c. Both A & B
 - d. None of above
5. **Which of the following is used to get data from user?**
 - a. Form
 - b. Pages
 - c. Query
 - d. Reports
6. **Which one of the following is not a feature of QuickBooks?**
 - a. Online Banking
 - b. Secure Sharing
 - c. Direct Payment
 - d. Detailed Report
7. **Involvement of which technology helps QuickBooks runs smoothly at any place and time?**
 - a. ERP
 - b. Cloud Computing
 - c. Network Connectivity
 - d. SAP

8. Due to which feature of QuickBooks, the data remains secure and there is no risk of sudden loss?

- | | |
|------------------------------|--------------------------|
| a. Security | b. Multiple Access |
| c. Special Accountant Access | d. Automatic Data Backup |

9. Which is an Advantage of QuickBooks Online Software?

- | | |
|--|--|
| a. No Direct Updating of Latest Version & No Data Mismatch | b. No Data Mismatch & Updating of Latest version |
| c. Updating of Latest version & More Data Mismatch | d. More Data Mismatch & No Direct Updating of Latest Version |

10. QuickBooks can be accessed from various devices including PC, Tablet, Mobile, etc. provided _____.

- | | |
|---------------------------|-------------------------------|
| a. Having Desktop | b. Having Internet Connection |
| c. Having Cloud Computing | d. Having Data |

11. We can say that the business is in profit, when:

- | | |
|-------------------------------|-------------------------------|
| a. Assets exceed Expenditure | b. Income exceeds Liabilities |
| c. Income exceeds Expenditure | d. Income exceeds Liabilities |

12. Term "Credit" means _____ by the business.

- | | |
|--------------------------|---------------------------------|
| a. Receiving of benefits | b. It has no effect on business |
| c. Providing of benefits | d. It depends upon items |

13. What type of expenses is paid out of Gross Profit?

- | | |
|---------------------|-----------------------------|
| a. General Expenses | b. Financial Expenses |
| c. Selling Expenses | d. All of the given options |

14. A company purchased a Laser Printer for Rs.6000. It will be used for 5 years and its residual value is expected to be Rs. 1000. What is the annual amount of depreciation using straight line method of depreciation?

- | | | | |
|----|----------|----|----------|
| a. | Rs. 1000 | b. | Rs. 2000 |
| c. | Rs. 3000 | d. | Rs. 3300 |

15. The process of transferring journal entry information to the ledger is called _____.

- | | | | |
|----|--------------|----|-----------|
| a. | Journalizing | b. | Posting |
| c. | Balancing | d. | Analyzing |

Answer Key

MCQ Number	Correct Answer
1	d
2	a
3	d
4	c
5	a
6	c
7	b
8	d
9	b
10	b
11	c
12	a
13	d
14	a
15	b

