

Digital Literacy: Basic Computer Training



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- Graphic and web design
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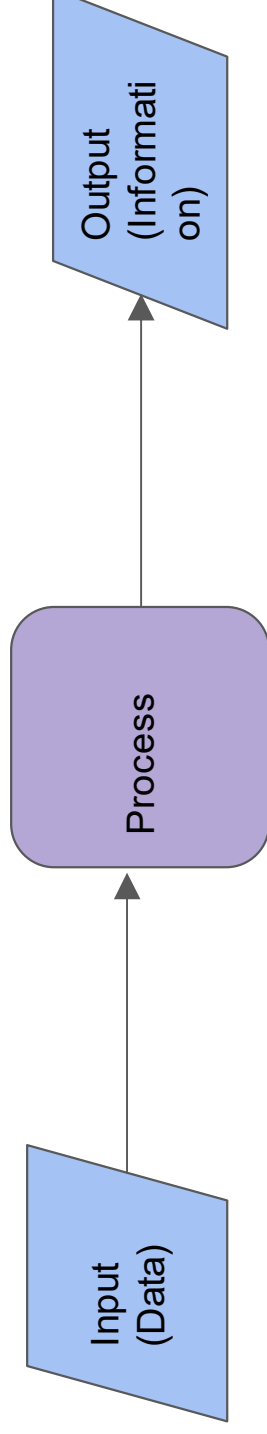
BASIC CONCEPTS OF INFORMATION TECHNOLOGY

Introduction

Information and communication plays an important role in our day-to-day's activities. To adapt to the ever changing technological world, one needs to be a knowledgeable and competent user of *computer based technologies*.

Definition of a computer

A computer can be defined as an electronic device that *processes* a user's *input* usually referred to as data to a desired *output*, also known as information. This is made possible by a set of instructions called computer programs stored in a computer. A computer is said to be electronic because it utilises electrical signals to process information.



Data-This are raw facts that do not have much meaning to the user and may include: numbers, letters and symbols

Information-This is the processed data that is meaningful to the user.

Input-This is the act of keying in data into a computer

Output-Getting or obtaining a printout of hardcopy or softcopy after processing.

Video on history of computer: [History of Computers in the 1970's](#)

QUIZ:

Which are the packages we shall be learning?

What is a computer?

Which year was the RAM invented?

In which year was the Intel 4004 created as a commercial microprocessor?

What was the name of the first personal computer?

Watch a part 2 of the History on Computers:[History of Computers after the 70's](#)

Central Processing Unit (CPU)

Also known as the *processor* it is the most important component of the computer. Usually regarded as the brain of the computer because all processing activities are carried out inside the processor. It consists of three functional elements namely:

1. *The control unit*
2. *Arithmetic and Logic Unit (ALU)*
3. *Main Memory*

Control unit

Coordinates all processing activities in the CPU as well as input, storage and output operations. It determines which instruction is to be executed next.

Arithmetic and Logic Unit (ALU)

This is a unit of CPU where all arithmetic and logical operations are carried out. The basic arithmetic operations includes; addition, subtraction, multiplication and division. Logic operations are based on the computer's capacity to compare two or more values.

Main memory

This is also known as *primary storage* is a type of storage that is directly accessible by the processor. Computer memory can be classified into *Read Only Memory (ROM)* and *Random Access Memory (RAM)*.

i. Read Only Memory (ROM)

This is used to store programmed instructions and data permanently or semi-permanently. Data and instructions stored in ROM are those which remain unchanged for long periods of time.

ii. Random Access Memory (RAM)

It is used to hold and instructions needed by the currently running applications. It is referred to as random access because its content can be read directly regardless of the sequence in which it was stored.

PARTS OF A COMPUTER

There are three main parts of a computer namely:

1. Hardware parts
2. Software parts

Hardware parts –Are physical parts of a computer that can be touched and felt

Types of Hardware

-Input Devices e.g. Keyboard, Mouse, Joy Stick, Light pen, Track Ball, Scanner, Graphic Tablet, Microphones
[Definition of the Input Devices Ref: Ms Word Input Output Doc](#)

Output devices e.g. Monitor, Printer, Plotter, Projector, Speaker, Headphones, Light / LED.

Processing devices

Storage devices

Software parts - are set of written instructions that tells the computer what to do

Types of software

System software

Application software

Orgware/Liveware parts - Are the operators of the computers.

Physical parts of a computer

A desktop computer is made up of a collection of different components that are interconnected in order to function as a single entity. A typical desktop computer is basically made up of a *system unit* and other devices connected to the system unit called *peripheral devices*.
System unit

This part houses *the brain* of the computer called the *Central Processing Unit (CPU)*. It also houses devices called *drives*. Drives are used to store, record and read data.

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Tower Type



Hardware

The physical parts of a computer system



Peripheral devices

These are connected to the system unit using special cables called *interface cables* that transmit data and information to and from the devices.

Keyboard

This is the most common peripheral that enables a user to enter data and instructions in a computer.

Mouse

This is a pointing device that enables the user to execute commands. It is used to control an arrow displayed on the screen.

Monitor

This is a television-like device used for displaying information. It enables the user to monitor what is going on in the computer.

SUB SYSTEMS

1. Power supply

This unit accepts electricity supply from the wall socket and converts it into direct current. The electronic components in the system unit use direct current. (DC). Power supply units are rated according to the power they can supply in Watts, the international unit for measuring power.

1. Motherboard (or system board)

This is a printed circuit board (PCB) on which the major electronic components that make a microcomputer work are fitted. These include the processor (CPU), chipset, RAM slots and modules, BIOS chip and connectors. All peripherals are plugged into the motherboard including the monitor, keyboard, mouse and printer. Everything connected to the motherboard is a peripheral. These fall into three categories. Input devices e.g. keyboard, mouse and scanner all used to enter data and programs into the computer.

Output devices e.g. monitor, printers, speakers and plotters used to provide output from the microcomputer. The output device may be directly connected to a machine in situations where we use a computer to control machine in situations where we use a computer to control machinery. This is true of many modern equipment from weapon systems to cars.

Secondary storage devices such as hard disks drives, floppy disk drives, CD-ROM drives and DVDs. These are used to store programs and documents.

Expansions slots

These are connectors used to install additional circuit boards (expansion cards) use to increase the functionality or features of a PC.

Common examples are fax / modem

- Video controllers to control the monitor
- Disk controllers to control the disk and tape drives of various types
- Input/ output cards to provide communication ports for attaching devices like printers, mouse, and external fax/ modems
- Scanner controller cards.

RAM(Read Access Memory)

Random Access memory is chips or Integrated Circuits located on one of the motherboard; they hold the temporary data that is running in the computer.

ROM(Read Only Memory)

This is a permanently stored program stored in a chip that controls a computer when switched on

RAM Slots

A computer requires primary memory in which programs are stored during execution. Documents or other data on which the program is working are also temporarily stored in this memory. Additionally, the special software that manages the computer, called the operating system is also stored in RAM.

Integrated Circuits (IC)

This is made up of many discrete electronic components e.g. Resistors, diodes and transistors all in one package.

Speakers

Each PC has in built speaker that is very useful in diagnosing faults. During the self testing carried out by BIOS before the operating system is loaded. Faults are indicated using a system of beeps from the speaker. External speakers are used for listening to audio.

Ports

They connect the peripherals to the system unit

Classification of computers

Computers can be classified according to physical size, purpose and functionality.

Classification according to physical size

Based on physical size, computers can be classified into four main groups' namely super computers, mainframe computers, minicomputers and microcomputers.

Supercomputers

They are the fastest, largest, most expensive and powerful computers available. Able to perform many complex operations in a fraction of a second.

This is a [computer](#) at the frontline of current processing capacity, particularly speed of calculation.

Supercomputers are used for highly calculation-intensive tasks, such as problems including [quantum physics](#), [weather forecasting](#), and climate research e.t.c.

Mainframe computers

They are less powerful and less expensive than supercomputers.

These are powerful [computers](#) used primarily by corporate and governmental organizations for critical applications, bulk data processing such as [census](#), industry and consumer statistics, enterprise, and financial [transaction processing](#).

Minicomputers

Resembles the mainframe but is slightly smaller. Thus it is referred to as a small-scale mainframe computer.

It is a class of multi-user [computers](#) that lies in the middle range of the computing spectrum, in between the largest [multi-user systems mainframe computers](#) and the smallest single-user systems [microcomputers](#) or [personal computers](#).

Classification according to purpose

Computers can be classified according to the tasks they perform either as *general* or *special purpose computers*.

General purpose computers

These have been designed to be able to perform a variety of tasks when loaded with appropriate programs. Their flexibility enables them to be applied in a wide range of applications like; document processing, performing calculations, accounting, data and information management among others.

Special purpose computers

This are designed to serve a specific purpose or to accomplish one particular task. Such computers can perform no other task except the one they were meant to do. Examples of such computers include; robots used in manufacturing industries, mobile phones for communication only and electronic calculators that carry out calculations only

Classification according to functionality

Computers can be classified into three types according to the type of data they process. Data can either be in discrete or in continuous form.

Digital computers

They process data that is discrete in nature. Apart from computers modern home appliances such as digital TVs, microwaves, wall clocks and other electronic home appliances are digital.

Analog computers

This refers to computers that process data that is continuous in nature. They are used in manufacturing process control like monitoring and regulating furnace temperatures, pressure etc.

Development of computers

Historical development of computers can be traced back to the time human beings were struggling to invent non electronic tools that would simplify arithmetic such as Abacus and Napier's bones.

Abacus

It was also called a counting frame, is a calculating tool used primarily in parts of Asia for performing [arithmetic](#) processes. Today, abaci are often constructed as a bamboo frame with beads sliding on wires, but originally they were beans or stones moved in grooves in sand or on tablets of wood, stone, or metal.

Napiers bones

This was developed by *John Napier*, a Scottish mathematician in the 17th century. It helps in multiplication and division.

The analytical engine

An important step in the [history of computers](#), is a design for a mechanical general-purpose [computer](#) first described by [English](#) mathematician [Charles Babbage](#) in 1832.

Electronic computers

The age of modern electronic computers can be traced back to 1951. These computers are classified into five generations depending on the technology used to develop them.

First generation computers (1940s to 1958)

These were very large physically and used thousands of electronic gadgets called *vacuum tubes* or *thermionic valves*. They consumed a lot of power, emitted a lot of heat and broke down constantly. Examples include (ENIAC) and (EDVAC)

Second generation computers (1958-1964)

Computers in this generation operated using tiny solid-state electronic devices called *transistors* that were much smaller than the vacuum tubes. These computers produced less heat, were much faster, smaller in size and more reliable than those made of vacuum tubes. Examples of second generation computers include *IBM 1401* and *7070*.

Third generation computers (1964-1970)

These used electronic devices called *integrated circuits (ICs)*. They emitted less heat, were smaller in size and were easier to program.

Fourth generation computers (1970 to present)

These were produced using *Large Scale Integrated* circuits which were used in the technological development and innovation of the microprocessor which is the brain of the computer. They are characterized by very low emission of heat, are small in size and easier to use and maintain. *IBM 370 and 4300.*

Fifth generation computers

This generation falls today's computers that have very high processing power and speed than their predecessors, whose size is increasingly becoming smaller. They are characterised by artificial intelligence, connectivity to Internet, superior hardware and software and are very small in size.

Areas where computers are used

In our day to day activities, we use computers in almost every aspect of our lives. This is because they are more efficient and accurate:

Supermarkets

Most retail stores use computers to help in the management of daily activities like *stock control*.

Offices

Computers have increased efficiency in offices by reducing the time and effort needed to access and retrieve information

Banks

ATM's which are cash dispensing machines have enabled automation of cash deposits and withdrawal services.

Industries

Computers are used to monitor and control industrial processes.

Hospitals

Computers are used to keep patients' records in order to provide easy access to a patient's treatment and diagnosis history.

Transport

Computers are used to monitor motor vehicles in busy towns, in aircraft navigation and in making reservations.

Power up/down

Cold booting a computer

Once you turn on the computer, it automatically goes through a process of self-test and preparation for use. This process is called *cold booting or bootstrap*.

There are 2 types of reboot(which is also known as restarting)

1. Hard reboot (Where you long press the power button)
2. Soft reboot (Where you follow the proper procedure)

Shutting down a computer

The correct procedure should be followed. If the procedure is not followed, then loss of data, damage of programs and computer components may occur. To shutdown proceed as follows:

1. Ensure that all work has been properly saved.
2. Close all programs that may be currently running
3. If computer is running on a Microsoft Windows O.S.
 - a)Click the **Start** button;
 - b)On the start menu, click **Turn Off Computer**.

On the message box appearing, click **Turn Off**. The computer will undergo the shut down process.

Advantages of using a computer

1. **Speed:** Computers work at very high processing speed compared to other types of processing i.e. manual processing
2. **Volume:** Computers can handle very large volumes of data and information simultaneously without becoming exhausted.
3. **Accuracy:** Computers are very accurate so long as the person using gives proper instructions
4. **Versatility:** The computer can do the same task over and over again without being worn out.
5. **Secrecy:** Information can be protected from unauthorized personnel (data integrity)
6. **Entertainment:** Computers come with multimedia applications that enable the user to play music, watch videos as well as view pictures in slide show.

Disadvantages of using a computer

1. **Cost/Price:** Computers with complex architecture and advanced capabilities can be unaffordable for the average user.
2. **Computer break down:** Like any other machine, computers are liable to break down due to power faults and other causes. This may cause loss of information and data from the memory devices.
3. **Health hazard:** Computers pose a health hazard to the user due to prolonged usage which requires the user to focus his/her eyes on the monitor, this may cause sight problems i.e. eye strain.
4. **Reduction of labour force:** Computers have led to reduction of labour in organizations that introduce computers to a workforce that was previously doing manual processing. The employees who are not computer literate are replaced with those who are computer proficient.
5. **Moral degradation and decay:** The spread of terrorism has thrived and co-ordination of terror activities is getting precise due to the usage of the computer and especially the internet. Human trafficking and child trafficking has also been promoted by the usage of the internet this is together with download and sharing of porn over the internet.

MOUSE SKILLS

Click

The mouse is the object you will use the most when interacting with the computer. The mouse is primarily used in one of four actions. When asked to click, this request always refers to the left mouse button. To perform this action:

- a. Place your index finger (if you are right-handed, this refers to the right hand index finger; if you are left-handed, this refers to the left hand index finger) on the left mouse button
- b. Press the index finger once on the button and release the finger. What you see on the item clicked depends on the type of item. We will view most types of behaviors that occur when the mouse is clicked on an item

Clicking

Position the mouse on an empty area of the desktop and make sure the mouse pointer is not touching anything else:

1. Place your index finger on the left mouse button and press the mouse button once. This action is called Click
2. Notice that nothing happens
3. Move the mouse and position its cursor on Recycle Bin
4. Then press the mouse button again once
5. After clicking, notice that the Recycle Bin icon becomes highlighted. This is also referred to as "selected"
6. Position the mouse on another item such as Internet Explorer. Then click once
7. Notice that Recycle Bin is not selected anymore but the new item is now selected or highlighted
8. Position the mouse on an empty area on the desktop and click
9. Notice that the previous item that was selected got deselected and now nothing is selected

From now on, unless specified otherwise, if you are asked to **CLICK**, position the mouse cursor on the item you are asked to [CLICK](#). Then press the left mouse button once.

Remember two things:

1. **CLICK** always refers to the **LEFT MOUSE BUTTON**
2. **CLICK** always means press the left mouse button **ONCE**

Double clicking

Another regular action you will perform using the mouse consists of pressing one of its button twice, very fast. This action is referred to as **Double-Click**. To perform this action:

1. Position the mouse on an item
2. Then apply two very fast strokes on the left mouse button. What happens as a result depends on the item on which you performed the action. It may open something. It may select another. Or it may not do anything at all

To double click

1. Position the mouse cursor on Recycle Bin
2. Then press the left mouse button twice, very fast.
3. A rectangular object called a window should open. If it doesn't, repeat the action until a rectangular object displays:

From now on, unless specified otherwise, if you are asked to DOUBLE-CLICK:

1. Position the mouse cursor on the item you are asked to DOUBLE-CLICK (you will always be indicated what you need to double-click)

2. Then press the left mouse button twice and very fast

Remember two things. Unless indicated otherwise:

- 1.DOUBLE-CLICK always refers to the LEFT MOUSE BUTTON

- 2.DOUBLE-CLICK always means press the left mouse button TWICE VERY FAST

- 3..To perform double-clicking again, position the mouse cursor on the most upper-left small picture on the rectangular object:



1. Then double-click again
2. Notice that the rectangular window has disappeared

Dragging

An action that has become popular with the use of the computer now consists of clicking somewhere and moving the mouse while the clicked button is still held down. This action is referred to as Dragging. To perform this action:

1. Position the mouse on Recycle Bin
2. Click once and hold your mouse button down
3. While the mouse is still down, move it in the right direction until Recycle Bin is positioned somewhere in the middle center of the desktop
4. Then release the mouse
5. Once again, position the mouse on another icon
6. Click and hold the mouse button down
7. While the mouse button is still down and the item is selected, move the mouse right and down until the item is not positioned where it was
8. Then release the mouse
9. In the same way, drag other items of your screen right, left, up, or down.

Right clicking

We saw already that the mouse is equipped with two buttons. This is not intended to make it fancy. Each button has a distinct role in the computer. Just like the left mouse button, the right mouse button can be clicked. It can also be double-clicked. It can even be involved in a dragging operation. Clicking the right mouse button of the mouse is referred to as Right-Click. What happens when you click with the right mouse button depends on the item that was clicked and/or sometimes whether the item was selected.

To right click:

1. Position the mouse pointer on an unoccupied area on the desktop.
2. Position the middle finger (of the hand that is using the mouse) on the right button of the mouse and press it once.
3. Notice that a series of words, referred to as a menu
4. Position the mouse on the [Taskbar](#). Then click the right mouse button with your middle finger
5. Notice that a different series of words appears
6. Position the mouse on Recycle Bin and right-click:
7. Notice the series of words that appear
8. Click somewhere else to deselect Recycle Bin
9. Position the mouse on Recycle Bin again and hold your mouse down
10. While the right mouse button is still held down on Recycle Bin, move the mouse in the right direction to drag
11. When the item gets to the right section of the desktop, release the mouse:
12. Notice a different series of words
13. Click an unoccupied area on the desktop

Keyboard skills

The computer keyboard, commonly called the keyboard, is a semi-flat object that lies on the table in front of the monitor or is the main area of the laptop when the laptop is opened:

A keyboard is equipped with small objects called keys. These keys are the real objects that give meaning to the keyboard. The keyboard is made useful when you press a key and something happens.

The keyboard is made of three main categories of keys. Each category is used for a different purpose. The end-goal is to help your computer experience be as effective as possible.

Watch Video on: [Basics of typing](#)



Getting started with Microsoft Windows

COMPUTER SYSTEMS

Introduction

System-This term refers to a collection of entities that collectively work together to achieve a stated goal. An entity can be a person, place or an object.

Description of a computer system

A computer system-A collection of three entities namely *hardware*, *software* and *liveware* that work together to receive, process, manage and present information in a meaningful format.

1. *Hardware*: Physical or tangible components that make up a computer system. They are classified into four categories namely *input devices*, *central processing unit*, *output devices* and *storage devices*.

2. *Software*: Refers to a set of instructions that direct a computer on what to do. They are mainly classified into two categories; namely system software and application software.

3. *Liveware*: An informal term that refers to the human beings attachment to computers. Other terms are wetware and grayware.

These devices convert user input which is in human readable form to machine language that a computer can process. These devices are classified according to the methods that they use to enter data namely:

1. *keying devices*
2. *pointing devices*
3. *scanning devices*
4. *technologies used to capture data*

Keying devices

Typing is the most common way of data input. A keying device converts characters into machine readable form.

The following are types of keying devices:

1. *Keyboard*
2. *Keypad*(a miniature keyboard used on portable devices such as PDAs laptops and mobile phones)

Pointing devices

These are used for controlling a pointer cursor on the screen e.g. the mouse.

Scanning devices

Scanning means capturing data from an object and converting it into digital format. There are optical scanners and magnetic scanners.

Other input technologies

These include touch screen using stylus on a touch sensitive screen, voice input through use of microphones.

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Output devices

These are peripheral devices that a computer uses to give out information produced after the processing operations. These devices can be classified into two categories namely *soft copy* and *hard copy* output devices.

Soft copy output devices

Soft copy refers to intangible output that can be seen or heard; such as screen display and sound. Examples of such devices include:

1. *Monitors*
2. *LCD projectors*
3. *Speakers*

Hard copy output devices

Refers to tangible output that can be felt such as a paper. Examples of hard copy output devices include:

1. *Printers*
2. *Plotters*
3. *Facsimile (fax)*

Secondary storage devices and media

These are devices that provide alternative long-term storage for programs, data and information. Unlike primary storage, they are not directly accessible by the CPU. Secondary storage devices can be classified according to:

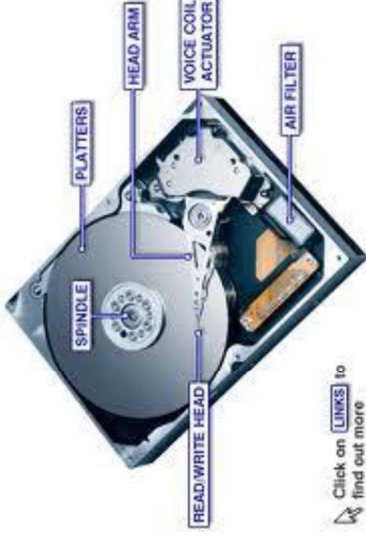
- a) Portability as removable and fixed
- b) Technology used to store and retrieve data as magnetic, optical, magneto-optical and solid state.

Removable storage

These media are those that are not housed inside the computer. Data is read and written into the media using a device known as *drive*. Examples include; floppy disks, CD's, solid state devices (Flash disks and memory card)

Fixed storage media

Traditionally, the hard disk is mounted inside the computer. For this reason its referred to as a fixed disk. However some hard disks are removable. It is made up of metallic disk platters together with a read/write head, housed in a protective metal case.



Computer software

Normally the term software is not only used to mean programs but also the documentation associated with it such as user guides. There are three ways of classifying software i.e. according to:

1. *Purpose*
2. *Acquisition*
3. *End-User-License (EUL)*

Q n A Section.

Quiz: 1. What is the difference between a hardware and software

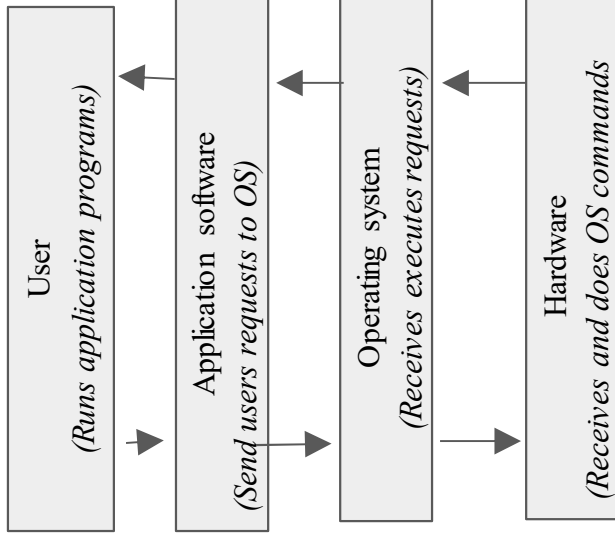
2. What is a liveware?
3. Mention 3 output devices?
4. What is the difference between input devices and output devices?

Microsoft Windows

OPERATING SYSTEMS AND WINDOWS

Introduction

An operating system is the main program that controls the execution of user applications and enables the user to access hardware and software *resources* of a computer.



Functions of operating system in resource management

Processor scheduling (CPU)

Refers to allocating each job waiting for execution processor time at each given interval. Since a computer may have concurrent processes ready for execution, it is the operating systems that determine which task will be processed first.

Resource allocation

Each available resource in a computer is given a unique identification number called an *Interrupt Request (IRQ)*. The operating system uses the IRQ number to identify the resource being requested.

Memory management

Data and instructions entered into the computer are temporarily held in the main memory before and after processing. The OS determines which task remains in memory awaiting for execution.

Input/output management

Like a skilled traffic officer, the OS coordinates between these various I/O and other peripheral devices making sure that data is transmitted securely.

Communication control and management

The operating system is responsible for managing various communication devices and provide an environment within which communication *protocols* operate.

Error handling

The OS has many ways of alerting the user of errors that may arise out of illegal operations, hardware or software failure.

Interrupt handling

An interrupt is a *break from the normal sequential processing of instructions in a program*. A critical request causes the processor to stop executing the current process to attend to it, before returning the control back to the process that was initially interrupted.

Getting started with Microsoft Windows

The Microsoft Windows desktop is made of various parts. Lets learn the different part:

Icons:These are the images on the desktop which is a representation of a particular program,file or folder

Folder: This is storage unit for file which can be comprised of the same software or different softwares.

File:This is a stored/saved document that can be from any program.

Start button: This is located at the bottom left side of the desktop. Click on the blue button and you will have access to all programs

Taskbar: enables the user to easily switch between different programs and *tasks* that are currently running.

Whenever the user starts a program or opens a file, its button appears on the taskbar and stays there until the user exits the program.

System tray: This is at the right part of the taskbar. It has icons of tasks running in the background but are not displayed on the screen. Examples are, the time and calendar, an antivirus program, volume control etc.

The application Window

To open Microsoft windows also known as Ms you go to the start button, click on all programs then scroll down to Microsoft office, click on it then double click on Microsoft word. And vwaalllllaaaahhh here we go

Quizzes:

1. Mention some of the Microsoft programs you know
2. Which company owns Ms Word?
 - a. Google
 - b. Bill Gates Foundation
 - c. Word processor

WORD PROCESSORS

Definition of a word processor

A word processor is an application software that enables a person to create, save, edit, format and print text documents.

Word processing is the act of using a word processor. Examples of word processors are:

LibreOffice -> Writer (Free)

Microsoft Office -> Microsoft Word.

Google Docs (Online and free)

Apple iWork - Pages.

Apple TextEdit - Apple Mac OS included Word processor.

Corel WordPerfect.

Q & A : Which is the most commonly used word processor?

Benefits of using a word processor

1. A document can be stored in the computer for future reference in computer files instead of having physical files stored in a cabinet.
2. Typing using a word processor is easier and more efficient because some actions are automated example is word-wrap and automatic insertion of a new page.
3. Most word processors have special editing tools such as *spelling and grammar checkers* and *thesaurus* that help user easily correct grammar and spelling mistakes
4. You can easily print as many copies as you would like
6. Using the *cut, copy and paste* commands, you can incorporate other text without having to retype.

Command are the same in all the word processors, for this lesson we shall be working on Microsoft Word and Google Docs as they are the most commonly used word processors

How to work using Microsoft Word

Starting Microsoft Word from the start menu

1. Click the **Start button**.
2. Point to **Programs/All programs**.
3. Click on **Microsoft Office**
- 4.. Click **Microsoft Word** from the programs menu.

Microsoft Word screen layout

You can start Microsoft Word, it provides you with a blank document window referred to as the new document template where you can create your document.

Once you have started the document you can type in your document, after completing go to the save button and save your document.

Ensure you remember to type in the name of the document and where you have placed it so that you do not forget where you have placed the document. When you save a document it is then called **a file**.

NB: Many people tend to forget where they have saved their documents hence loosing the file, but on actual sense the file is not lost it is just somewhere in the computer's memory.

MICROSOFT WORD 2010

Basic User Guide – Lesson One

An Introduction

Lesson 1

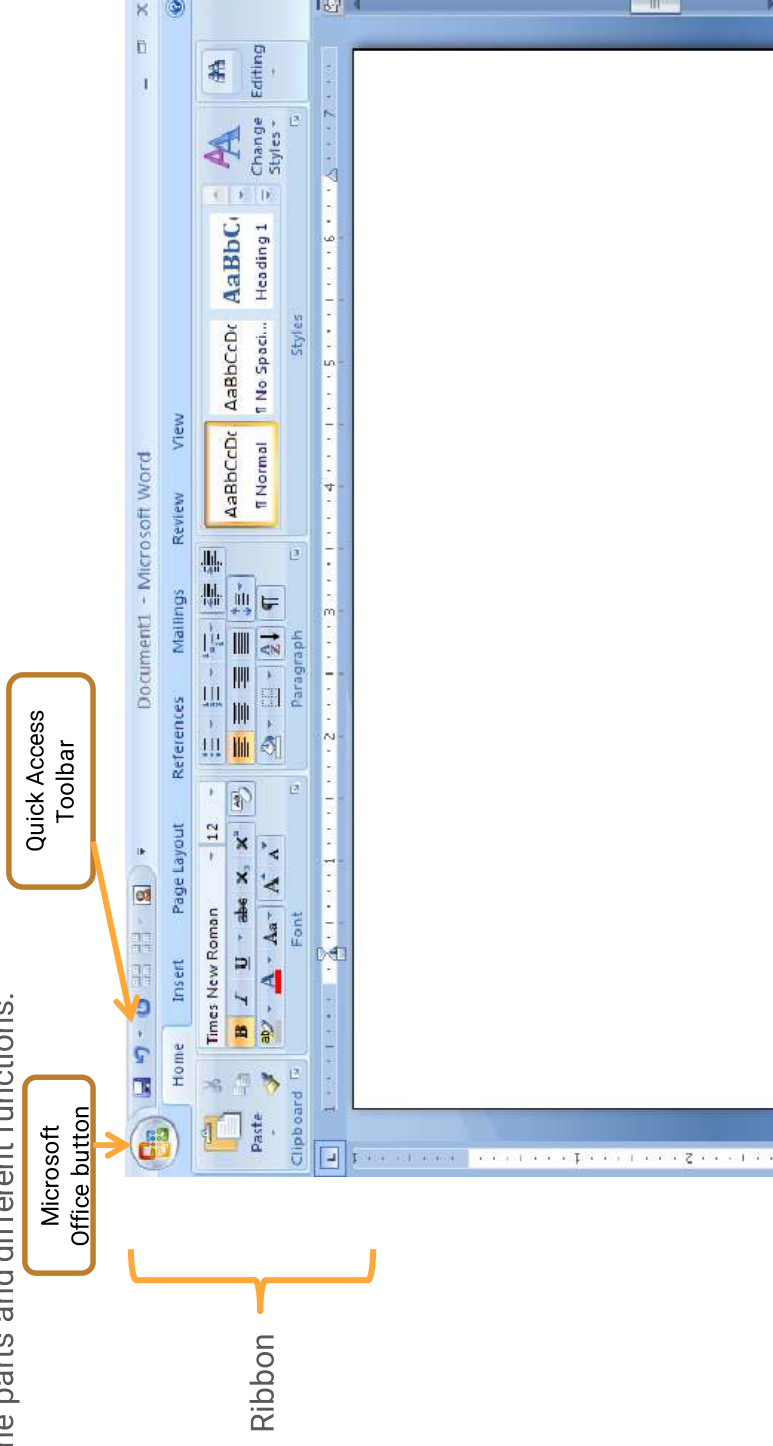
The Word Interface, Part 1

Starting Word, Title Bar, Maximize, Minimize, Close, Office Button



Lets understand more.....

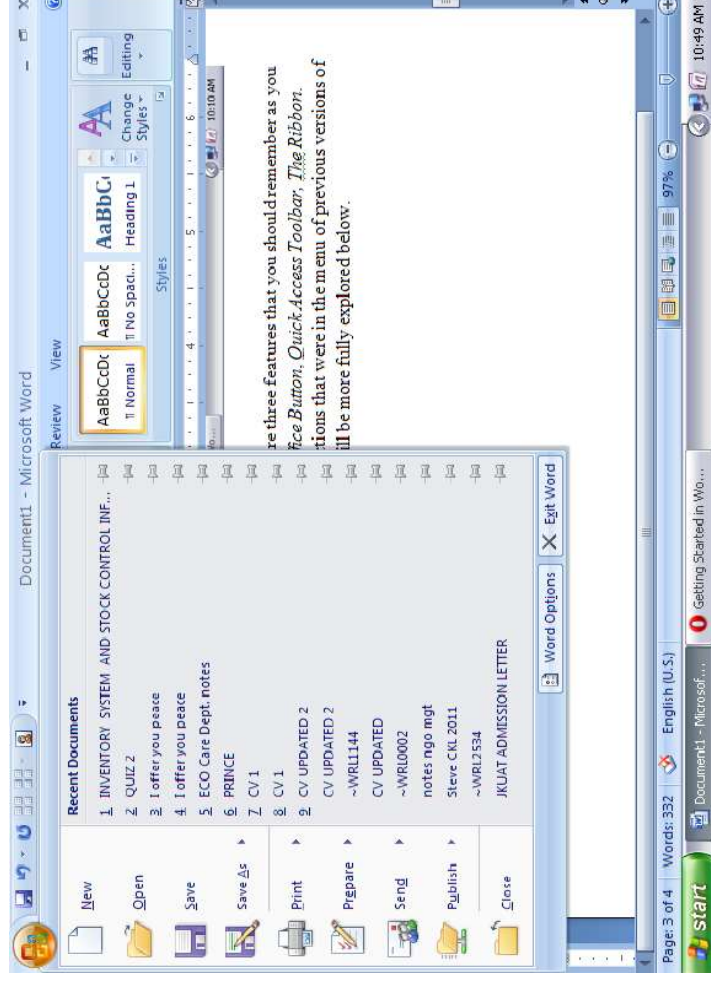
Once you open a Ms Word document it look like the image below:
We shall learn the parts and different functions:



When you begin to explore Word 2007 there are three features that you should remember as you work within the application. *The Microsoft Office Button, Quick Access Toolbar, The Ribbon.* These three features contain many of the functions that were in the menu of previous versions of Word. The functions of these three features will be more fully explored later.

Lets look further.....

The Microsoft office Button: This button is one of the main features of Ms Word under it we shall find different functions such as New, Save, Save As, Print etc. Below is an image, using your computer go to the Ms Office button and identify some of the functions you can see and how it operates



Exercise 1:

Type is your name, where you live, your favourite food and the course you are taking, where you are taking the course and why you taking the course.

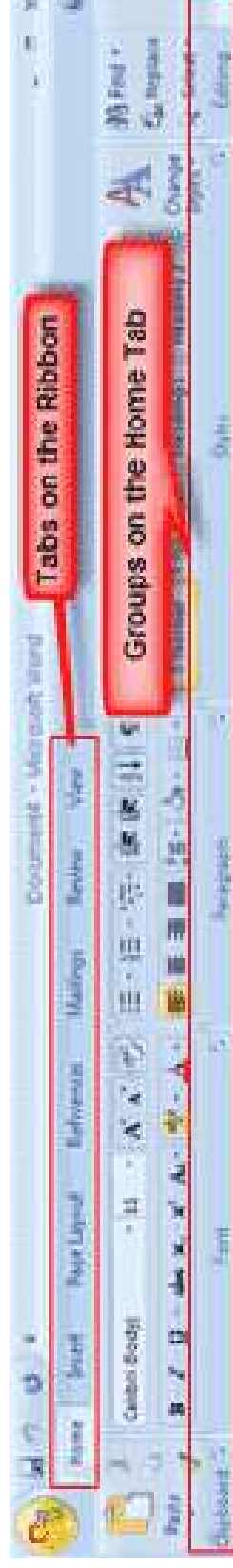
- ☐ Save the document as Tamuka doc
- ☐ Relocate the document and save your document on the desktop
- ☐ Transfer the document from the desktop to Library and save under document.
- ☐ Ensure you have saved your document correctly as you will be using it during this training
- ☐ *In case you are not certain, please ask your trainer to guide you.*

- ☐ ***NB: Remember where you saved the document as it shall be used for other coming exercises.***

The Ribbon is the panel at the top portion of the document. It has seven tabs:

- **Home:** Clipboard, Fonts, Paragraph, Styles, and Editing.
- **Insert:** Pages, Tables, Illustrations, Links, Header & Footer, Text, and Symbols
- **Page Layout:** Themes, Page Setup, Page Background, Paragraph, Arrange
- **References:** Table of Contents, Footnote, Citation & Bibliography, Captions, Index, and Table of Authorities
- **Mailings:** Create, Start Mail Merge, Write & Insert Fields, Preview Results, Finish
- **Review:** Proofing, Comments, Tracking, Changes, Compare, Protect
- **View:** Document Views, Show/Hide, Zoom, Window, Macros

Each tab is divided into groups. The groups are logical collections of features designed to perform functions that you will utilize in developing or editing your Word document. Commonly used features are displayed on the Ribbon, to view additional features within each group, click on the arrow at the bottom right of each group.



Quick Access Toolbar



The quick access toolbar is a customizable toolbar that contains commands that you may want to use. You can place the quick access toolbar above or below the ribbon. To change the location of the quick access toolbar:

Click on the arrow at the end of the toolbar and

Click on Show Below the Ribbon.

You can also add items to the quick access toolbar:

Right click on any item in the Office Button or the Ribbon and

Click on Add to Quick Access Toolbar and a shortcut will be added to the Quick Access Toolbar.

Renaming Documents

- To rename a Word document while using the program:
- Click the Office Button and find the file you want to rename.
- Right-click the document name with the mouse and select Rename from the shortcut menu.
- Type the new name for the file and press the ENTER key.

Close a Document

Click the Office Button
Click Close

Exiting from word

Click the Office Button
Close the current document
Click Exit

Editing and formatting a document

Editing

This refers to making necessary changes to an existing document. Apart from manual editing using *delete, insert* and *overwrite/overwrite* commands. Microsoft word provides the user with inbuilt tools such as the *spelling and grammar checker, thesaurus, undo* and *re-do, find* and *replace* etc.

At this point a person can type in anything on the document, however, when editing a document is when re-reading a document and making changes such as grammar check, delete, bold, underline, italics, change font style or size etc. You shall learn how to do this by the end of this lesson.

Selecting with a mouse

- Place the pointer on the word then, double click it.
- To select a sentence, position the mouse pointer at the left margin until it changes to a right arrow, and then clicks once.
- To select a paragraph, place the pointer at the beginning or end of the paragraph. Notice that the pointer changes to I-beam. Now drag I-beam over the next to be selected and release the mouse button at the end of the text you wish to work on.

Selecting with the keyboard

- Move the pointer to the beginning or end of the word then press
- Shift+Right or left arrow.
- To select one line, press Shift+Up or Shift+Down arrow key .Alternatively, move the pointer to the end or beginning of the line then press Shift+Home or end keys respectively.
- To select an entire page, press Shift +Page Down or Shift + Page Up.
- To select the entire document, press Ctrl+A or place the cursor at the beginning of the document then press Shift+Ctrl+End.

Deleting text

- Place the pointer on the right of the word then press the backspace key.
- To delete a character to the right of the cursor position, place the pointer on the left of the word then press the Delete key.

To delete a block of text

- Highlight the text to be deleted.
- Press the Delete key.

To restore deleted text

To restore deleted text in the current word processing session; click the Undo button on the quick access toolbar.

Copying and moving text and objects

Copying means creating a duplicate of text or an object while moving means changing the position of text or an object in a document. In Ms Word, you can copy or move a block of text.

To copy a block of text:

- Highlight the text,
- Position the pointer where you want to copy the text.
- On the document, right click on the mouse and select Copy.
- Then place pointer to where you want to place the text
- Right click on your mouse and select paste

Or

- Highlight the text,
- On the Clipboard which is a tool on the Home tab select Copy.
- Position the insertion pointer where you want to copy the text.
- Click Paste

Search and Replace Text

To find a particular word or phrase in a document:

- Click Find on the Editing tool of the Home tab on the Ribbon
- To find and replace a word or phrase in the document:
- Click Replace on the Editing tool of the Home tab on the Ribbon.



Proofreading

This is when one checks whether the document has typographical or grammar errors. Microsoft Word has tools for proofreading e.g. *Spelling and grammar checker*, *Thesaurus*, *Autocomplete* and *Autocorrect*.

Spelling and grammar checker

The spelling and grammar checker is an inbuilt tool that helps the user to correct spelling errors and incorrect grammar structures. However, the checker can only recognize errors of those words whose correct spelling is in its dictionaries. To check the accuracy of spelling and grammar:

Click Review tab on the Ribbon

Click on Spelling & Grammar tool on the Proofing tab

Quiz: In class

Q & A:

1. Which are the 3 main features in Ms. Word?
2. What is a ribbon?
3. Name 3 functions that are located in the quick access tool bar?
4. How do you copy a selected word

Formatting

This refers to applying various styles or features to enhance the document's appearance. You can format text, a paragraph or a page.

Text formatting

Refers to features such as changing fonts (type, style and size of characters), changing text color, underlining, bolding italicizing etc.

Styles

A style is a format enhancing tool that includes font typefaces, font size, effects (bold, italics, underline, etc.), colors and more. You will notice that on the Home Tab of the Ribbon, that you have several tools that will control the style of your document: Font, Paragraph, and Styles.



To change font type, size, put in bold ,italics, change colour
Increase indent, insert bullets and number

To change the *font typeface*:

Click the **arrow** next to the font name and choose a font.



To change the *font size*:

- Click the **arrow** next to the font size and choose the appropriate size, or
- Click the **increase** or **decrease** font size buttons.



Font Styles and Effects

Font styles are predefined formatting options that are used to emphasize text. They include: Bold, Italic, and Underline. To add these to text:

Select the text and click the **Font Styles** included on the Font Group of the Ribbon, or

Select the text and right click to display the font tools

Change Text Color

- Select the text and click the **Colors** button included on the Font Group of the Ribbon, or
- Highlight the text and right click and choose the colors tool.
- Select the color of your choice by clicking the down arrow next to the font color button.

Highlight Text

Highlighting text allows you to use emphasize text as you would if you had a marker.

- Select the text
- Click the **Highlight Button** on the Font Group of the Ribbon, or
- Select the text and right click and select the highlight tool
- To change the color of the highlighter click on down arrow next to the highlight button.

You can also add more features to your document by using:

- **Bold:** To bold, select the word, go to the ribbon and search for the **B** sign and click on it
- **Italic:** To create italics, select the word, go to the ribbon, then to the format tool bar and select the slanted *I*
- **Underline:** to underline, select the word, go to the format toolbar on the ribbon and click on the U

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- Select the text and right click and select the highlight tool
- To change the color of the highlighter click on down arrow next to the highlight button.

Paragraph Formatting

Formatting paragraphs allows you to change the look of the overall document. You can access many of the tools of paragraph formatting by clicking the **Page Layout** Tab of the Ribbon or the **Paragraph** Group on the Home Tab of the Ribbon.

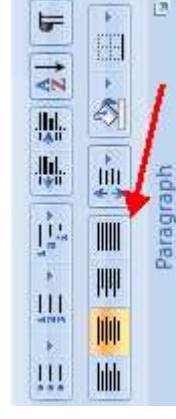


Change Paragraph Alignment

- The paragraph alignment allows you to set how you want text to appear. To change the alignment:
- Click the Home Tab

Choose the appropriate button for alignment on the Paragraph Group.

- I. Align Left: the text is aligned with your left margin
- II. Center: The text is centered within your margins
- III. Align Right: Aligns text with the right margin
- IV. Justify: Aligns text to both the left and right margins.



Lesson 2

The Word Interface, Part 2

The Ribbon



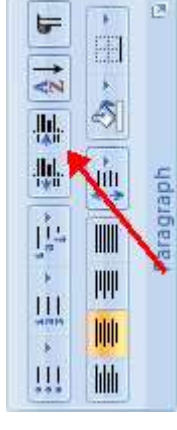
Exercise 2

- ☐ Open your saved document located in my library.
- ☐ Make your name bold
- ☐ Underline where you live
- ☐ Highlight your favourite food in red
- ☐ Put in italics why you are doing the course.
- ☐ From where you have typed in the reason you are taking the course start out in on under paragraph and increase the indent level 2 times
- ☐ Align your document to the right

Indent Paragraphs

Indenting paragraphs allows you to set text within a paragraph at different margins. There are several options for indenting:

- To indent paragraphs, you can do the following:
- Click the Indent buttons to control the indent.
- Click the Indent button repeated times to increase the size of the indent.

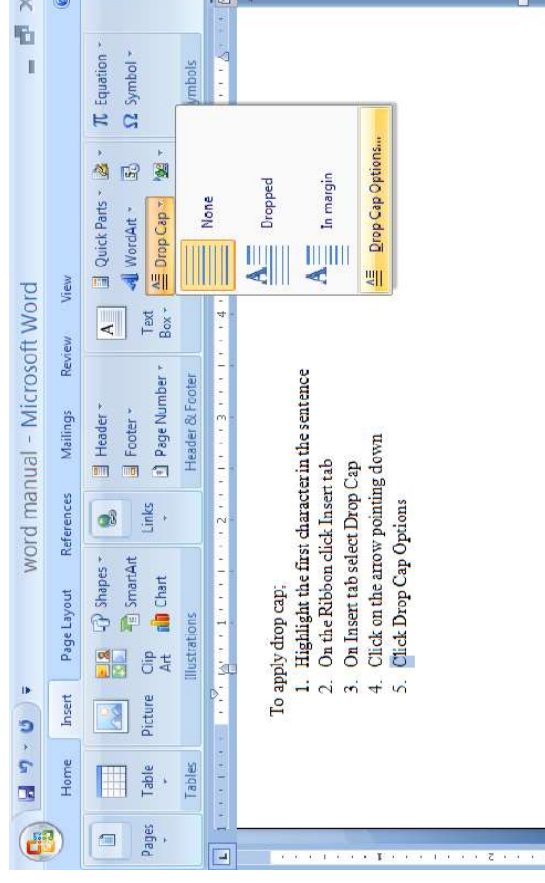


Drop caps

There are times when you wish to attract the reader's attention by making the first character in a sentence large, taking more space in the next line. Such kind of a character is said to be "dropped".

To apply drop cap;

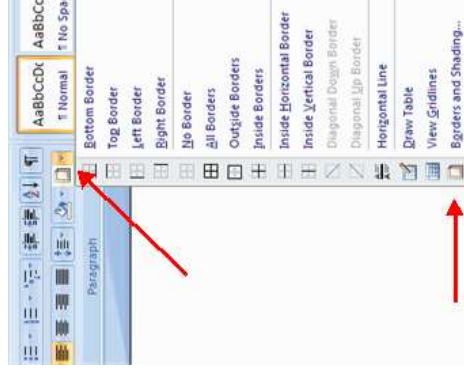
- Highlight the first character in the sentence
- On the Ribbon click Insert tab
- On Insert tab select Drop Cap
- Click on the arrow pointing down
- Click Drop Cap Options



Borders and Shading

You can add borders and shading to paragraphs and entire pages. To create a border around a paragraph or paragraphs:

- Select the area of text where you want the border or shading.
- Click the **Borders Button** on the Paragraph Group on the Home Tab
- Choose the **Border and Shading**
- Choose the appropriate/// options



Creating and editing tables

A table is a feature in Ms Word made up of rows and columns that is used to organize and enhance display of information.

Creating tables

- To create a table:
- Place the cursor on the page where you want the new table
- Click the **Insert** Tab of the Ribbon
- Click the **Tables** Button on the Tables Group. You can create a table one of four ways:
- Click **Insert Table** and enter the number of rows and columns
- Click the **Draw Table**, create your table by clicking and entering the rows and columns
- Highlight the number of row and columns

Modify the Table Structure and Format a Table

To **modify** the structure of a table:

Click the table and notice that you have two new tabs on the Ribbon: **Design** and **Layout**. These pertain to the table design and layout.



Graphics

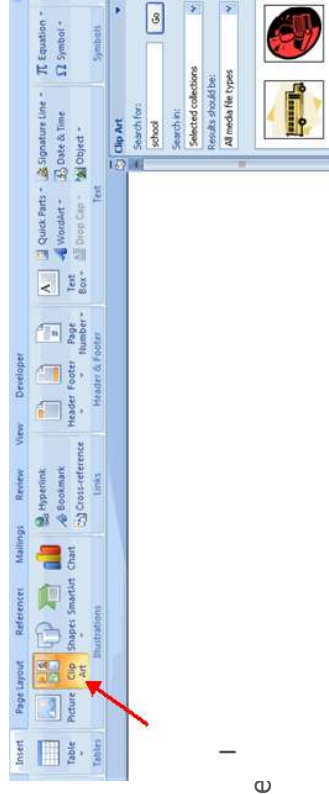
Word 2007 allows you to insert special characters, symbols, pictures, illustrations, and watermarks.



Illustrations, Pictures, and Smart Art

Word 2007 allows you to insert illustrations and pictures into a document. To insert **illustrations**:

- Place your cursor in the document where you want the illustration/picture
- Click the **Insert** Tab on the Ribbon
- Click the **Clip Art** Button
- The dialog box will open on the screen and you can search for clip art.
- Choose the illustration you wish to include



To insert a picture:

- Place your cursor in the document where you want the illustration/picture
- Click the **Insert** Tab on the Ribbon
- Click the **Picture** Button
- Browse to the picture you wish to include
- Click the **Picture**
- Click **Insert**

Resize Graphics

All graphics can be resized by clicking the image and clicking one corner of the image and dragging the cursor to the size you want the picture

Page Formatting

Modify Page Margins and Orientations. The page margins can be modified through the following steps:

- Click the **Page Layout** Tab on the Ribbon
- On the **Page Setup** Group, Click **Margins**
- Click a **Default Margin**, or
- Click **Custom Margins** and complete the dialog box

Apply a Page Border and Color

To apply a page border or color:

Click the **Page Layout** Tab on the Ribbon

On the Page Background Group, click the **Page Colors** or **Page Borders** drop down menus



Insert Common Header and Footer Information: To insert Header and Footer information such as page numbers, date, or title, first, decide if you want the information in the header (at the top of the page) or in the Footer (at the bottom of the page), then:

- Click the **Insert** Tab on the Ribbon
- Click **Header or Footer**
- Choose a style
- The **Header/Footer Design** Tab will display on the Ribbon
- Choose the information that you would like to have in the header or footer (date, time, page numbers, etc.) or type in the information you would like to have in the header or footer

Bulleted and Numbered Lists

Bulleted lists have bullet points, numbered lists have numbers, and lists with no bullet points or numbers are called lists with no organization of the list.

- To **add** a list to existing text:
- Select the text you wish to make a list
- From the Paragraph Group on the Home Tab, Click the **Bulleted or Numbered Lists** button

Insert Footnote

Some types of academic writing utilize footnotes. To insert a footnote:

- Click the **References** Tab on the Ribbon
- Click **Insert Footnote** (or Insert Endnote depending on your needs)
- Begin typing the footnote



Exercise 3

- ☐ Using your document insert a table
- ☐ Insert the table have 3 columns and 4 rows
- ☐ On the first column type in: item, colour, size. On the first row: type in T-shirts, Trousers and shoes
- ☐ In the between fill in numbers of your choices.
- ☐ Insert a header with the name Tamuka Hub and today's date.
- ☐ Insert a footer with your full names
- ☐ Insert a picture of your choice. Select any of the default pictures on the computers my pictures folder
- ☐ Remember to save your work capture the most recent edits on your document
- ☐ Create a folder on the desktop and name it with your Surname
- ☐ Relocate the folder to libraries and save it under documents

Printing a document

The choice of a printer depends on the quality of hardcopy desired. Before you print, it is very important that you preview your document to confirm that no details are outside the printable area and that the document layout is okay.

Using print preview

- Click on the Office Button
- Point to Print option
- Select Print Preview option

To print:

- Click on the Office Button
- Point to Print Option
- Select Print. A dialog box appears where you can specify:
 - The type of printer installed in your computer other than the default printer
 - Whether to print the whole document or a range in the Page Range box
- Number of copies to print per page in the Number of copies
- Click OK to start printing

Creating your CV and cover letter

A Curriculum Vitae also known as a C.V or resume is a representation of yourself on paper.

How you present your CV will determine whether an organization/company would invite you for an interview. We shall look at how to create a CV from scratch:

☐ Open your document using either of the word processors

☐ Now lets look at how you shall structure your CV. You need to remember that you CV need to be divided into four major parts:

1. Bio data: This is the basic introduction of yourself. Put in your name, Date of Birth, Telephone No. Email address, P.O. box(if you have), general location (City and Country),Gender (if your name is tricky e.g. Jean Marie, Ashley, Denise)
2. Professional Background or Work experience: Here you need to organise your document in a chronological i.e from most current to the oldest. If you have worked in many places, only indicate work experiences that are relevant to the position and company you are applying for. There are 4 keywords to have in this section are: **Name of the company/organization, Position held , Duration worked, specific responsibilities(indicate a minimum of 4 key responsibilities)**
3. Educational background: In this section again you need to organise in a chronological manner starting from the latest attained education to the earliest. You can have the keywords as: **Name of institution, Duration, Attained level of education, an outline of the major modules covered**
4. Referees: You need a minimum of 2 referees and a maximum of 3. They should not be your cells even though the company worked for is Family owned. The keywords in this sections are: Full Names of referee, Current telephone number, current address, current organization ,position held.

Watch video on how to create a CV using Ms Word

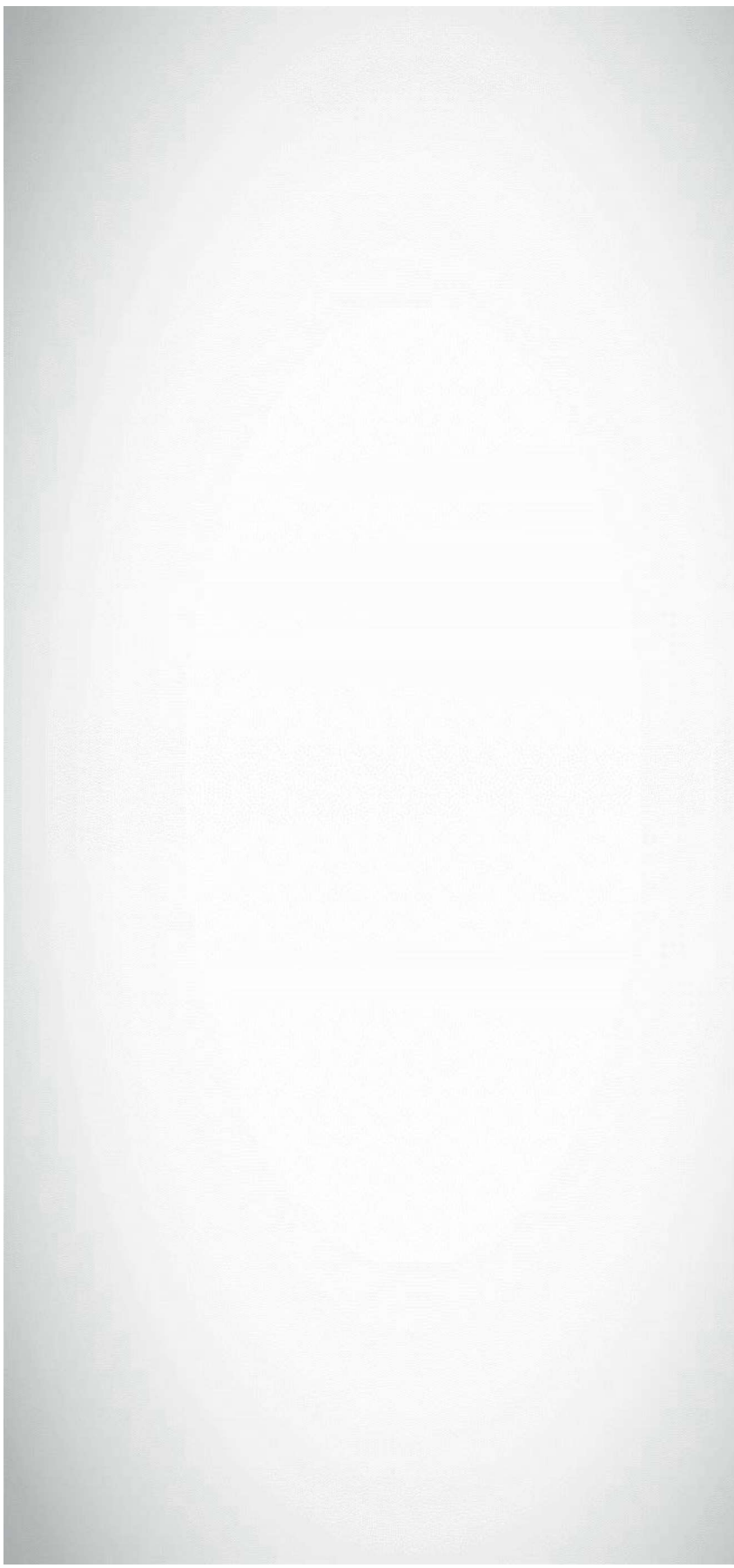
Making your CV outstanding

A few pointers to make your CV impressive:

- Organise your CV in a chronological manner
- Avoid using common words like hardworking, dedicated , loyal with more professional words like self-drive, problem-solving oriented
- Avoid using the same font size, change the size when it comes to headings
- Using functions/tools like bold, Italics, underline make your CV look appealing to the eye
- Be as specific as possible when outline your responsibilities under work experience

Watch videos on how to make your CV impressive.....

Words to avoid when making a C.V.



SPREADSHEETS

Definition of a spreadsheet

A spreadsheet is essentially a ledger sheet that lets you enter, edit and manipulate numeric data . There are two types of spreadsheets namely

The manual spreadsheet

The electronic spreadsheet

A manual spreadsheet

This is the most commonly used type by book keepers as a ledger book with many sheets of paper divided into rows and columns on which various amounts of money are entered manually using a pen or pencil.

An electronic spreadsheet

This is prepared using a computer program that enables the user to enter values in rows and columns similar to the ones in manual spreadsheets and to manipulate them mathematically using formulae.

Examples of spreadsheets

- *VisiCalc*: It was the first type of spreadsheet to be developed for personal computers
- *Lotus 1-2-3*: An integrated software with spreadsheet module, graphs and database.
- *Microsoft Excel*
- *Googesheets*
- *Libre Calc*

Introduction to Spreadsheets

Components of a spreadsheet

A spreadsheet has three components which are:

Workbook

Sheets

Database

Workbook

This is the component in which data values are entered .It is made up of rows and columns.

The intersection between a row and a column is called **cell**.

A row is a horizontal arrangement of cells while a **column** is a vertical arrangement of cells.

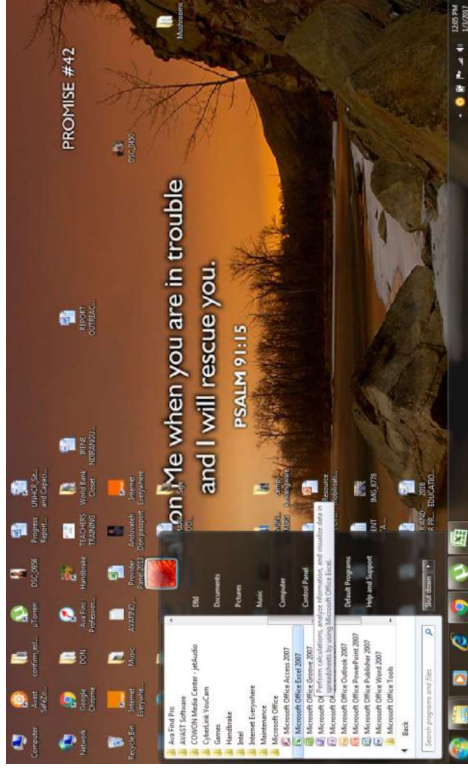
Each cell is referenced using the column label followed by the row label e.g. cell B3 this form of identifying the cell is call a **cell coordinator**. At the top of the rows the whether a heading is put is called a **column header** this helps to identify the items entered in the cells below the header. They are arranged in an alphabetical order. On the side we have the **row headers** they are organized in **numbers**. This helps identify data being entered along the columns

Sheets are created by clicking on the add tab button. A workbook can have as many sheets as 1000+.

Database is the numerical or alphanumerical information that is added on a sheet. Adding information to a sheet is what we call **populating a workbook**

Getting started with Microsoft Excel 2007

- Click on the Start button.
- Select Microsoft Excel on the start menu.
- If Excel is not available on the menu, point to Programs.
- Select Microsoft Office option.
- Select Microsoft Excel from the side kick menu.



➤ Ribbon

The ribbon is the panel at the top portion of the document. It has seven tabs: Home, Insert, Page Layouts, Formulas, Data, Review, and View. Each tab is divided into groups. The groups are logical collections of features designed to perform function that you will utilize in developing or editing your Excel spreadsheets. Commonly utilized features are displayed on the Ribbon. To view additional features within each group, click the arrow at the bottom right corner of each group.

[Watch video on introduction to Ms Excel => .](#)

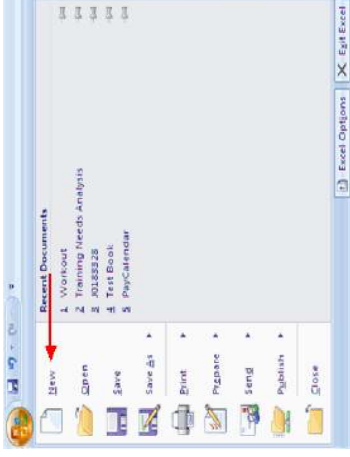
Creating a Workbook

To create a new Workbook:

Click the **Microsoft Office Toolbar**

Click **New**

Choose **Blank Document**



Save a Workbook

When you save a workbook, you have two choices: **Save** or **Save As**.

To save a document:

Click the **Microsoft Office Button**

Click **Save**

You may need to use the **Save As** feature when you need to save a workbook under a different name or to save it for earlier versions of Excel. Remember that older versions of Excel will not be able to open an Excel 2007 worksheet unless you save it as an Excel 97-2003 Format. To use the **Save As** feature:

Click the **Microsoft Office Button**

Click **Save As**

Type in the name for the Workbook

In the **Save as Type** box, choose **Excel 97-2003 Workbook**

Opening a Workbook

- Click the **Microsoft Office Button**
- Click **Open**
- Browse to the workbook
- Click the title of the workbook
- Click **Open**

Now, you have created a new workbook. You will notice that at the bottom you have 3 sheets labeled sheet 1,2 and 3.

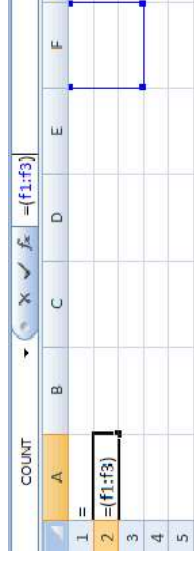
Entering Data

There are different ways to enter data in Excel. When you click on an individual cell we call that **an active cell** . To enter data you can either click on the cell of choice to make it an active cell and type in or click on the specific cell and type on the formula bar.



To enter data into the **formula bar**

- Click the cell where you would like the data
- Place the cursor in the **Formula Bar**
- Type in the data



Excel allows you to move, copy, and paste cells and cell content through cutting and pasting and copying and pasting.

Select Data

To select a cell or data to be copied or cut:

- Click the **cell**

	A	B	C
1			
2	2-Jun		
3	4-Jun		
4	6-Jun		

- Click and drag the cursor to select many cells in a range

	A	B	C	D	E
1		Widgets	Customers	Sales	Price
2	2-Jun				
3	4-Jun	2	4	2	5
4	6-Jun				

Select a Row or Column

To select a row or column click on the **row** or **column header**.

	A	B	C	D	E	F
1		Widgets	Customers	Sales	Price	
2	2-Jun					
3	4-Jun	2	4	2	5	
4	6-Jun					
5						

Copy and Paste

- Select the cell(s) that you wish to copy
- On the **Clipboard** group of the **Home** tab, click **Copy**



- Select the cell(s) where you would like to copy the data
- On the **Clipboard** group of the **Home** tab, click **Paste**



- To **cut**, use the same procedure.
- Click on the icon that looks like a pair of scissors.

- Then go to the paste icon and paste the new information to the desired cell.

Do note that when you cut a cell, data or words the original cells does not retain the information, it only goes to the location you have pasted to

Exercise

- ☐ Open an excel spread sheet
- ☐ On the column header type in : Name, T-shirt, Blouse, Trousers, Shoes, Socks
- ☐ On the row header type in, [this should be under the Name column]: John, Mary, James, Jane, Peter, Magdaline
- ☐ Under item, type in; T-shirt; 5,6,2,4,5,6. Blouse: 2,5,4,7,3,7. Trousers: 5,8,11,13,13,12. Shoes: 7,4,5,6,7,8. Socks: 8,2,3,4,5,6.
- ☐ Save the spreadsheet under your name and put it in your folder.

Auto Fill

The Auto Fill feature fills cell data or series of data in a worksheet into a selected range of cells. If you want the same data copied into the other cells, you only need to complete one cell. If you want to have a series of data (for example, days of the week) fill in the first two cells in the series and then use the auto fill feature. To use the Auto Fill feature:

- **Click the Fill Handle**
- **Drag the Fill Handle** to complete the cells
- OR**
- Click the cell and drag down the series will appear.

Modifying a Worksheet

Inserting Cells, Rows, and Columns

To insert cells, rows, and columns in Excel:

- Place the cursor in the row below where you want the new row, or in the column to the left of where you want the new column
- Right Click, select the **Insert** button on the **Cells** group of the **Home** tab
- Click the appropriate choice: **Cell, Row, or Column**

Deleting Cells, Rows and Columns

To delete cells, rows, and columns:

- Place the cursor in the cell, row, or column that you want to delete
- Right click and select the **Delete** button on the **Cells** group of the **Home** tab
- Click the appropriate choice: **Cell, Row, or Column**

Calculations

Excel Formulas

A formula is a set of mathematical instructions that can be used in Excel to perform calculations. Formulae perform mathematical operations ranging from very simple arithmetic problems to complex scientific, scientific, financial and mathematical analysis.

All Formulas are started in the formula box with an = sign. You can either type on the active cell(which will be a cell of your choice) or go to the formula bar after selecting the active cell and type in your formula there

Formula Bar



Operators: Symbols (+, -, *, /, etc.) that specify the calculation to be performed

Constants: Numbers or text values that do not change

Functions: Predefined formulas in Excel

To create a basic formula in Excel:

- Select the **cell** for the formula
 - Type = (the equal sign) and the **formula**
 - Click **Enter**
 - Lets look at the formulas
- I. Addition – Has the plus (+) on the key board or you can to the tools bar and select auto sum (your trainer will help you identify the icon)
 - II. Subtraction – Has the minus(-) sign on the keyboard or you can go to the formula bar select the subtraction
 - III. Division – Has a slash sign either forward or back ward (/)
 - IV. Other formulas are also included that can be gotten from the formula tool bar.

Calculating with Functions

A function is a built in formula in Excel. A function has a name and arguments (the mathematical function). Common functions in Excel:

Sum: Adds all cells in the argument

Average: Calculates the average of the cells in the argument

Min: Finds the minimum value

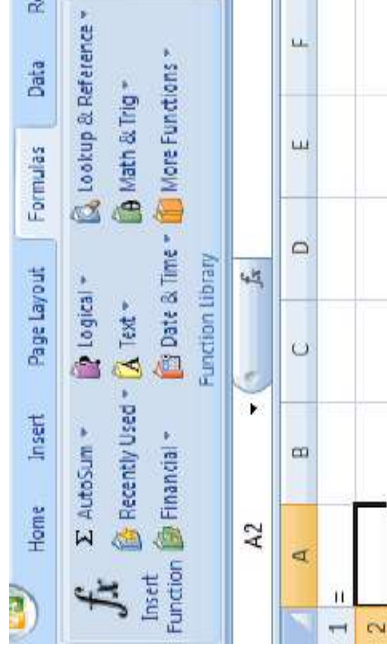
Max: Finds the maximum value

Count: Finds the number of cells that contain a numerical value within a range of the argument

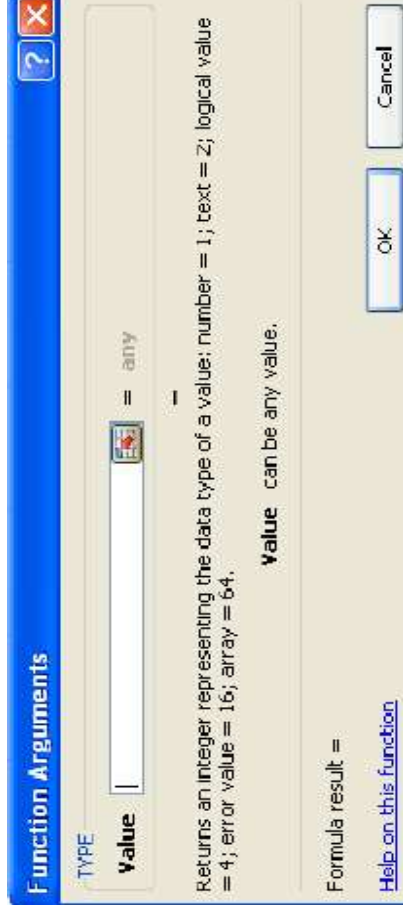
To calculate a function:

Click the **cell** where you want the function applied

Click the **Insert Function** button



- Complete the Number 1 box with the first cell in the range that you want calculated
- Complete the Number 2 box with the last cell in the range that you want calculated



Function Library

The function library is a large group of functions on the Formula Tab of the Ribbon. These functions include:

AutoSum: Easily calculates the sum of a range

Recently Used: All recently used functions

Financial: Accrued interest, cash flow return rates and additional financial functions

Logical: And, If, True, False, etc.

Text: Text based functions

Date & Time: Functions calculated on date and time

Math & Trig: Mathematical Functions

Functions and formulas

Cell referencing, Absolute referencing and Mixed References

Using cells coordinates by just their column and row labels (such as "A1") is called **cell referencing**. When a formula contains cell referencing and it is copied from one cell to another, Excel does not create an exact copy of the formula. It will change cell addresses cell to the row and column they are moved to.

For example, if a simple addition formula in cell C1 $= (A1+B1)$ is copied to cell C2, the formula would change to

$= (A2+B2)$ to reflect the new row.

To prevent this change, cells must be called by **absolute referencing** and this is accomplished by placing dollar signs "\$" within the cell addresses in the formula.

Continuing the previous example, the formula in cell C1 would read $= (\$A\$1+\$B\$1)$ if the value of cell C2 should be the sum of cells A1 and B1. Both the column and row of both cells are absolute and will not change when copied.

Mixed referencing can also be used where only the row OR column fixed. For example, in the formula $= (A\$1+\$B2)$, the row of cell A1 is fixed and the column of cell B2 is fixed.

Cell references

Exercise:

- ☐ Get the totals of each person on the database you have created
- ☐ Add manually for John
- ☐ Use cell referencing for Mary
- ☐ Drag the formula down till Magdaline
- ☐ Do Absolute referencing for Peter
- ☐ Do Mixed referencing for Magdaline
- ☐ Subtract the totals of Magdaline from John and put it in cell G2
- ☐ Get the average result of all and put in cell F8

Sort and Filter

At times, it becomes necessary to use advanced data management tools to manage large data stored on a worksheet. If the worksheet has many records, it may become necessary to arrange them in a particular order using a method called *sorting* for easier access to data items. Other methods of data management include use of *filters*, *total/subtotal function* and *forms*.

Sorting and Filtering allow you to manipulate data in a worksheet based on given set of criteria.

Basic Sorting

To execute a basic descending or ascending sort based on one column:

- Highlight the cells that will be sorted
- Click the **Sort & Filter** button on the **Home** tab
- Click the **Sort Ascending** (A-Z) button or **Sort Descending** (Z-A) button



Custom Sorting

To sort on the basis of more than one column:

- Click the **Sort & Filter** button on the **Home** tab
- Choose which column you want to sort by first
- Click **Add Level**
- Choose the next column you want to sort
- Click **OK**

Filtering

This is a quick and efficient method of finding and working with a subset of data in a list.

Filtering allows you to display only data that meets certain criteria. To filter:

- Click the column or columns that contain the data you wish to filter
- On the **Home** tab, click on **Sort & Filter**
- Click **Filter** button
- Click the **Arrow** at the bottom of the first cell
- Click the **Text Filter**
- Click the **Words** you wish to Filter
- To clear the filter click the **Sort & Filter** button
- Click **Clear**



Charts/graphs

Charts allow you to present information contained in the worksheet in a graphic format. A chart helps the reader to quickly see trends in data and to be able to compare and contrast aspects of data that would otherwise have remained obscure.

Excel offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter and more. To view the charts available click the Insert Tab on the Ribbon.



Creating a Chart

To create a chart:

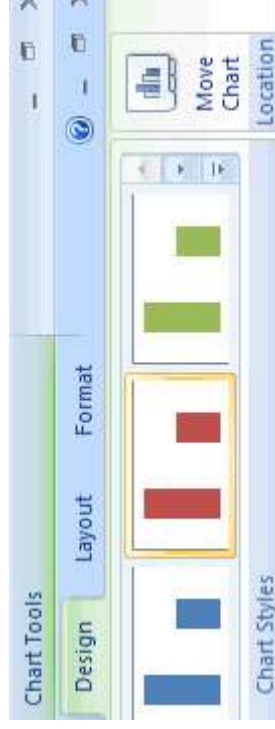
- Select the **cells** that contain the data you want to use in the chart
- Click the **Insert** tab on the Ribbon
- Click the type of **Chart** you want to create

Modifying a Chart

Once you have created a chart you can do several things to modify the chart.

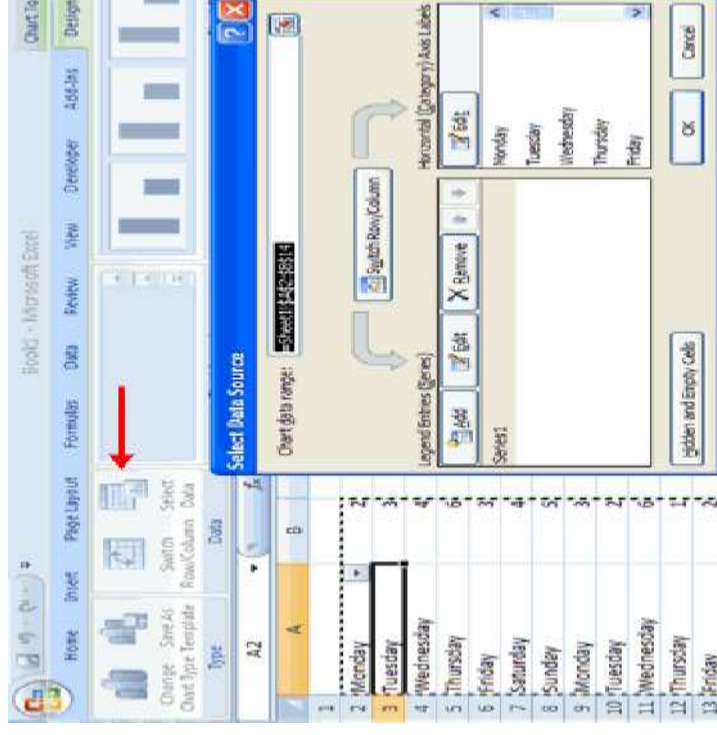
To move the chart:

- Click the **Chart** and **Drag** it another location on the same worksheet, or
- Click the **Move Chart** button on the **Design** tab
- Choose the desired location (either a new sheet or a current sheet in the workbook)



To change the data included in the chart:

- Click the **Chart**
- Click the **Select Data** button on the **Design** tab



To reverse which data are displayed in the rows and columns:

- Click the **Chart**
- Click the **Switch Row/Column** button on the **Design** tab



To modify the labels and titles:

- Click the **Chart**
- On the **Layout** tab, click the **Chart Title** or the **Data Labels** button
- Change the **Title** and click **Enter**



Chart tools

The Chart Tools appear on the Ribbon when you click on the chart. The tools are located on three tabs: Design, Layout, and Format.

Design tab

Within the **Design** tab you can control the chart type, layout, styles, and location.



Layout tab

Within the **Layout** tab you can control inserting pictures, shapes and text boxes, labels, axes, background, and analysis.



Format tab

Within the **Format** tab you can modify shape styles, word styles and size of the chart.



Copying a Chart to Microsoft Word

- Select the **chart**
- Click **Copy** on the **Home** tab
- Go to the **Word** document where you want the chart located
- Click **Paste** on the **Home** tab



Formatting a worksheet

This refers to enhancing the appearance of the worksheet to make it more professional and appealing to the reader. The golden rule of formatting is to use simple clear formats.

Modifying Fonts

Modifying fonts in Excel will allow you to emphasize titles and headings. To modify a font:

Select the cell or cells that you would like the font applied

On the **Font** group on the **Home** tab, choose the font type, size, bold, italics, underline, or color

Formatting Cells Dialog Box

In Excel, you can also apply specific formatting to a cell. To apply formatting to a cell or group of cells:

Select the cell or cells that will have the formatting

Click the **Dialog Box** arrow on the **Alignment** group of the **Home** tab

There are several tabs on this dialog box that allow you to modify properties of the cell or cells.

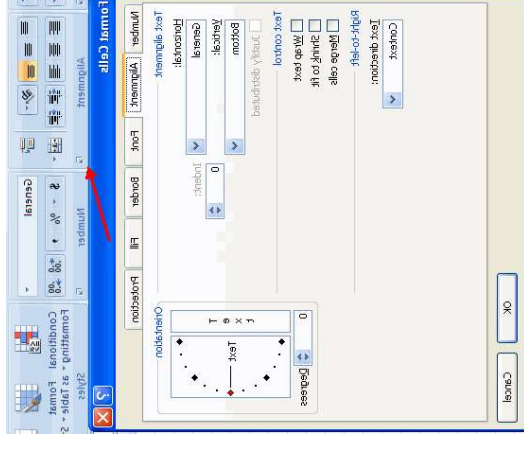
Number: Allows for the display of different number types and decimal places

Alignment: Allows for the horizontal and vertical alignment of text, wrap text, shrink text, merge cells and the direction of the text.

Font: Allows for control of font, font style, size, color, and additional features

Border: Border styles and colors

Fill: Cell fill colors and styles



Adding Borders and Colors to Cells

Borders and colors can be added to cells manually or through the use of styles. To add borders manually:

Click the **Borders** drop down menu on the **Font** group of the **Home** tab

Choose the appropriate border

To apply colors manually:

- Click the **Fill** drop down menu on the **Font** group of the **Home** tab
- Choose the appropriate color



Merging Cells

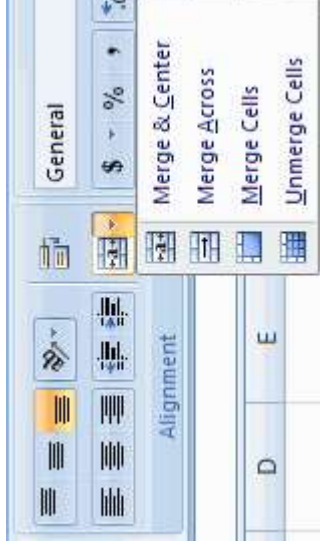
To merge cells select the cells you want to merge and click the **Merge & Center** button on the **Alignment** group of the **Home** tab. The four choices for merging cells are:

Merge & Center: Combines the cells and centers the contents in the new, larger cell

Merge Across: Combines the cells across columns without centering data

Merge Cells: Combines the cells in a range without centering

Unmerge Cells: Splits the cell that has been merged



Developing a workbook

Formatting a Worksheet Tab

You can rename a worksheet or change the color of the tabs to meet your needs.

To rename a worksheet:

- Open the sheet to be renamed
- Click the **Format** button on the **Home** tab
- Click **Rename sheet**
- Type in a new name
- Press **Enter**

Inserting and Deleting Worksheets

To insert a worksheet

- Open the workbook
- Click the **Insert** button on the **Cells** group of the **Home** tab
- Click **Insert Sheet**

To delete a worksheet

- Open the workbook
- Click the **Delete** button on the **Cells** group of the **Home** tab
- Click **Delete Sheet**



Copying and Pasting Worksheets:

To copy and paste a worksheet:

- Click the tab of the worksheet to be copied
- **Right click** and choose **Move** or **Copy**
- Choose the desired position of the sheet
- Click the check box next to **Create a Copy**
- Click **OK**

Q & A session

Add an exercise on :

- ☐ -Sorting and filtering
- ☐ Adding a worksheet and renaming it

DATABASE (MS ACCESS)

Introduction to databases

Today, computerized systems have radically changed the way data and information is managed by use of special programs called *Database Management System (DBMS)*.

Database-A collection of structured and related data items organized so as to provide a consistent and controlled access to the items.

Watch video on introduction to Ms Access.

Database concepts

Computerized database creation and manipulation is achieved using Database Management System software. This software facilitates the creation, organization and maintenance of databases. Examples of database management softwares include:

Microsoft Access

Oracle

FoxPro

Lotus Approach

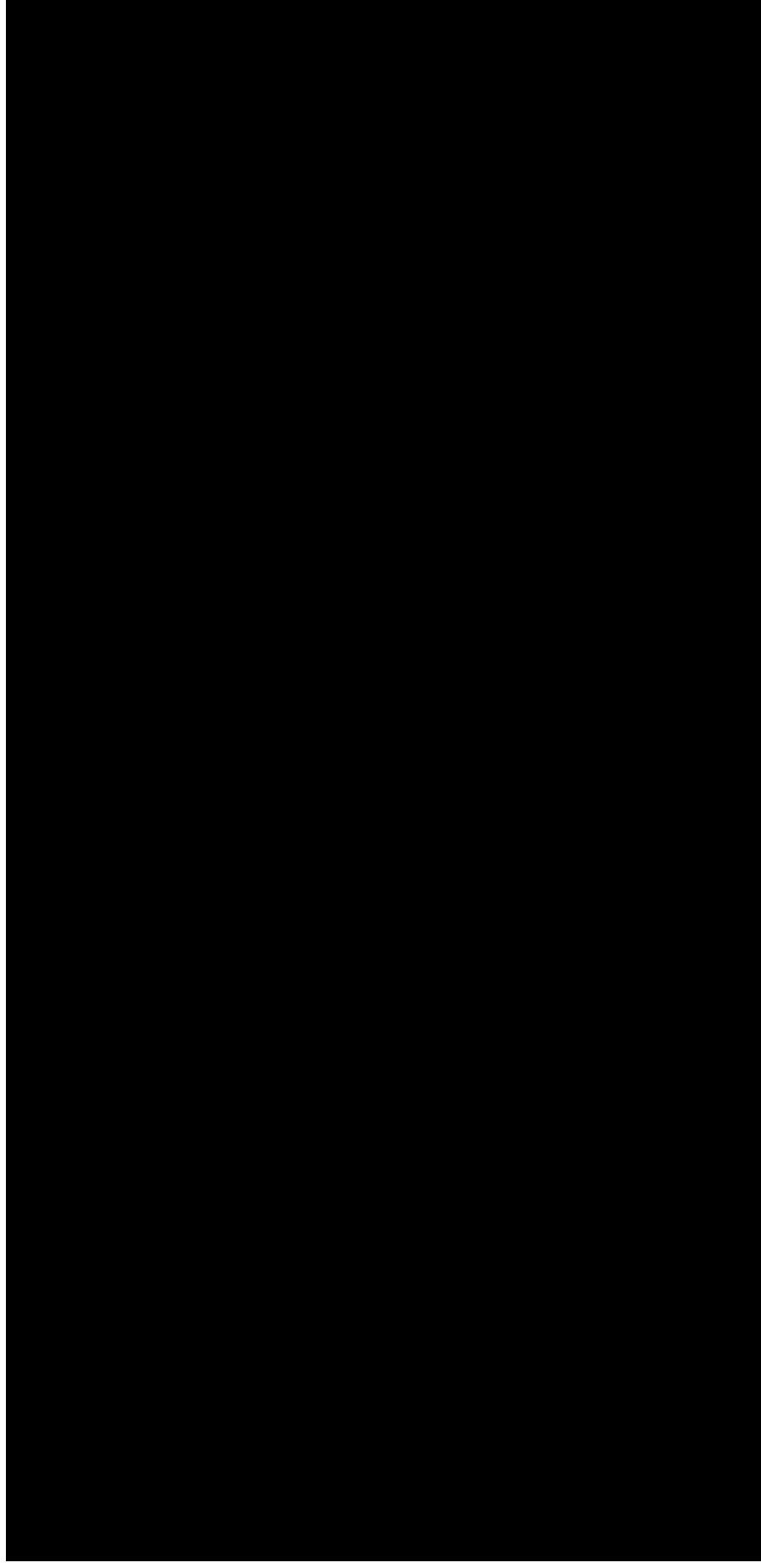
Features of a database management software

Database software contains a collection of features that provides the user with a means to manipulate data in a database. These features include Tables/files, Queries, Reports generators, Form interface and a computer programming language with it.

Tables/file structure

A database structure that is used to hold related records. Tables are organized in rows and columns with each row representing a record while each column represents common fields in each record.

Introduction to Microsoft Access



To view data in a table:

- Click the **arrow** to open the navigation pane
- Double-click on the table name to open the table



Queries and query language

This is a database tool used to search for or question a database on specific records and returns a result for the user. The query statements are written using a special language called *Structured Query Language (SQL)*.

Queries select records from one or more tables in a database so they can be viewed, analyzed, and sorted on a common datasheet. A query can also perform calculations and display the results. The resulting collection of records, called a **dynaset** (short for dynamic subset), is saved as a database object and can therefore be easily used in the future. The query will be updated whenever the original tables are updated. Types of queries are **select queries** that extract data from tables based on specified values, **find duplicate** queries that display records with duplicate values for one or more of the specified fields, and **find unmatched** queries display records from one table that do not have corresponding values in a second table.

To run a query:

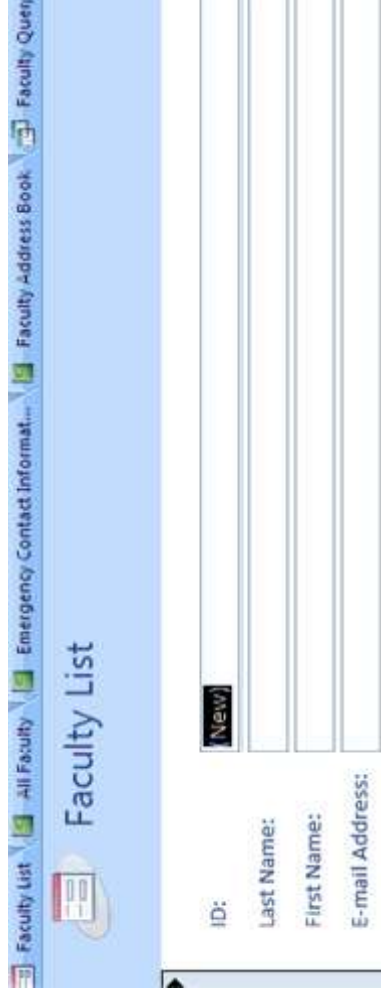
- Click the **arrow** to open the navigation pane
- Double-click on the query name

Forms/screen input

A form is a graphical interface that resembles the ordinary paper forms used to collect data. However, a database form enables the user to view and enter data into a table.

To view data using a form:

- Click the **arrow** to open the navigation pane
- Double-click on the form name



Reports

Most database systems provide the user with a tool for generating reports from an underlying table or query. It is the report generator that provides the user with a means to specify the output layout and what it is to be output or printed on a report.

To view data using a form:

- Click the **arrow** to open the navigation pane
- Double-click on the report name



Name	Faculty ID	Faculty Type	Office	Business Phone	E-mail Address
Jones Sandy	251				jones@facu...
Smith Jane	247				smith@facu...
Subtotal	2				

Macros

Some database software provides the user with a tool called a *macro*, that can be used to automate frequently performed procedures or tasks.

Programming module

When your database becomes more and more complex, you may need a more powerful tool than the macros to automate your database operations further.

NB: For the purpose of your course, only tables, forms, queries and reports have been covered.

Data organization in a database

One of the functions of a database system is to organize data for easy access, retrieval and manipulation. Data is organized from the simplest form called a *field* to a very complex structure called a *database*.

Fields

A character or a logical combination of characters that represent a data item. For example, in a hotel guest list, the guest name is a field.

Records

This is a collection of related fields that represent a single entity.

Files/tables

A file is a collection of related records. For example, the students' file in a school database contains the details of all the students in the school.

Database

This is the highest in data organization hierarchy that holds all related files or tables.

Creating a new database

You can create a new database from scratch or you can create a database from the database wizard.

New Database

To create a new database from scratch:

- Click the **Microsoft Office Button**
- Click **New**
- Type in a name for the database
- Click **Create**

Creating a table/file structure

Table Views

There are two ways to view a table in Access to add data to the table: **Design View** and **Datasheet View**.

In **Design View** you can view all the fields with the data types and descriptions. The records of information that has been added to the database is not viewable



To go to **Design View**:

- Click the down arrow on the **View** button
- Click **Design View**
- In **Datasheet View** you can display the records in a table, where one row is one record. The column headers are the fields you have defined for the database.

To go to **Datasheet View**:

Click the down arrow on the **View** button

Click Datasheet View

Adding New Fields

There are many ways to enter new fields into a database. New fields can be added in the Datasheet View or in the Design View.

There are two ways to add a new field in Datasheet View: Add A New Field or the New Field Button.

- To add a New Field within the Datasheet:
- Click the **Add New Field** column

To add a new field by using the **New Field Button**

- Click the **Datasheet** tab on the Ribbon
- Click the **New Field Button**
- Choose the type of field you wish to add from the **Field Templates** window



Description of field data Types

There are many types a data that a field can be predefined to hold. When you create a new field in a database you should closely match the data type to what will be entered into the field.

The type of data to be used in a database must be clearly defined for the purpose of manipulation and storage.

For example if a field is to be used for calculation, it must be defined as a number. The data types allowed in Ms Access include:

Text	Text, number, or a combination up to 255 characters
Memo	Similar to the text field, can contain text, numbers, or a combination up to 2 GB of data.
Number	Numbers up to 16 bytes of data
Date/Time	Date and Time information
Currency	Currency up to 8 bytes and precise to 4 decimal places
AutoNumber	Access creates a unique number for each new record. This is often the primary key for the table
Yes/No	Yes and No, stored as -1 for yes and 0 for no
OLE Object	Images, documents, graphs up to 2 GB
Hyperlink	Web addresses
Attachment	Attachments such as images, spreadsheets, documents, and charts.

Managing tables

Delete a Table

To delete a table:

- Open the desired database by clicking the **Microsoft Office Button** and clicking **Open**
- Right click on a table and choose **Delete**

Rename a Table

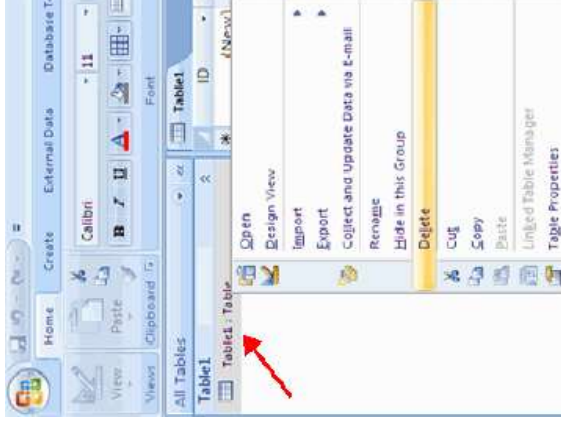
To rename a table:

- Open the desired database by clicking the **Microsoft Office Button** and clicking **Open**
- Right click on a table and choose **Rename**
- Type in the new name

Add a Description to a Table

To add a description to a table

- Open the desired database by clicking the **Microsoft Office Button** and clicking **Open**
- Right click on a table and choose **Table Properties**
- Click the **Description** text box
- Type in the description



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Primary key and indexes

Primary Key

An *index* is a database feature used to speed up search and sort operations in a table.

The primary key is a unique identifier for a record it works by enforcing uniqueness in a table so that one record is not entered twice. The primary key cannot be the same for two records. This field can never be blank.

Composite Key

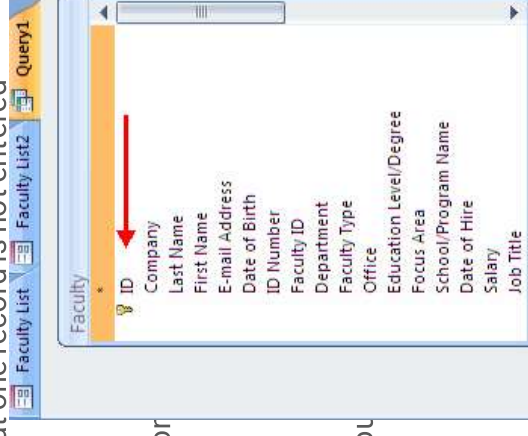
A composite key is a primary key that is comprised of two or more fields. It can also be called a compound key.

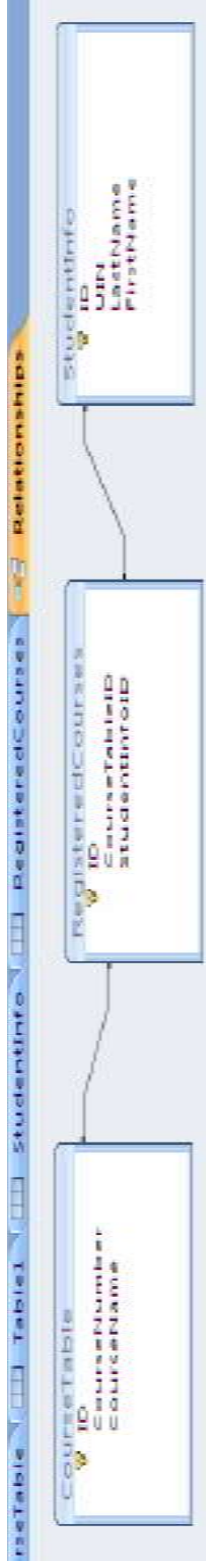
Foreign Key

A foreign key is a field or combination of fields that are related to the primary key of another table.

Table Relationships

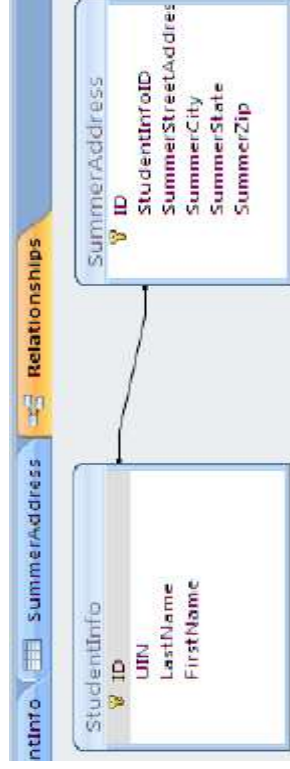
Table relationships are the associations of data between tables. By defining table relationships, you can ensure data integrity and consistency across your database. Relationships are based on matching fields.





One-to-One Relationship

A one-to-one relationship is between two tables where the primary key in one table and the foreign key in another table are the same. For each record in the first table, there is a single matching record in the second table.



One-to-Many Relationship

A one-to-many relationship occurs between two tables where the primary key in one table can be duplicated many times in another table



Creating Table Relationships

To create relationships between tables:

- Click the **Database Tools** tab on the Ribbon
- Click the **Relationships** button
- Click on the **Design** tab
- Click **Show Table**



Select the desired tables

- Click **Add**
- Click **Close**
- Click the field you wish to create a relationship from
- Drag it to the matching field in the other table
- Click **Create**

Printing a Table Relationship

- Click the **Database Tools** tab
- Click the **Relationships** Button
- Click the **Relationship Report Button** on the **Design** tab
- Click the **Print** button

Managing Data

Totals

The totals button provides you the opportunity to add a totals row to your database. The total can be the sum, average, a count, minimum, maximum, standard deviation, or the variance. To set up a totals row:

- Click the **Totals** button on the Home tab
- Click the down arrow of the cell where you want the totals
- Click the appropriate choice



Sort Records

You can sort records in a datasheet by a single column or by two adjacent columns. To sort records by a single column:

Select the field you wish to sort

Click the **Sort Ascending** or **Sort Descending** button



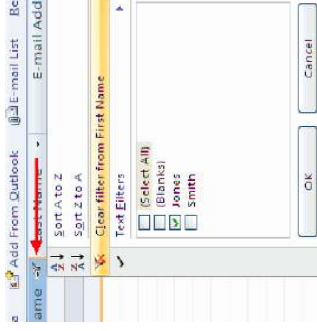
Filtering Records

You can filter records to include only records that you want to display. To filter by a column:

- Open the database in Datasheet View
- Click the **down arrow** in the field label
- Choose the appropriate filter criteria
- Click **OK**

To remove a filter:

- Click the filter button on the field label
- Click Clear Filter
- Click **OK**



Querying a database

Queries are the fastest way to search for information in a database. A query is a database feature that enables the user to display specific records as well as perform calculations on fields from one or multiple tables. You can analyze a table or tables by using either a *select query* or an *action query*.

Select query

The most common type of query used for searching and analyzing data in one or more tables. Select query lets the user specify the search criteria and the records that meet those criteria are displayed in a dynasty or analyzed according to the user requirement.

Action query

These are queries that are used to make changes to many records once. They are mostly used to delete, update, add a group of records from one table to another or create a new table from another table.

Query Wizard

The Query Wizard walks you through the steps to set up a query. To run a query using the query wizard:

- Click the **Create** tab
- Click the **Query Wizard** button
- Choose the type of query you wish to run

- Choose the fields you wish to include from each table
- To select fields from different tables, click the **Tables/Queries** down arrow
- Click **Next**



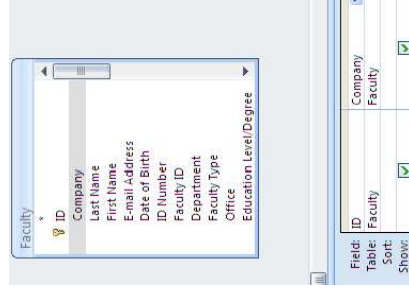
Query Design

You can also design a query with the Query Design Button. To design a query using the Query Design Button:

- Click the Query Design Button on the Create tab.



- Select the tables that you would like to query
- Click **Add**
- Double click the name of the field you would like to query
- Repeat this process for as many fields as you would like in the query



Query Criteria

Query criteria are search conditions used in a query to retrieve specific data. You can set query criteria to be a specific number or data set, or you can set the criteria to be a range of data.

"value"	Will only display items that are that exact value (replace the word value with what you want to search by)
=	Is equal to
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
<>	Not equal to
Between X And Y	Within a range (replace X & Y with values)
Is Null	Null values
And	True only if both conditions exist
Or	True if either condition exists
Not	True if the single instance is not true

To specify search criteria:

- Click the query that you wish to add conditions
- Type in the appropriate query criteria in the **Criteria Box**

Field:	ID	Company
Table:	Faculty	Faculty
Sort:		☒
Show:		☒
Criteria:	= "smith"	
or:		

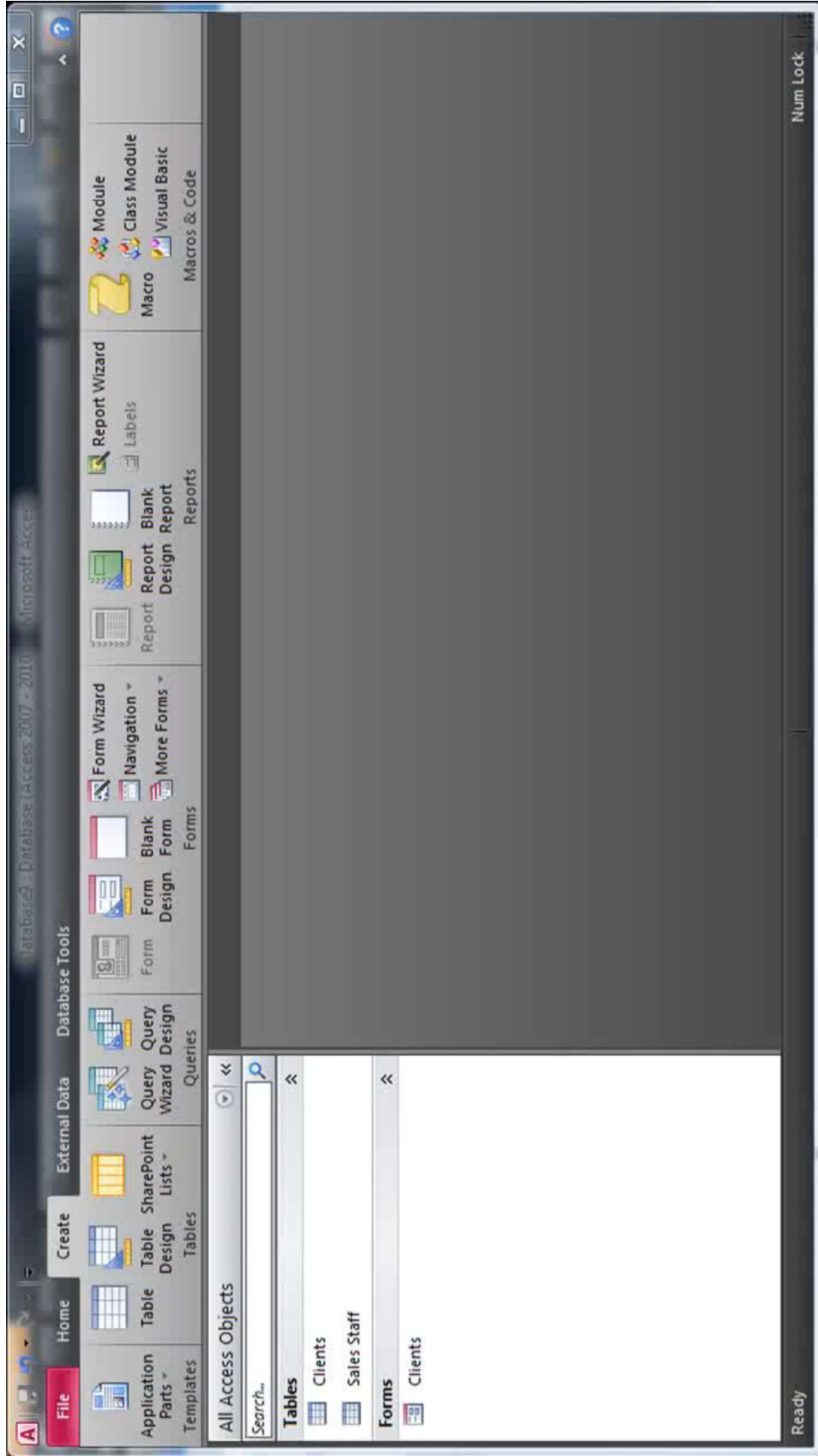
Form design

A form is an interface that enables the user to view and make data entries in to an underlying table more easily. Forms allow you to control the look and feel of the screen for the input of data and the reports generated.

Form Views

There are three ways to view forms in Access:

Design View	Allows you to design a form that includes a header, a footer, and details in the form. You can also add images and control which fields appear on the form.
Form View	This is a dynamic page which allows the user to enter and edit data or navigate through data in a field.
Layout View	This view allows you to design the form and manipulate data.



Creating a Form through design

You can create a form from a table or a query. To create a form:

- Click the **Create** tab
- Click the **Form Design** button
- Click the **Format** tab
- Click the **Add Existing Fields** Button
- In the **Field List** box on the right, click and drag the fields you would like on the form

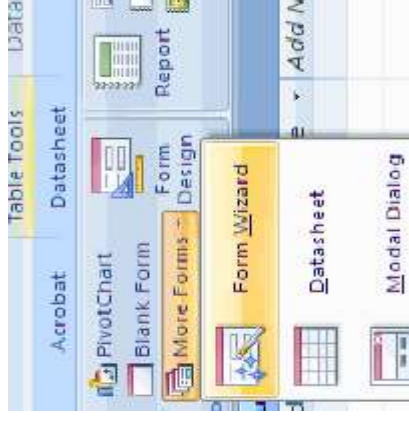
To preview the form:

- Click the **Views** button on the Home tab
- Click the **Form View** button

Creating a form using Form Wizard

You can create forms with the help of the Form Wizard. To use the form wizard:

- On the create tab, click the **More Forms** down arrow
- Click **Form Wizard**
- Choose the **Tables/Queries** that you wish to have on the form
- Choose the fields you wish to have on the forms
- Click **Next**
- Choose the layout for the form
- Click **Next**
- Choose a style
- Click **Next**
- Create a title for the form
- Choose whether you want to open the form to view it or modify the form's design
- Click **Finish**



Generating Reports

Reports are used to summarize and present information from a database. A good database should enable the user to generate database reports and print them for presentation and distribution. Reports are also a means to view and analyze large amounts of data. You can use the Report Wizard or create a custom report that meets your specific needs.

Report Views

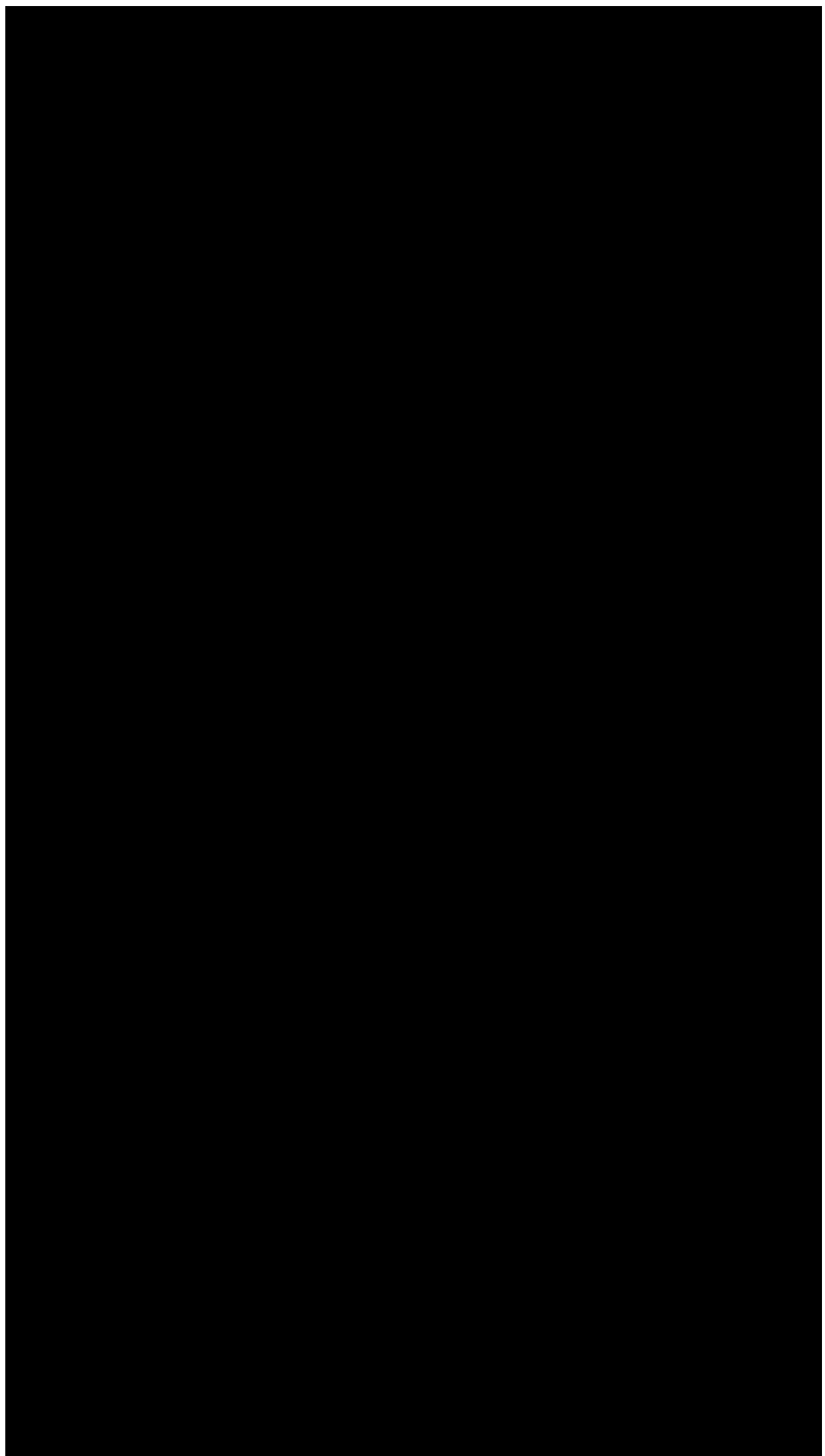
Reports can be displayed in four views:

Design View	This view provides you with the structure of your report. You can add, modify or delete components of the report but you cannot manipulate the data in the tables associated with the report.
Report View	This view allows you to view the data from the table but not to change any layout of the report.
Layout View	This view allows you to see data from the table and add, modify, and delete components of the report.
Print Preview	This view allows you to see what your report will look like when it is printed.

Printing a Report

To print a report:

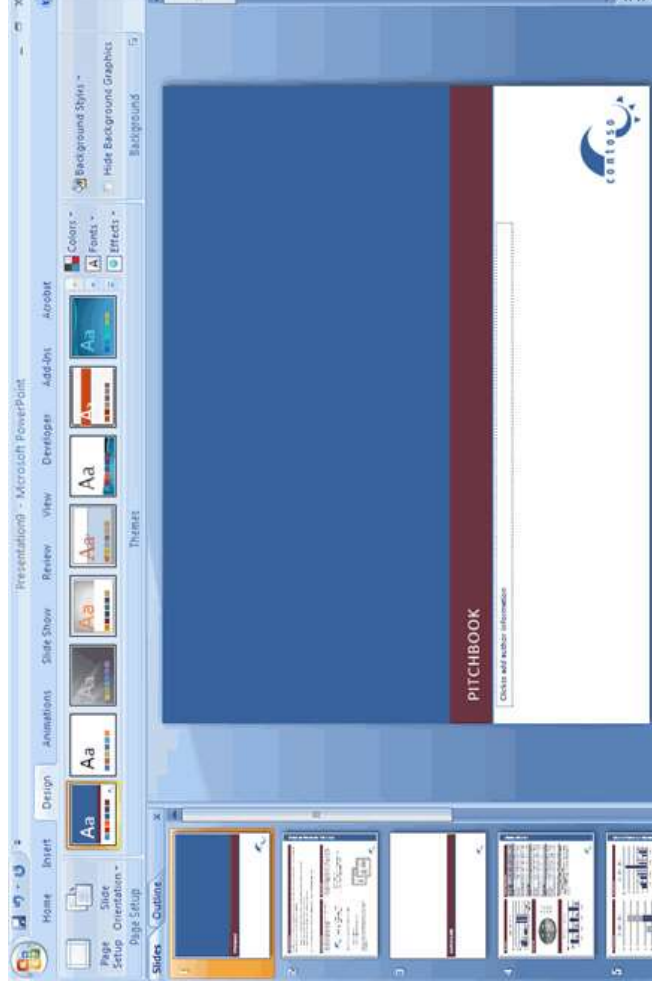
- Select the report you wish to print
- Right-click on the **Report Name**
- Click **Print Preview**
- Choose the appropriate layout, margins, and paper size in the Page Layout group



MICROSOFT POWERPOINT

Getting Started

There are three features that you should remember as you work within PowerPoint 2007: the Microsoft Office Button, the Quick Access Toolbar, and the Ribbon. The function of these features will be more fully explored below



Presentation

A presentation is a collection of data and information that is to be delivered to a specific audience. A *PowerPoint presentation* is a collection of electronic slides that can have text, pictures, graphics, tables, sound and video. This collection can run automatically or can be controlled by a presenter.

Microsoft Office Button

The Microsoft Office Button performs many of the functions that were located in the File menu of older versions of PowerPoint. This button allows you to create a new presentation, Open an existing presentation, save and save as, print, send, or close.

Can you mention some of the functions on the Office button?

Ribbon

The ribbon is the panel at the top portion of the document. It has seven tabs: Home, Insert, Design, Animations, Slide Show, Review, and View. Each tab is divided into groups. The groups are logical collections of features designed to perform function that you will utilize in developing or editing your PowerPoint slides.



Commonly utilized features are displayed on the Ribbon. To view additional features within each group, click the arrow at the bottom right corner of each group.

Home: Clipboard, Slides, Font, Paragraph, Drawing, and Editing

Insert: Tables, Illustrations, Links, Text, and Media Clips

Design: Page Setup, Themes, Background

Animations: Preview, Animations, Transition to this Slide

Slide Show: Start Slide Show, Set Up, Monitors

Review: Proofing, Comments, Protect

View: Presentation Views, Show/Hide, Zoom, Window, Macros

Quick Access Toolbar

The **quick access toolbar** is a customizable toolbar that contains commands that you may want to use. You can place the quick access toolbar above or below the ribbon. To change the location of the quick access toolbar, click on the arrow at the end of the toolbar and click **Show Below the Ribbon**.

Mini Toolbar

A new feature from Office 2007 is the Mini Toolbar. This is a floating toolbar that is displayed when you select text or right-click text. It displays common formatting tools, such as Bold, Italics, Fonts, Font Size and Font Color.

Slide Views

Presentations can be viewed in a variety of manners. On the View tab, the Presentation Views group allows you to view the slides as Normal, Slide Sorter, Notes Page, Slide Show, Slide Master, Handout Master, and Notes Master.



Creating a presentation

Creating a presentation

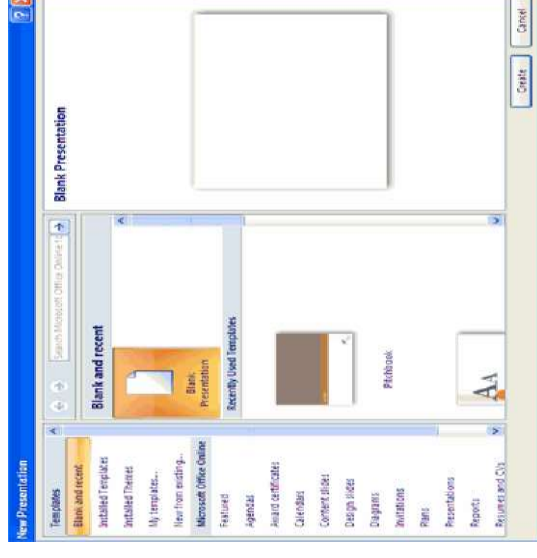
New Presentation

You can start a new presentation from a blank slide, a template, existing presentations, or a Word outline. To create a new presentation from a blank slide:

- Click the **Microsoft Office Button**
- Click **New**
- Click **Blank Presentation**

To create a new presentation from a template:

- Click the **Microsoft Office Button**
- Click **New**
- Click **Installed Templates** or **Browse through Microsoft Office Online Templates**
- Click the template you choose



To create a new presentation from an existing presentation:

- Click the **Microsoft Office Button**
- Click **New**
- Click **New from Existing**
- Browse to and click the presentation

To create a new presentation from a Word outline:

- Click the slide where you would like the outline to begin
- Click **New Slide** on the **Home** tab
- Click **Slides from Outline**
- Browse and click the Word Document that contains the outline

Saving a Presentation

When you save a presentation, you have two choices: **Save** or **Save As**.

To save a document:

- Click the **Microsoft Office Button**
- Click **Save**

You may need to use the **Save As** feature when you need to save a presentation under a different name or to save it for earlier versions of PowerPoint. Remember that older versions of PowerPoint will not be able to open PowerPoint 2007 presentation unless you save it as a PowerPoint 97-2003 Format. To use the **Save As** feature:



Adding Slides

There are several choices when you want to add a new slide to the presentation: Office Themes, Duplicate Selected Slide, or Reuse Slides.

To create a new slide from Office Themes:

- Select the slide immediately **Before** where you want the new slide
- Click the **New Slide** button on the **Home** tab
- Click the slide choice that fits your material

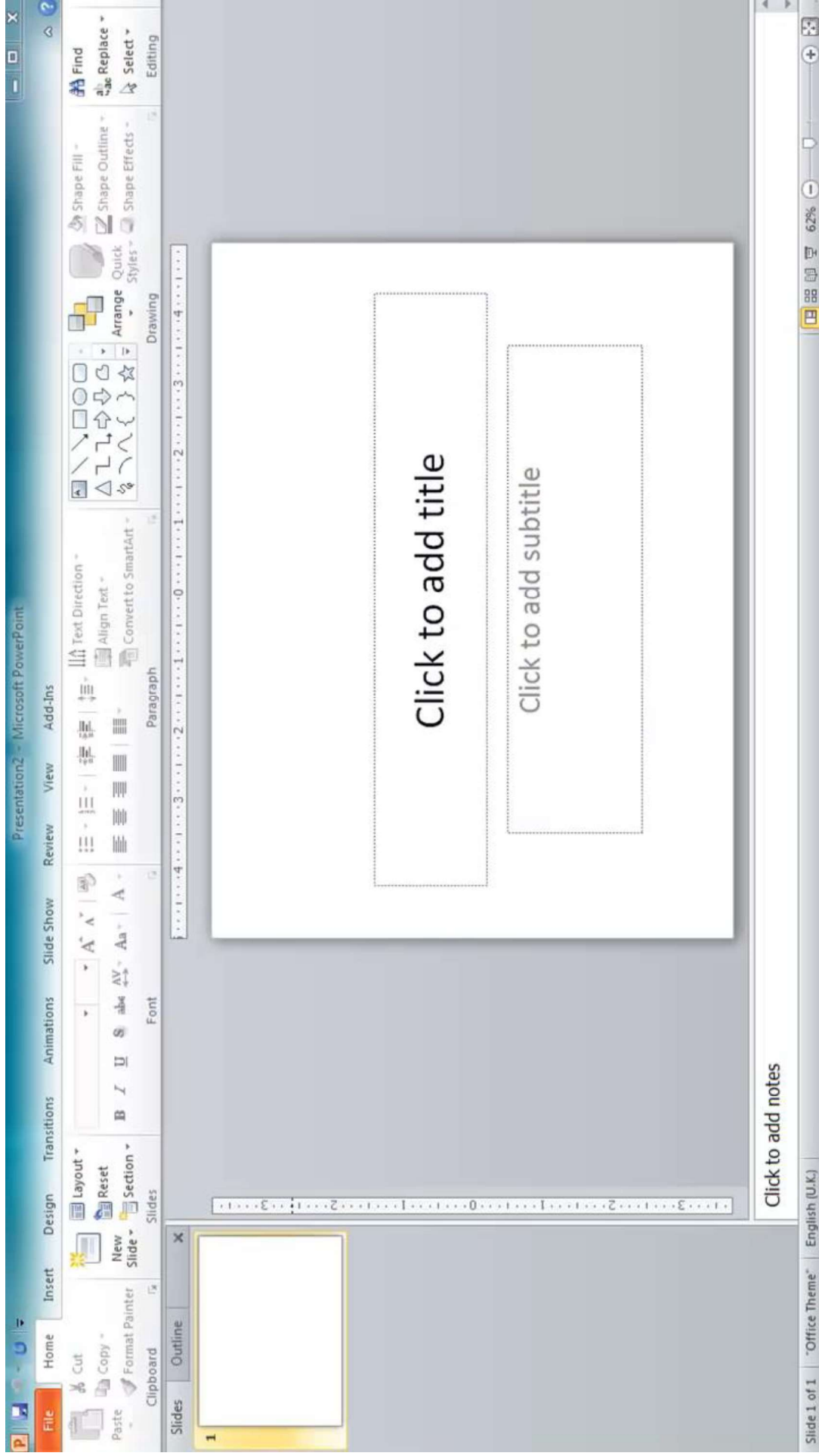


Themes

Themes are design templates that can be applied to an entire presentation that allows for consistency throughout the presentation. To add a theme to a presentation:

Click the **Design** tab

Choose one of the displayed **Themes** or click the **Galleries** button



Working with content

To enter text:

- Select the **slide** where you want the text
- Click in a **Textbox** to add text



To add a text box:

- Select the **slide** where you want to place the text box
- On the **Insert** tab, click **Text Box**
- Click on the slide and drag the cursor to expand the text box
- Type in the text



Copy and Paste

To copy and paste data:

- Select the item(s) that you wish to copy
- On the **Clipboard Group** of the **Home Tab**, click **Copy**
- Select the item(s) where you would like to copy the data
- On the **Clipboard Group** of the **Home Tab**, click **Paste**



Undo and Redo

To undo or redo your most recent actions:

- On the **Quick Access Toolbar**
- Click **Undo** or **Redo**



Spell Checking

To check the spelling in a presentation:

- Click the **Review** tab
- Click the **Spelling** button



Adding content

To resize a textbox:

- Click on the **textbox**
- Click the corner of the box and drag the cursor to the desired size

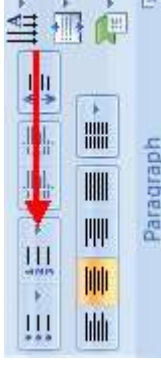


Bulleted and Numbered Lists

Bulleted lists have bullet points, numbered lists have numbers, and outline lists combine numbers and letters depending on the organization of the list.

To add a list to existing text:

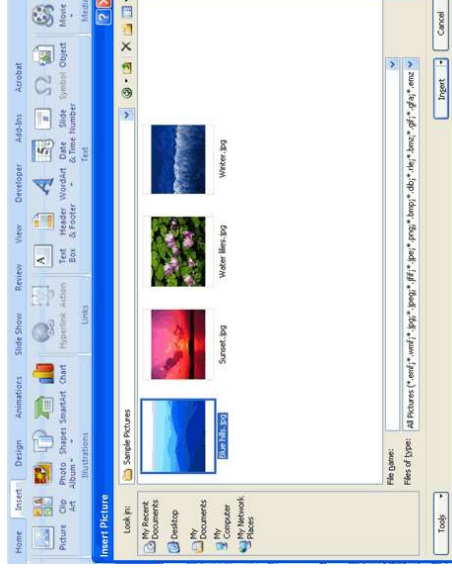
- Select the text you wish to make a list
- Click the **Bulleted or Numbered Lists** button



Adding Pictures

To add a picture:

- Click the **Insert** Tab
- Click the **Picture** Button
- Browse to the picture from your files
- Click the **name** of the picture
- Click **insert**
- To move the graphic, click it and drag it to where you want it



Adding Clip Art

To add Clip Art:

- Click the **Insert** Tab
- Click the **Clip Art** Button
- Search for the clip art using the search Clip Art dialog box
- Click the **clip art**
- To move the graphic, click it and drag it to where you want it



Editing Pictures and Clip Art

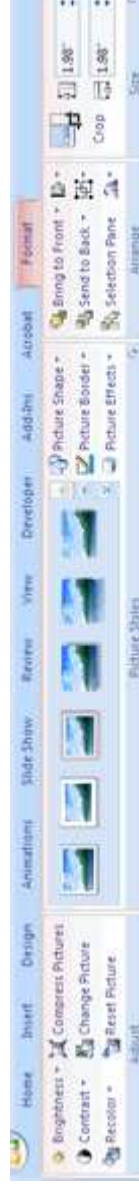
When you add a graphic to the presentation, an additional Tab appears on the Ribbon. The Format Tab allows you to format the pictures and graphics. This tab has four groups:

Adjust: Controls the picture brightness, contrast, and colors

Picture Style: Allows you to place a frame or border around the picture and add effects

Arrange: Controls the alignment and rotation of the picture

Size: Cropping and size of graphic



Adding a Shape

To add Shapes:

- Click the **Insert** Tab
- Click the **Shapes** Button
- Click the shape you choose
- Click the **Slide**
- Drag the **cursor** to expand the Shape



To format the shapes:

- Click the **Shape**
- Click the **Format** tab



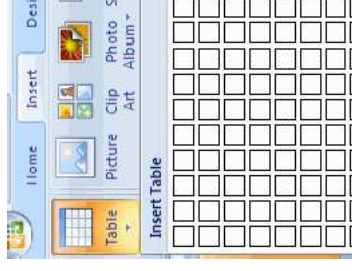
Tables

Tables are used to display data in a table format.

Creating a Table

To create a table:

- Place the cursor on the page where you want the new table
- Click the **Insert** Tab of the Ribbon
- Click the **Tables** Button on the Tables Group. You can create a table one of four ways:
- Highlight the number of row and columns
- Click **Insert Table** and enter the number of rows and columns
- Click the **Draw Table**, create your table by clicking and entering the rows and columns
- Click **Excel Spreadsheet** and enter data



Entering Data in a Table

Place the cursor in the cell where you wish to enter the information. Begin typing.

Inserting a Table from Word or Excel

- Open the Word document or Excel worksheet
- Select the **chart**
- Click **Copy** on the Home tab
- Go to the **PowerPoint** document where you want the chart located
- Click **Paste** on the Home tab

Charts

Charts allow you to present information contained in the worksheet in a graphic format. PowerPoint offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter and more. To view the charts available click the Insert Tab on the Ribbon.



Creating a Chart

To create a chart:

- Click the **Insert** tab on the ribbon
- Click the type of **Chart** you want to create
- Insert the **Data** and **Labels**



Editing Chart Data

To edit chart data:

- Click on the chart
- Click **Edit Data** on the Design tab
- Edit data in the spreadsheet

Modifying a Chart

Once you have created a chart you can do several things to modify the chart.

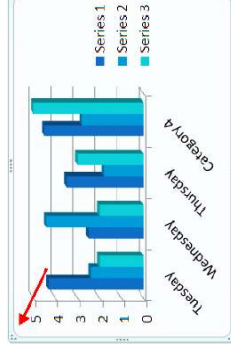
To move the chart:

- Click the **Chart** and Drag it another location on the same slide, or
- **Copy** it to another slide
- Choose the desired location and click **Paste**

To modify the chart size:

Click the **Chart**

Click on any of the corners and drop and drag to resize

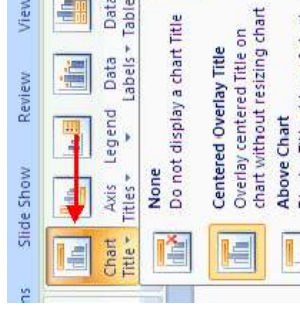


To modify the labels and titles:

- Click the **chart**
- Click the **Layout** tab
- Choose the appropriate label to change

Pasting a Chart from Excel

- Open the Excel worksheet
- Select the **chart**
- Click **Copy** on the Home tab
- Go to the **PowerPoint** document where you want the chart located
- Click **Paste** on the Home tab



Slide effects

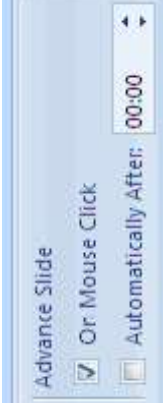
Slide Transitions

Transitions are effects that are in place when you switch from one slide to the next. To add slide transitions:

Select the slide that you want to transition

- Click the **Animations** tab
- Choose the appropriate animation or click the **Transition** dialog box

To select how to **advance a slide**:
Choose to **Advance on Mouse Click**, or
Automatically after a set number of seconds



Slide Animation

Slide animation effects are predefined special effects that you can add to objects on a slide. To apply an animation effect:

- Select the object
- Click the **Animations** tab on the Ribbon
- Click **Custom Animation**
- Click **Add Effect**
- Choose the appropriate effect



Animation Preview

To preview the animation on a slide:

Click the **Preview** button on the **Animations** tab

Slide Show Options

The Slide Show tab of the ribbon contains many options for the slide show. These options include:

- Preview the slide show from the beginning
- Preview the slide show from the current slide
- Set up Slide Show



Setting Up Slide Show

This option allows you to set preferences for how the slide show will be presented. The options include:

Whether the show will run automatically or will be presented by a speaker

The looping options

Narration options

Monitor resolutions



Printing

Printing a Presentation

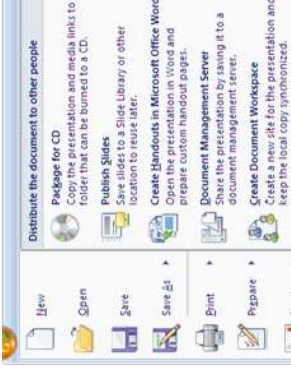
There are many options for printing a presentation. They are:

- **Slides:** These are slides that you would see if you were showing the presentation, one slide per page
- **Handouts:** 1, 2, 3, 4, 6 or 9 per page, this option allows for more slides per page
- **Notes Page:** This includes the slides and the speaker notes
- **Outline View:** This will print the outline of the presentation
- To access the print options:
- Click the **Microsoft Office Button**
- Click **Print**
- In the Print Dialog Box, click the **arrow** next to **Print what**
- Choose the format and click **OK** to print

Packaging a Presentation

There are times when you want to package a presentation with all of the additional files attached as well. To package a presentation for CD:

- Click the **Microsoft Office Button**
- Click **Publish**
- Click **Package for CD**
- Type a name for the CD
- Click **Copy to CD** or **Copy to Folder**



Power Point tips

Design Tips

1. Slides should be of a consistent design throughout the presentation
2. Use graphics and pictures when possible
3. Remove unnecessary information and graphics
4. Use contrasting background and text colors
5. Keep the number of fonts used in the presentation to 3
6. Keep the fonts consistent throughout the presentation

Presentation Tips

1. Identify the critical information for your presentation
2. Use no more than 6 bullets per page
3. Bullets should be short ideas, not complete sentences (these should be your talking points)
4. To start the Slide Show, Click **Slide Show** on the **Presentation Views** group on the **View** tab
5. Use the arrow keys to move forward or backward in a presentation
6. Press the **Escape (Esc)** key to end the slide show
7. A pen tool is available for drawing on the screen with the mouse. Press **CTRL+P** or click the right mouse button at any time and a popup window will appear. Choose **Pen** and the pointer will change to a pen that allows you to draw freehand on the screen using the mouse. Press the **E** key to erase all pen strokes. Press **CTRL+A** to disable the pen feature and revert the pen back to a pointer arrow.
8. If you would like to use the pen to draw on a blank screen during a presentation, press the **B** or **W** keys, or select **Screen/Black Screen** from the popup menu and the screen will turn black. Press **B** or **W** again or choose **Next** from the popup menu to return to the presentation when you are finished drawing.
9. To hide the pointer and button from the screen press the **A** key.
10. Be sure to preview the slide show using a projector if one will be used during the presentation. Words or graphics that are close to

Introduction to Internet

ONLINE ESSENTIALS

Introduction

Computers can be connected together using data transmission media like cables, to communicate with one another. Communication in this case will be in the form of exchange of data and information. Such interconnection of computers to achieve message transfer is called *networking*.

Definition of the Internet

The term *internet* can be broken into two words, *inter* and *net* this implies there is an interconnection of networks.

Hence *Internet* is therefore a large network of networks that covers the whole world and enables millions of computers from different organizations and people to communicate globally.

Information superhighway-Because of its large size and great volume of information that passes through it, it's sometimes given this term.

Importance of Internet

The internet has evolved from a specialized communication network previously only used for military and academic purposes to a public network that is changing how we the people carry out our daily activities.

The internet's importance can be seen through its contribution to research, news and information dissemination, leisure and communication, a place to do business and many other profitable activities.

Internet connectivity requirements

For a computer to be able to connect to the Internet, there are several requirements one of them is to connect to a telecommunication service provider in order to transmit data over a wide region. This section shall discuss some minimum requirements for internet connectivity to be achieved.

Telecommunication facilities

The Internet heavily relies on telecommunication facilities like the telephone lines, telephone exchange stations and satellite transmission in order to cover the whole wide world.

A computer is connected to the external world through a telephone line and has to dial a remote computer on the net to establish a connection for data transfer. However this is being replaced by *dedicated digital data transmission* a connection that ensures constant and quick connection to the Internet unlike dial-up that needs to be dialed every time you need access to the internet.

Transmission of data on land takes the form of telephone exchange to telephone exchange until data reaches the destination.

However intercontinental transfer of data is achieved by having satellite base stations transmitting data through a wireless uplink channel to the satellite.

The satellite then sends the data signal to the base station on another continent where it is picked up and sent to telephone exchanges for transfer to the destination computer

Modems

A computer needs a special digital to analog and vice versa interface card called a *modem* that enables it to send and receive data on telephone lines.

The word is short form for modulator-demodulator. *Modulation*; data to be transmitted is changed from digital to analog so that it can be transmitted on the telephone lines. *Demodulation*, at the receiving end, the data is changed from analog to digital for the computer to understand it.

Internet service providers (ISP's)

These are companies that offer internet services to end users at a fee.

Internet software

To achieve connection between computers and telecommunication devices that have different configurations for hardware and software a special software called *protocol* is needed .

Protocol is a set of rules that governs how two computers can send and receive data on the network.

Transmission control protocol (TCP) and *Internet protocol (IP)*. TCP governs how data is transferred from one place to the next, while IP determines the addressing system on the internet.

Internet services

The internet has become very popular in today's world because of the diverse but very important services that it offers to people.

The world wide web

The world wide web can be viewed as a vast virtual space on the Internet where information pages called *websites* are installed.

Individuals and organizations establish *sites* where their web documents can be placed for easy access by the external world. Such sites are called *websites* and each has a special address called a *uniform resource locator (URL)* that can be used to access them. For example, one common URL address is:

<http://www.yahoo.com>

The first part ([http](http://)) stands for *hypertext transfer protocol* which is a protocol that transfers hypertext. www is the name of the Internet server (web server) on which the webpage resides. [yahoo.com](http://www.yahoo.com) is usually called the domain name of the local area network. It uniquely identifies a particular local area network. On the internet, two networks may have the same web server name but never the same domain.

Electronic mail (e-mail)

This is the exchange of electronic letters, data and graphics on the internet.

Electronic commerce (e-commerce)

This is a new business strategy where goods and services are sold over the internet. A company can access customers all over the world and is not limited by space and time.

Electronic learning (e-learning)

Learning through interaction with special programs on the computer.

Internet fax

The internet provides you with complete fax facilities from your computer.

Other Internet services

News media on the net. Major news houses post daily news on the Internet for their clientele to access.

Health information on the net. The Internet provides latest medical news and research findings for practitioners and scholars.

Music and entertainment on the net. Its possible to listen to music on the web and to watch video clips if your computer is a multimedia machine.

Chatting on the net. People can sign into a chat room and exchange ideas freely through discussions.

Accessing the Internet

There are many applications that enable a person to access the Internet. Such applications are called *web browsers*. Some of them have text interface while more popular ones use graphical user interface. The most common ones are *Netscape Navigator* and *Internet Explorer*.

Therefore before accessing the internet, a person must start the web browser software

Log in/sign in

To access a website, type the full address of the website in the address bar then press the Enter key on the keyboard. If the internet connection is working properly, the browser will start connecting to the requested website or URL.

Surf/browse

Surfing or browsing is the process of accessing Internet resources like web pages and website. This is done by either typing the URL address of a site in the address bar of the browser or by following links that lead to web pages called *hyperlinks*.

Hyperlinks and search engines.

This is a text or picture on an electronic document, especially web page that causes other webpages to open when the link is clicked. To identify a hyperlink the mouse pointer changes to look like a palm having four fold fingers with the index finger not folded but pointing towards the hyperlink.

Google search engine

Downloading/saving/printing web content

After searching and finding information on the internet, you may want to save the information locally on your computer for future reference. The process of transferring information from a remote computer to a local storage is called *downloading*. To download a file the following procedure is required:

- Right click the hyperlink to the file.
- On the shortcut menu, click the Save target as command.
- After searching the browser displays the save as dialog box. Specify the folder or drive where the file is to be saved then type a unique name for the file in the name box.
- Click the save button and the download progress dialog appears on the screen. Unless otherwise selected, the download dialog will notify the user at the end of the download process.
- Open the file in its application to view it.

Electronic mail (e-mail)

The sending and receiving of electronic letters and documents on the internet. This feature serves to popularize the Internet even among non-technical people.

e-mail software

This software falls under a special group of application packages called *communication software*.

A specially designed and developed software enabling a user to read and send individual documents on the internet as long as both sender and recipients have an e-mail address.

A typical e-mail address would look like this:

calistak@yahoo.com

calistak is the user name and is usually coined by the user during e-mail account registration.

@ is the symbol for “at” which separates the user name from the rest of the addresses.

yahoo.com is the name of the *host* computer in the network i.e. the computer on which the e-mail account is hosted.

The period “.” is read as dot and is used to separate different parts of the e-mail address.

com identifies the type of institution offering a particular service(s) and is called the *domain*, meaning it’s a commercial institution.

Other common domains include:

Domain	Type
.edu	Educational institution.
.gov	Government institution
.org	Non-profit making organization
.mil	Military organization
.co	Commercial institution



Sometimes another two letter extension is added after the domain name to show the country where the site is located e.g. kentak@yahoo.co.ke, .ke stands for Kenya.

E-mail facilities

Basically all e-mail software packages provide the user with the ability to receive messages, display them, reply to the messages, compose new ones and store received messages.

File attachment

Attaching of other files like pictures, music and video to an e-mail for sharing with friends before sending. The recipient can then download the attached files or simply view them on the screen. A good example of usage of attachments is when people attach curriculum vitae to an e-mail message.

On-line meetings

Involves a person sending electronic mail composed of interviewing questions to a recipient who can read and answer back immediately. This method is useful in situations where travelling may be impossible or too expensive.

Telephone messages

Because of the integration between mobile telephony and the Internet technology, it's possible to send e-mail to a mobile handset and a mobile message to an e-mail account. This mobile computing is made possible by a special internet access protocol called *wireless access protocol (WAP)* and *wireless markup language (WML)*.

Contact management

Most mail programs allow the user to develop an address book which holds contact information like e-mail addresses of different people along with other necessary information. E-mail software usually provides a simple way of accessing these contacts when required.

Accessing information on emerging issues

Steps for searching

Plan for your search. You must develop a search strategy. Consider the following questions before starting to search for information.

What would be the best place to find the information required

What tool best suits the work at hand?

What key words can best describe the search problem?

The is always the best place to start the search. The best places are in website of leading media houses like www.bbc.co.uk and

www.standard.co.ke because you might get links to the latest research discoveries in you area of interest.

After checking out on the newshouses you can now open some search engines and type key words in the search field. Remember to use different search engine as the may supply you with a variety of links on the information you are looking for.

Internet Explorer

How to change your home page

Click on the **Tools** menu

Select **Internet Options**

On **General** tab type the desired Home page address

How to restore your default settings

Click on **Programs**

Select the button labeled **Reset Web Settings**

How to clear browsing history

Click on the **Tools** menu

Select **Internet Options**

On **General** tab select **Clear History** button.

The Internet Options dialog box

Downloading/Saving/printing web content

After searching and finding information on the Internet, you may want to save the information locally to your computer for future reference.

Downloading-The process of transferring information from a remote computer to a local storage.

Right click the hyperlink to the file/file

On the shortcut menu, click the **Save target as/Save image as/Save picture as** command

After some searching the browser displays the save as dialog box. Specify the folder or drive where the file is to be saved then type a unique name for the file in the name box.

Click the **Save** button and the download progress dialog box appears on the screen appears

on the screen. Unless otherwise selected, the download dialog will notify the user at the end of the download process.

Open the file in its application to view it.

File attachment

E-mail software allows a person to *attach* other files like pictures, music and movie clips to an e-mail for sharing with friends before sending. Recipients can the download the attached files or simply view them on the screen.

Start the e-mail software i.e. Yahoo or G-Mail

Open to compose e-mail

Specify the recipients address and the subject

Click the Insert menu then **File attachment**. A dialog box appears where you chose the file you want to attach

Select the file then click the Attach button

An attachment bar is inserted in the e-mail window with a name of the file you chose

Click Send to send the e-mail.