

BASIC AGRICULTURAL PRODUCTION AND NATURAL RESOURCE CONSERVATION OPERATIONS

Level I

Learning Guide #17

Unit of Competence: Operate a Personal Computer

Module Title: Operating a Personal Computer

LG Code AGR BAN1 M17 0919

TTLM Code: AGR BAN1 TTLM17 0919

LO1 Start computer, system information and features

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Adjusting work space, furniture and equipments to suit ergonomic requirements..
- Ensuring OHS requirements in work organization.
- Starting/logging a computer.
- Identification basic functions and features.
- Customizing desktop configurations.
- Using help functions

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:-

- Start computer, system information and features
- Navigate and manipulate desktop environment
- Organize files using basic directory and folder structures
- Print information
- Shutdown computer

Learning instruction:

1. Read the specific objectives of this Learning Guide.
2. Read the information written in the "Information Sheets.
3. Accomplish the "Self-check" listed under each information sheet.
4. If you earned a satisfactory evaluation proceed to "Operation Sheet" under each learning outcomes. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity.
5. Read the "Operation Sheet" and try to understand the procedures discussed.
6. You are delivered with lessons on how to prepare for ground support operations. Before you begin the operation read the information written in the "Information Sheets. You will be also provided with additional reference reading materials.
7. Read all the contents of each information sheet and try to understand the procedures discussed. Additional readings are provided in Operation Sheet under each learning outcomes. Go to your teacher if you need clarification or you want answers to your questions or you need assistance in understanding a particular step or procedure.
8. Request your teacher to arrange for you to join a ground support operation Team. You will join the Team as an observer. Prepare a report of learning experience. Your report will be evaluated and will form part of your training portfolio.
9. Do the "LAP test" in each learning outcomes (if you are ready) and show your output to your teacher. Your teacher will evaluate your output either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to the next Learning Guide.

Information Sheet-1	Adjusting work space, furniture and equipments to suit ergonomic requirements
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1.1 Computer class room arrangement

Preparing convenient computer lab room is the first task to be done so that trainees will gain the required skills properly. before preparing computer room the following points has to be considered:

Building consideration

- What is the size of your new or existing learning space?
- How many students will be utilizing the space?
- Will power be accessed from the floor, the ceiling, the walls, or from the furniture itself?
- Are there doors, windows, columns, heater vents, and other items that need to be designed around?
- Are dimmable lighting or light-blocking window treatments required for some classrooms?

Classroom consideration

- Will computers or technology equipment be placed on top of work surfaces, or mounted below?
- What items will be used individually or shared?
- How many are needed? Computers, CAD stations, tablets?
- Do the lessons emphasize students working independently or as part of a group?
- What size groups?•Will students gather at a staging area, or a central location, before breaking into groups for project work?
- Are accessories like monitor arms, CPU holders, or keyboard trays desired?

Teacher consideration

- What type of desk does the instructor need?
- A desk with student meeting space?
- Built-in outlets or accessible power?
- A mobile cart with power?

- Will the teacher present lectures, requiring a lectern, or is all instruction collaborative — or is there a blend of the two?
- What type of technology will the instructor employ regularly?
- Whiteboard, computer, or projection technology?

Student consideration

- What age are the students?
- Five, eleven, seventeen?
- What seat or workstation heights will work best?
- Do students have backpacks or other materials with them that require classroom storage?
- Can students see everything clearly?
- From the population's average height, are their sight lines clear?
- Do students have portable devices that require charging?

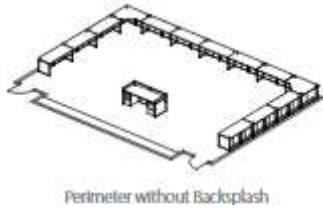
The following are some of the class room styles convenient for teaching learning process

a) Perimeter classrooms

With workstations arranged along the walls, perimeter labs allow teachers to easily makeover around the classroom and manage student work. Teachers can easily keep an eye on what a large number of students are working on, and students can quickly turn around when the teacher needs to make a presentation.

Features of perimeter style classroom

- ✓ Layouts shown below are for 22 students
- ✓ Chase Wire Management System
- ✓ Varied panel heights; they can match work surface height, rise above work surface to define workspaces, or be even higher to create a shelf as pictured at right.
- ✓ Popular work surface heights: 25", 27", or 29"



b) Lecture classroom

Classrooms with students arranged in rows are the classic layout, and that is because many subjects are best taught with instructors leading the class. Lecture layouts allow students a clear view of the teacher without having to turn around, teachers can easily see when a student has a question, and the front of the classroom can be used to work or project lessons onto a screen.

Features of Lecture-Style Classrooms:

- ✓ Layouts shown below are for 30 students
- ✓ Chase Wire Management System
- ✓ Varied panel heights; they can match work surface height, rise above work surface to define workspaces, or be even higher to create a secure testing space.
- ✓ Popular work surface heights: 25", 27", or 29"



c) Back-to-Back classrooms

Back-to-back layouts are similar to lecture layouts, but allow many students to fit in a relatively small footprint. Often, these classrooms have split uses — one area for non-computer-based work, and another for working with technology. Teachers might not do much lecturing because some students may be facing away from them, but the students do have the ability to easily interact with fellow classmates.

Features of Lecture-Style Classrooms:

- ✓ Layouts below are for 30 students; layout above is for 28 students
- ✓ Chase Wire Management System
- ✓ Varied panel heights; they can match work surface height, rise above work surface to define workspaces, or be even higher to create a secure testing space.
- ✓ Popular worksurface heights: 25", 27", or 29"



D) Flexible Designs

Every instructor has a teaching style or idea for how they want to teach, and Interior Concepts has stepped up to the plate with layouts and workstation designs that can be personalized for your space and learning environment. With our ability to design our workstations by the inch, we can also build our stations to fit your unique room layout, accommodating doors, window ledges, and columns.

Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Explain briefly about the following styles of computer class room arrangement.
 - a) Perimeter classrooms
 - b) Lecture classroom
 - c) Back-to-Back classrooms
2. What are the considerations to be taken to make a convenient computer class room?

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____
Rating: _____

Information Sheet-2	Ensuring OHS requirements in work organization.
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OHS guidelines related to the use of the screen equipment, computing equipment and peripherals, ergonomic work stations, security procedures, customization requirements

- Statutory requirements

Computer care

We should have to take care of our computer from damage. A computer can cause problems both on the hard ware & software. So, to protect it from damage

A. Provide the best possible environment both physically & electronically for the computer
Physical like, ambient temperature, dust & smoke conditions.

Electronically concerns are like sudden increase in an electric voltage & lightning. To overcome this problem we use devices like UPS (uninterrupted power supply) w/c can tolerate large voltages

B. Virus protection & detection

Viruses are software w/c prevent the computer from performing tasks in the right way.

A virus can be transmitted in to our computer by d/t meanness like floppy diskettes, flash disk, through computer networks etc.

To prevent our computer from viruses. We should use or install Anti-virus software & we should frequently update our anti viruses.

There is no way that viruses can damage computer hardware

Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What measures to be taken to protect a computer from virus? Explain

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

What is a computer?

A computer is an electronic device, operating under the control of instructions stored in its own memory that can accept data (input), process the data according to specified rules, produce information (output), and store the information for future use

Historical overview of computers

In the early days man used to count with his fingers and manipulated numbers manually. Technology development demand faster computing devices. This led to the development of computers. The Abacus, Pascal's calculator and the personal computer are some of such devices separated by thousands of years of history.

Computer technology is under continuous improvement and the general trend from earliest generations to the latest generations is enumerated as follows.

- Are getting lesser in volume size
- Are getting more reliable
- Are getting cheaper in price
- Consume less power
- Better life span & Have larger memory capacity
- Have better execution speed
- Better programming capabilities
- Simpler maintenance schedules

Characteristics of computers

The main characteristics of computers that have made them so powerful and useful are:

- ❖ Speed: Computers can perform tasks within a matter of seconds.
 - Their speed is measured in second, micro second (10^{-6} one millionths), nanosecond (10^{-9} one billionths), and Pico second (10^{-12} one trillionths).

- Hence a computer with speed 1 microsecond can perform 1 million instructions in 1 second.
- ❖ Accuracy and Reliability: A computer is extremely fast and perfect in reliability and accuracy. Since computers have tremendous accuracy, they function without error. However, it must be remembered that the computer is capable of doing only what it is instructed to do. If faulty instructions are provided for processing data, obviously, faulty answers will be given. This is called GIGO (garbage in garbage out).error free.
- ❖ Consistency (Diligence): computers operate and process data over long period of time. Unlike human being, computers being machines are highly consistent, are free from monotony, tiredness, lack of concentration, etc
- ❖ Storage Capacity: computers can store huge amount of data. Once recorded a piece of information is never forgotten (unless some problems takes place) and information can be retrieved almost instantaneously. A single CD ROM can contain the entire Encyclopedia Britannica and more!
- ❖ Flexibility or versatility (Programmability): Computer is a versatile machine. A computer is perhaps the first general-purpose machine devised by man. All other machines like TV, typewriter, radio, etc do one thing they are designed for, nothing more nothing less. Unlike this, a computer can be used to play music, type letters, send faxes, and diagnose illness, design buildings and bridges, etc, provided that it is given the right set of instructions to do the job.
- ❖ Volume- handle large amount of data
- ❖ Repetitiveness – suitable for processes that represent themselves in a predetermined manner e.g. payroll system

Application of computers

Computers can be applied in:

- Health and medicine
- Education and training
- Business and commerce
- Science and engineering
- Manufacturing
- Aviation and space control
- Sports and entertainment
- Library and documentary
- Transport and communication

- Weather & environment routing & dangerous tasks
- Shopping from home
- Information utilities and so on.

In general computers can be applied in every walk of human life. So we can say computers are the power tools of the modern society.

Why we need to study computer science?

Because it is more powerful than humans in speed, accuracy tireless attention (to speed up problem solving and increase productivity, increase efficiency, higher quality , improved safety, and better service) even though human is superior in creativity , judgment and intuition. In other words to study computer science is not preference, it is mandatory, because today computer is important in every walk of human life such as at home, at school, at office, at space and so on.

Limitations of Computers

Although computers can be applied in different areas, there are activities that computers can't perform. Some of them are:

- a.Computers can't decide how to be programmed. It is always humans that are responsible for programming the computers.
- b.Computers do not provide their own inputs unless people provide it with the inputs. Interpretation of data and implementation of decisions is always left for humans. That is a computer does not interpret the information it produces based on the information obtained unless it is programmed.

Generation of Computers

The main criteria to distinguish generation of computer are:-

- Dominate types of electric circuit element that used
- Major secondary storage device
- Computer language
- Types of characteristics of operating system
- Memory access time (time to store or retrieve a word of data from the memory)

1. *First Generation Computers (1940-1959):*

- Used vacuum tubes
- Punched cards were the main source of inputs
- Magnetic grams were used for internal storage

- Operate in a speed of milliseconds
- Could handle more than 10,000 additions per second

Vacuum tubes

- Are large in their nature
- Consume a great deal of electricity
- produce a lot of heat
- Are prone to failure

The shortcomings of the first generation are:

- ❖ Slow on function.
- ❖ Low level of accuracy and reliability.
- ❖ High power consumption.
- ❖ Machine breakdown rate was very high.
- ❖ Fault finding was difficult
- ❖ Too big in size
- ❖ Expensive.

2. Second Generation Computers (1959-1965):

- Transistors were their main circuit components
- Invented by Bell Labs
- Uses magnetic tapes as main storage
- Operate in a speed of Micro seconds

Transistors had the following on their credit side: - They

- ♠ Are smaller
- ♠ More reliable
- ♠ Use less electric energy
- ♠ Generate little heat

→ In addition Computers with transistors could operate much faster than those with vacuum tubes.

3. Third Generation Computers (1965-1972):

- Era of microelectronics
- Invention of Integrated circuits(IC)
- Data storage switched from magnetic cores to Integrated circuit boards.
- New input/output(I/O) methods such as optical scanning & plotters

Other advantages of this generation over the second generation includes:-

- Better storage devices
- Improved I/O devices

- Low cost of auxiliary memory or storage device

4. Fourth Generation computers (since 1970):

- ❖ Generally expanded storage capabilities & improved circuitry
- ❖ Has large scale integrated circuits (LSI) very LSI
- ❖ Operate at a speed of nano seconds
- ❖ Thousands of transistors on a single silicone chip.
- ❖ This generation is also called the micro generation as a result of the introduction of the micro processors

Other advantages of 4th generation are:-

- ✓ More compact size (minimized)
- ✓ Much faster
- ✓ More accurate and reliable
- ✓ More memory and storage capacity
- ✓ Better interface b/n user and computer

5. Fifth Generation Computers:

- ⇒ Is still in progress
- ⇒ These computers will have intelligent processors
 - Computers of this generation are said to be truly intelligent machines, in that:-
- ⇒ Learn from experience
- ⇒ Incorporate artificial intelligence
- ⇒ Can process natural language, like English, Amharic etc.

The summarized form for generation of computer

Generation	Year	Circuit element	2 nd ary storage device	Computer language	Operating system	Memory access time
First	1940-56	Vacuum tube	Punched card	Assembly & machine	Operator manual control	1millisecond
Second	1957-63	Transistor	Magnetic tape	COBOL & FORTAN	Batch	10 micro second
Third	1964-70	Integrated circuits	Magnetic disk	Structured	Interactive or time sharing	100nano second

Fourth	1970- nowaday	microprocessor or VLSI	Mass storage	Application oriented	Virtual	1nano second

Types of Computers

A. Classification based on the method of operation

1. Analog computers

- ✓ They operate by measuring
- ✓ They deal with continuous variable
- ✓ They are special purpose computers
- ✓ They have limited accuracy

Examples, Thermometer, Voltmeter, Speedometer and Gasoline pomp.

2. Digital computers

- ✓ They deal with discrete variables
- ✓ They operate by counting rather than measuring
- ✓ They have higher accuracy and speed than analogue computers

Examples, abacus, desk and pocket calculators & general purpose computers

3. Hybrid computers

The best features of analog & digital computers can be combined into a single device to form a hybrid computer.

B. Classification based on their purpose (application)

i. Special purpose computers

Are designed to solve a single type of problem (for a specific application or situation)

E.g. Traffic control system, public telephone box, ticket machines & pocket calculators

N.B. most analog computers are special purpose computers.

ii. General purpose computers

They are more flexible & versatile

E.g. Micro, mini, main-frame & super computers

C. Classification based on their size, price, capacity & performance

i. Micro computers

- Known as personal or desk top computers
- Its CPU is a microprocessor
- Microprocessor is a processor all of whose components are on a single Integrated circuit chip, so that it can serve only one user at a time (single user).

E.g. home & office computers

Microcomputers come in a variety of sizes and shapes. Basically they can be grouped into three: Laptop, palmtop and desktop computers.

ii. Mini computers

- Have relatively lower speed than main frame computers and can handle multi users (2-4 users at a time) and are used in small organizations
- Minicomputers play a major role in computer-aided design (CAD) and computer aided manufacture (CAM).

iii. Mainframe Computers

Smaller in size & capacity lower in speed & memory capacity than super computers. They are multi-user systems (100 users at a time) and are used in large organizations.

iv. Super Computer

Is the fastest, most powerful, most expensive & largest computer.

- ✓ Perform hundreds of millions of operations per second
- ✓ They are multi-user systems (200 users at a time)
- ✓ They can carry out enormously complex scientific calculations

They are used in;-Space technology centers, meteorology stations, astronomical observations, intercontinental communications and air line organizations.

Functionalities of a computer

Any digital computer carries out five functions in gross terms:

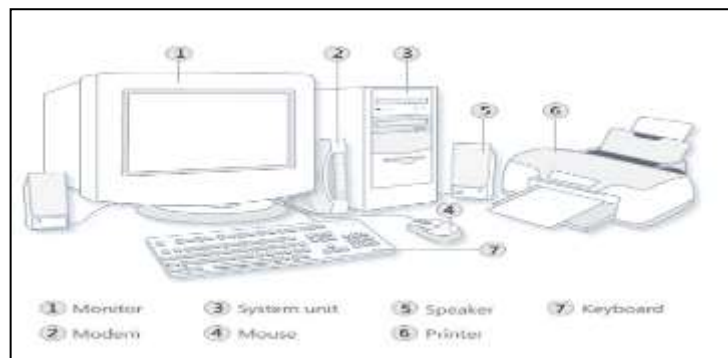
- ✓ Takes data as input
- ✓ Stores the data/instruction in its memory and use them when required
- ✓ Process the data and converts it in to usefull information
- ✓ Generates the out put
- ✓ Control all the above four steps



Computer Components

Any kind of computers consists of **HARDWARE** and **SOFTWARE**: Computer hardware is the collection of physical elements that constitutes a computer system.

- ✓ **Computer hardware:** refers to the physical parts or components of a computer such as the monitor, mouse, keyboard, computer data storage, hard drive disk (HDD), system unit (graphic cards, sound cards, memory, motherboard and chips), etc. all of which are physical objects that can be touched.



Input Devices: Input device is any peripheral (piece of computer hardware equipment to provide data and control signals to an information processing system such as a computer or other information appliance. Input device Translate data from form that humans understand to one that the computer can work with. Most common are keyboard and mouse

Examples of Manual Input Devices			
Keyboard 	Numeric Keypad 	Pointing Device 	Remote Control 
Joystick 	TouchScreen 	Scanner 	Graphics Tablet 
Microphone 	Digital Camera 	Webcams 	Light Pens 

Central Processing Unit (CPU): A CPU is brain of a computer. It is responsible for all functions and processes. Regarding computing power, the CPU is the most important element of a computer system. The CPU is comprised of three main parts:

- **Arithmetic Logic Unit (ALU):** Executes all arithmetic and logical operations. Arithmetic calculations like as addition, subtraction, multiplication and division. Logical operation like compare numbers, letters, or special characters
- **Control Unit (CU):** controls and co-ordinates computer components such as
 - ✓ Read the code for the next instruction to be executed.
 - ✓ Increment the program counter so it points to the next instruction.
 - ✓ Read whatever data the instruction requires from cells in memory.
 - ✓ Provide the necessary data to an ALU or register.
 - ✓ If the instruction requires an ALU or specialized hardware to complete, instruct the hardware to perform the requested operation.
- **Registers:** Stores the data that is to be executed next, "very fast storage area".
- ✓ **Primary Memory:-**
 1. **RAM:** Random Access Memory (RAM) is a memory scheme within the computer system responsible for storing data on a temporary basis, so that it can be promptly accessed by the processor as and when needed. It is volatile in nature, which means that data will be erased once supply to the storage device is turned off. RAM stores data randomly and the processor accesses these data randomly from the RAM storage. RAM is considered "random access" because you can access any memory cell directly if you know the row and column that intersect at that cell.
 2. **ROM (Read Only Memory):** ROM is a permanent form of storage. ROM stays active regardless of whether power supply to it is turned on or off.ROM devices do not allow

data stored on them to be modified. Secondary Memory:-Stores data and programs permanently: its retained after the power is turned off

3. **Hard drive (HD):** A hard disk is part of a unit, often called a "disk drive," "hard drive," or "hard disk drive," that store and provides relatively quick access to large amounts of data on an electromagnetically charged surface or set of surfaces.

4. **Optical Disk:** an optical disc drive (ODD) is a disk drive that uses laser light as part of the process of reading or writing data to or from optical discs. Some drives can only read from discs, but recent drives are commonly both readers and recorders, also called burners or writers. Compact discs, DVDs, and Blu-ray discs are common types of optical media which can be read and recorded by such drives. Optical drive is the generic name; drives are usually described as "CD" "DVD", or "Blu-ray", followed by "drive", "writer", etc.

There are three main types of optical media: CD, DVD, and Blu-ray disc. CDs can store up to 700 megabytes (MB) of data and DVDs can store up to 8.4 GB of data. Blu-ray discs, which are the newest type of optical media, can store up to 50 GB of data. This storage capacity is a clear advantage over the floppy disk storage media (a magnetic media), which only has a capacity of 1.44 MB.

4. **Flash Disk:** A storage module made of flash memory chips. Flash disks have no mechanical platters or access arms, but the term "disk" is used because the data are accessed as if they were on a hard drive. The disk storage structure is emulated.

Comparison between Main memory (RAM) and Secondary Memory (Hard disk)

RAM Memory	Hard Disk (Hard Drive) Storage
Smaller amount (typically 500 MB-6 GB)	Much larger amount (typically 80GB to 1000 GB)
Temporary storage of files and programs	Permanent storage of files and programs
A little like your real desktop - has only your current work on it (which could be ruined by a spill of Coke or coffee!)	Like a file cabinet - has long-term storage of work (it's safe from spills!)
Contents disappear when you turn off power to the computer and when the computer crashes	Contents remain when you turn off the power to the computer (they don't disappear unless you purposely delete them), and when the computer crashes
Consists of chips (microprocessors)	Consists of hard disks (platters)
When you want to use a program, a temporary copy is put into RAM and that's the copy you use	Holds the original copy of the program permanently

Output devices: an output device is any piece of computer hardware equipment used to communicate the results of data processing carried out by an information processing

system (such as a computer) which converts the electronically generated information into human-readable form.



Computer Software

Software is a generic term for organized collections of computer data and instructions, often broken into two major categories:

System software that provides the basic non-task-specific functions of the computer, and application software which is used by users to accomplish specific tasks.

Software Types

A. **System software:** is responsible for controlling, integrating, and managing the individual hardware components of a computer system so that other software and the users of the system see it as a functional unit without having to be concerned with the low-level details such as transferring data from memory to disk, or rendering text onto a display. Generally, system software consists of an operating system and some fundamental utilities such as disk formatters, file managers, display managers, text editors, user authentication (login) and management tools, and networking and device control software.

B. **Application software:** is used to accomplish specific tasks other than just running the computer system. Application software may consist of a single program, such as an image viewer; a small collection of programs (often called a software package) that work closely together to accomplish a task, such as a spreadsheet or text processing system; a larger collection (often called a software suite) of related but independent programs and packages that have a common user interface or shared data format, such as Microsoft Office, which consists of closely integrated word processor, spreadsheet, database, etc.; or a software system, such as a database management system, which is a collection of fundamental

programs that may provide some service to a variety of other independent applications.

Comparison Application Software and System Software

	System Software	Application Software
	Computer software, or just software is a general term primarily used for digitally stored data such as computer programs and other kinds of information read and written by computers. App comes under computer software though it has a wide scope now.	Application software, also known as an application or an "app", is computer software designed to help the user to perform specific tasks.
Example:	1) Microsoft Windows 2) Linux 3) Unix 4) Mac OSX 5) DOS	1) Opera (Web Browser) 2) Microsoft Word (Word Processing) 3) Microsoft Excel (Spreadsheet software) 4) MySQL (Database Software) 5) Microsoft PowerPoint (Presentation Software) 6) Adobe Photoshop (Graphics Software)
Interaction:	Generally, users do not interact with system software as it works in the background.	Users always interact with application software while doing different activities.
Dependency:	System software can run independently of the application software.	Application software cannot run without the presence of the system software.

Unit of Measurements

Storage measurements: The basic unit used in computer data storage is called a bit (binary digit). Computers use these little bits, which are composed of ones and zeros, to do things and talk to other computers. All your files, for instance, are kept in the computer as binary files and translated into words and pictures by the software (which is also ones and zeros). This two number system is called a "binary number system" since it has only two numbers in it. The decimal number system in contrast has ten unique digits, zero through nine

Computer Storage units

Bit	BIT	0 or 1
Kilobyte	KB	1024 bytes
Megabyte	MB	1024 kilobytes
Gigabyte	GB	1024 megabytes
Terabyte	TB	1024 gigabytes

Size example

- 1 bit -answer to an yes/no question
- 1 byte -a number from 0 to 255.
- 90 bytes: enough to store a typical line of text from a book.
- 4 KB: about one page of text.
- 120 KB: the text of a typical pocket book.
- 3 MB -a three minute song (128k bitrate)
- 650-900 MB -an CD-ROM
- 1 GB -114 minutes of uncompressed CD-quality audio at 1.4 Mbit/s
- 8-16 GB -size of a normal flash drive

Speed measurement: The speed of Central Processing Unit (CPU) is measured by Hertz(Hz), Which represent a CPU cycle. The speed of CPU is known as computer Speed.

CPU SPEED MEASURES	
1 hertz or Hz	1 cycle per second
1 MHz	1 million cycles per second or 1000 Hz
1 GHz	1 billion cycles per second or 1000 MHz

Computers classification

Computers can be generally classified by size and power as follows, though there is considerable overlap:

Personal computer: A small, single-user computer based on a microprocessor. In addition to the microprocessor, a personal computer has a keyboard for entering data, a monitor for displaying information, and a storage device for saving data.

Workstation : A powerful, single-user computer. A workstation is like a personal computer, but it has a more powerful microprocessor and a higher-quality monitor.

Minicomputer : A multi-user computer capable of supporting from 10 to hundreds of users simultaneously.

Mainframe : A powerful multi-user computer capable of supporting many hundreds or thousands of users simultaneously.

Supercomputer : An extremely fast computer that can perform hundreds of millions of instructions per second.

Laptop and Smartphone Computers **LAPTOP:** A laptop is a battery or AC-powered personal computer that can be easily carried and used in a variety of locations. Many laptops are designed to have all of the functionality of a desktop computer, which means they can generally run the same software and open the same types of files. However, some laptops, such as netbooks, sacrifice some functionality in order to be even more portable.

Netbook: A netbook is a type of laptop that is designed to be even more portable. Netbooks are often cheaper than laptops or desktops. They are generally less powerful than other

types of computers, but they provide enough power for email and internet access, which is where the name "netbook" comes from.

Mobile Device: A mobile device is basically any handheld computer. It is designed to be extremely portable, often fitting in the palm of your hand or in your pocket. Some mobile devices are more powerful, and they allow you to do many of the same things you can do with a desktop or laptop computer. These include tablet computers, e-readers, and smart phones.

Tablet Computers: Like laptops, tablet computers are designed to be portable. However, they provide a very different computing experience. The most obvious difference is that tablet computers don't have keyboards or touch pads. Instead, the entire screen is touch-sensitive, allowing you to type on a virtual key board and use your finger as a mouse pointer.

Tablet computers are mostly designed for consuming media, and they are optimized for tasks like web browsing, watching videos, reading e-books, and playing games. For many people, a "regular" computer like a desktop or laptop is still needed in order to use some programs. However, the convenience of a tablet computer means that it may be ideal as a second computer.

Smart phones: A smart phone is a powerful mobile phone that is designed to run a variety of applications in addition to phone service. They are basically small tablet computers, and they can be used for web browsing, watching videos, reading e-books, playing games and more.

Data, Information and Knowledge

Data: Facts and figures which relay something specific, but which are not organized in any way and which provide no further information regarding patterns, context, etc. So data means "unstructured facts and figures that have the least impact on the typical manager."

Information: For data to become information, it must be contextualized, categorized, calculated and condensed. Information thus paints a bigger picture; it is data with relevance and purpose. It may convey a trend in the environment, or perhaps indicate a

pattern of sales for a given period of time. Essentially information is found "in answers to questions that begin with such words as who, what, where, when, and how many".

Knowledge: Knowledge is closely linked to doing and implies know-how and understanding. The knowledge possessed by each individual is a product of his experience, and encompasses the norms by which he evaluates new inputs from his surroundings.

Opening Your Computer

To start a Computer for the first use after checking the electric is connected to the source or socket we follow the following simple steps:

Step 1: Press the **start button** on the CPU tower.

Step 2: Wait while the computer **boots**. When the computer has finished booting, it will show a **dialogue box** that will ask for a **user name** and **password**.

Step 3: Enter your user name and password, and then **click** "OK."

Step 4: Your computer is now ready to use.

2.1 What is Windows?

A window is the rectangular portion of a desktop that displays an open program or the contents of a folder or disk. You can open multiple windows at a time. This ability (opening more than one program at a time.) is one of the distinguishing features of windows. Windows is a single user, multitasking operating system. Unlike DOS, the Windows operating system provides a graphical user interface.

The latest version of windows is Windows XP (last XP) and windows vista. Earlier versions were Windows 2000, Windows 98, etc. In this training manual, we shall see how to use Windows XP.

Benefits of Windows

The main benefits of MS-Windows over that of MS-DOS are:

- ❖ No need of memorizing commands and switches.
- ❖ No typing required. You simply click on menus, dialog boxes, option buttons, list boxes, etc.
- ❖ The availability of many programs designed to run under windows.
- ❖ The possibility of sharing information between windows program is high.
- ❖ High support for communication.
- ❖ Use of many programs simultaneously.
- ❖ High support for long file name, enabling file organization easier.

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. what is window ?
2. differentiate data, information and knowledge
3. explain briefly about the following parts of a computer
 - a. Hardware
 - b. software

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation sheet	Opening/logging a computer
------------------------	-----------------------------------

Objectives:

- To understand how to open a computer for the first time

Procedures to follow

To start a Computer for the first use:

Step 1: check the electric is connected to the source or socket

Step 2: Press the **start button** on the CPU tower.

Step 3: Wait while the computer **boots**. When the computer has finished booting, it will show a **dialogue box** that will ask for a **user name** and **password**.

Step 4: Enter your user name and password, and then **click** "OK."

Step 5: Your computer is now ready to use.

Information Sheet-4	Identifying basic functions and features
----------------------------	------------------------------------------

4.1 Using a mouse and a keyboard

Keyboard is an input device used to enter information into your PC. There are essentially dozen keyboard designs. The keys on the keyboard can be divided into 5 sections.

Alphanumeric (Character Keys): These keys work just like a conventional type writer which consists of letters (A-Z), numbers (0-9), Enter key, Spacebar, Backspace, Shift, Caps lock, etc.

Function Keys: These keys perform different tasks based on the type of application you are working on. Function keys are labeled as F1, F2... F12.

Numeric Keys: Let you enter numerical data more easily when you are working on numbers. To use this section of the keyboard, make sure that the Num Lock key is ON.

Navigation (Cursor movement Keys): These keys are used to navigate through your document. The keys are: Arrow keys, Home, End, Page up, Page down, etc.

Computer (Special) keys: They perform different tasks when used alone or in conjunction with other keys. Some of these keys are: Alt, Ctrl, Print Screen, Scroll Lock, Pause, Delete, and Insert

Mouse

A mouse is a pointing device that is used in windows. It is a hand held device that controls the movement of a pointer on your screen. The object that moves around the screen as the mouse is moved is called a **mouse pointer**.

There are usually two buttons on the mouse: **Left** and **Right** button.

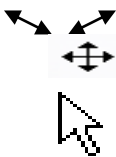
The terms used while using mouse are:

- ✓ **Pointing:** Positioning the mouse cursor over an item or an area you want.
 - ✓ **Clicking:** Positioning and pressing the left mouse button once.
 - ✓ **Double Clicking:** Clicking the mouse button twice quickly over an object.
 - ✓ **Dragging:** Positioning the mouse cursor on an object, holding the mouse button down and moving the cursor to a desired place before releasing the button.
- Remark:** the shape of the mouse cursor changes to signify or indicate different things. These are:



Vertical resize: To resize top or bottom boundary of window or an object.

Horizontal resize: To resize the left or right boundary of window or an object.



Diagonal resize: To resize the diagonal corners of a window or an object.

Move: Whenever you have selected on object for moving, your pointer would turn into this shape.

Normal Select: Whenever you normally point the **mouse pointer** at any object or icon, scroll bar, or menu the mouse pointer would turn into this shape.



Help Select: Whenever you click on what is this? Form the help menu or press shift + F1 on the key board, the mouse pointer would turn in to this shape. Once you get this shape, simply click on the icon for which you want description.



Working in back ground: Whenever you execute a command, which takes, a couple, windows would display this shape. This means that the window is processing your request in the background.

Busy: When ever windows is trying to load some information in to the computer memory, or is busy trying to open or save a file, this mouse pointer would be displayed.



Text select: Whenever and wherever you can work on some text or some typed input is required from the user, this mouse pointer would be displayed.

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is key board ?
2. Explain the functions of the following key board sections
 - a) Navigation (Cursor movement Keys)
 - b) Function Keys
 - c) Numeric Keys
3. What is mouse and explain the function of mouse

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers. Answer sheet

Score = _____
Rating: _____

Information Sheet-5	Customizing desktop configurations.
----------------------------	-------------------------------------

Desktop

When you start Windows XP, the large area you see is called the Desktop, on which icons, windows and applications are displayed. Think of the Desktop as your personal workspace.

Changing the Desktop's Pattern or Wall Paper

Display: Is used to modify **Desktop background, Screen savers, Menu appearances** etc.

Background: Desktop wallpapers decorate and add more colors fun to your life.

- To change background:
Right click on desktop → Properties → Desktop/background → Select one → Ok/Apply

Screen Saver: Is a moving image or pattern that appears on your monitor when you have left your computer idle for specified limits.

- To change the Screen Saver:
Right click on desktop → Properties → Screensaver → Select one → Ok/Apply Or
- Right click on desktop → Properties → Screensaver → Select marquee → settings → write the text you want and format → Change the waiting period → Ok/Apply

Arranging the Icons on the Desktop

You can arrange icons on the Desktop by simply dragging and placing them where you want to place them.

1. Right click → Arrange icons → Click on the desired type of arrangement

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

4. What is desktop?
5. How we can change the arrangement of desktop icons?

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation sheet	Change desktop background
------------------------	----------------------------------

Objectives:

- To understand how to change desktop backgrounds

Procedures to follow

To change the background of a desktop the following steps are used.

Step 1: Right click on desktop

Step 2:select properties

Step 3: click Desktop/background

Step 4: Select one

Step 5: click Ok/Apply

Information Sheet-6	Using help functions
----------------------------	----------------------

Using Help

If you do not know how to do something, you can look it up in help.

- To use help:
Click the Start button → Help → Type document you want the help → **Find**

Getting Help in a Dialog box

You can get Help on each item in a dialog box by clicking the question mark button in the title bar and then clicking the item. If the dialog box does not have the button, look for a Help button, or try pressing F1.

Another way to get help is to use your mouse button to click an item, and then click **what is this?** On the menu that appears.

Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Why we use help function ?

2. How can we use help function ?

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____



Ministry of Agriculture ATVET

BASIC AGRICULTURAL PRODUCTION AND NATURAL RESOURCE CONSERVATION OPERATIONS

Level I

Learning Guide #17

Unit of Competence: Operate a Personal Computer

Module Title: Operating a Personal Computer

LG Code: AGR BAN1 M17 0919

TTLM Code: AGR BAN1 TTLM17 0919

LO2: Navigate and manipulate desktop environment

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Opening ,closing and accessing desktop icons
- Opening, resizing and closing desktop windows
- Creating shortcuts

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:-

- Start computer, system information and features
- Navigate and manipulate desktop environment
- Organize files using basic directory and folder structures
- Print information
- Shutdown computer





Learning instruction:

10. Read the specific objectives of this Learning Guide.
11. Read the information written in the "Information Sheets.
12. Accomplish the "Self-check" listed under each information sheet.
13. If you earned a satisfactory evaluation proceed to "Operation Sheet" under each learning outcomes. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity.
14. Read the "Operation Sheet" and try to understand the procedures discussed.
15. You are delivered with lessons on how to prepare for ground support operations. Before you begin the operation read the information written in the "Information Sheets. You will be also provided with additional reference reading materials.
16. Read all the contents of each information sheet and try to understand the procedures discussed. Additional readings are provided in Operation Sheet under each learning outcomes. Go to your teacher if you need clarification or you want answers to your questions or you need assistance in understanding a particular step or procedure.
17. Request your teacher to arrange for you to join a ground support operation Team. You will join the Team as an observer. Prepare a report of learning experience. Your report will be evaluated and will form part of your training portfolio.

18. Do the “LAP test” in each learning outcomes (if you are ready) and show your output to your teacher. Your teacher will evaluate your output either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to the next Learning Guide.

Information Sheet-1	Opening ,closing and accessing desktop icons
----------------------------	----------------------------------------------

The Windows desktop contains a range of icons, some of which appear when you install Windows, and some that appear when you install new programs. Icons with an arrow are known as shortcuts or links to programs, files or folders. You can double-click on a desktop icon to launch that program, folder or file. Below are some common desktop icons.

Icons	What They Represent
	<p>Programs</p> <p>The icons to the left represent <i>shortcuts</i> to various <i>programs</i>. You can tell it's a shortcut as it contains an arrow. So, if you were to delete the shortcut, you wouldn't be deleting the actual program, only the desktop link to it.</p> <p>Double-clicking on the relevant icon will launch that program. For example, if you double-click on the icons to the left you will launch:</p> <ol style="list-style-type: none"> 1. Microsoft Word 2007 (word processing program) 2. Mozilla Firefox (internet browser) 3. Adobe Reader 9 (to view PDF files)
	<p>Files</p> <p>Icons that show a page represent a <i>file</i>. When you double-click on the icon, the file will open in the program that it was created in. The picture to the left shows that the file was created in Notepad. However, as no arrow appears, it is not a shortcut, but indicates that this file was actually saved to the desktop. Therefore, if this desktop icon is deleted, so is the actual file.</p>
	<p>Folders and drives</p> <p>Icons that show a folder represent a <i>folder</i> or shortcut to a folder. When you double-click on a folder icon, the Windows Explorer window will open and you will see the contents of that folder. Similarly, icons that show a hard disk will display the contents of that drive in Windows Explorer when you double-click on it.</p>
	<p>Recycle Bin</p>

2.3 Components of windows

Desktop Icons

Icons are small pictures representing a program, my computer, my document; recycle bin, internet explorer or Mozilla Firefox, my network place, file, folder, application or other item.

My Computer

It is located at the upper left corner on the Desktop. You can use My Computer to quickly and easily see everything on your computer. Inside My Computer, you can see a list of all of the disk drives on your computer.

- To open my computer double click on it or right click and then click open
 - I. **Micro floppy disk**, we use **A: drive**
 - II. **Mini floppy disk**, we use **B: drive**
 - III. **Hard disk**, we use **C: drive** ,D:drive ,F:drive
 - IV. **CD's**, we use **D: drive**

Folder

Folder Contain programs, files, or other folder that are grouped together for easy access.

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Mention at list three desktop icons and explain how to open them.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

When a new icon appears on the desktop, it usually sits along the left side of the screen. However, just as you can arrange items on your desk to suit your preferences, you can also arrange icons on the desktop to sit wherever you'd like. As well as arranging icons, you can also resize them, that is, make the icons larger or smaller.

Try This Yourself:

Before starting this exercise ensure you are viewing the desktop...

- 1 Click and hold down the left mouse button on a desktop icon, and drag to another part of the desktop, then release the mouse button

The icon returns to its original position, as the auto-arrange option is turned on...

- 2 Right-click on a blank area of the desktop to display a shortcut menu
- 3 Select **View > Auto arrange icons** to turn this option off
- 4 Select **View > Align to grid** to turn this option off
- 5 Repeat step 1

You can now freely move your icons anywhere on the desktop...

- 6 Repeat steps 3 and 4 to turn these options on
- The icons will automatically align to the left of the desktop...*

- 7 Right-click on a blank area of the desktop and select **View > Large icons** to display larger icons
- 8 Select **View > Medium icons** to display icons at their default size



The Start button and Taskbar

The taskbar is located at the bottom of your screen. It is a bar and contains the Start button (allows you to quickly start a program or to find a file), Tool bar, Clock and other features. At the far-right corner of the task bar, you see the system clock. Point your cursor (double click on it) to see the date and time. When you open a program, document or window, a button appears on the taskbar. You can use this button to quickly switch between the windows you have opened by clicking its taskbar button. When you click the start button, you see a menu that contains everything you need to begin windows

Date and Time

Inside your computer, there is a component called a real time clock (**RTC**). This **RTC** and **COMS** battery ensure that the basic settings are lost when you switch off your computer. RTC stores the current time and date in your computer and passes on this information to put a date and time to correct operations.

Time Zone: This option determines which time zone you are in. Especially for Laptop users who zip across many countries (and time zone frequently).

➤ To change the time zone to adjust your system clock :

Double click on taskbar at desktop → you can adjust the time, date, time zone → Ok/Apply

2.5 Elements of opened windows

Most windows have certain elements in common which looks like as the fig. Below.

Control Menu: When clicked on, this box drops a system menu. The menu contains the Move, Resize, Maximize, Minimize, Restore and Close buttons. It is also called the system icon.

Title Bar: Contains the name of application, program or currently opened document. It is used to move a window by holding down the left mouse button and move it to the desired place. It is also used to maximize or restore a window (double click on it).

Menu bar: is an area with a series of menu names. Clicking in this menu name drops a menu that contains a number of commands from which we can select.

Minimize, Maximize and Close Buttons: They are located in the top, right-hand corner of every window. When you click on the minimize button, the window is reduced to an icon on the taskbar. The Maximize Button is changed to Restore button, which returns the window to its original state.

Scrolling Arrows and Bars: Very often, a window you open can't display everything that is in it. If so, the window will have a scrolling arrow and bar, either a vertical one along the right side or a horizontal one across the bottom, or both. If a window doesn't have anything hidden that you can't see, you will not see any scroll bars. To see more of what a window has, click on the scroll arrow and hold the mouse button down, or drag the scroll bars to scroll more swiftly.

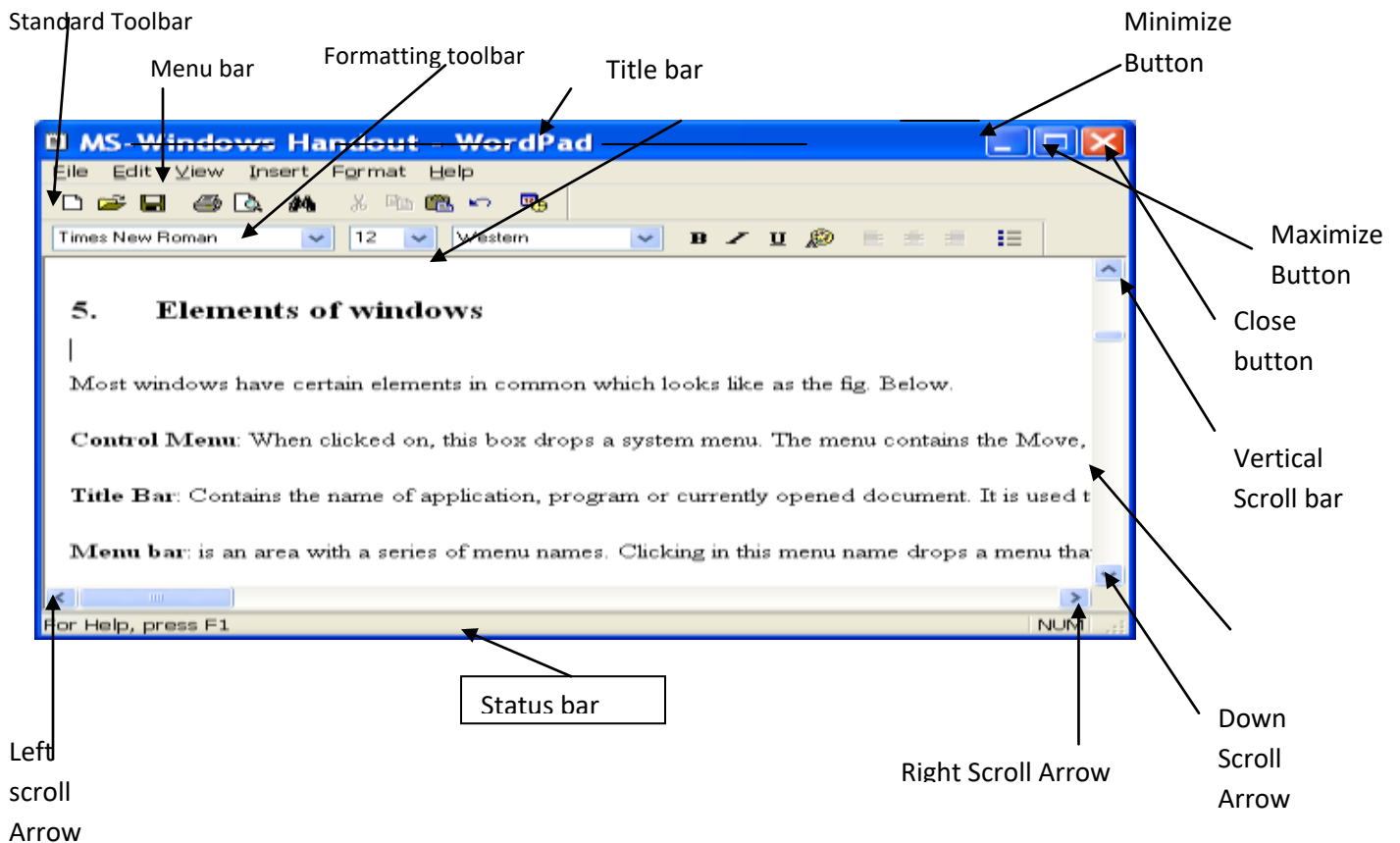


Fig 2.1

There is also a status bar at the bottom of the window that gives you information about what is in windows, If you are not viewing the status bar choose status bar from view menu. The status bar has hidden features that show you what menus will do if you choose an

option from them and displays in information explaining what the mysterious icons are as you move the mouse pointer over them.

2.6 Starting and Quitting Programs

Starting a Program

- ❖ To start a Program:
 1. Click the Start button, and then point to All Programs
 2. If the program you want is not on the menu, point on the folder that contains the program.
 3. Double-click the program.

Remark: If the program you want to start doesn't appear on the All Programs menu or one of its submenus, point to Search on the start menu and then click Files and Folders. Use the Search dialog box to type the program you want and click Search. From the search results dialog box, double click the program you want to open.

Alternative Method: Starting a program by using the Run command.

1. Click the Start button, and then click Run.
2. In the Open box, type the location and name of the program you want to start. If you don't remember the location or name of the program file, click Browse and from the programs that appear, double-click on the program you want to open.

Starting the Word Pad

Windows includes a text editor, Word pad, which you can use to create and modify documents.

- To start Word pad:
Start button → All Programs → Accessories → Word pad

Starting Paint

Windows includes a program, paint that enables you to create, modify or view pictures.

- To start **Paint**:
Start button → All Programs → Accessories → Paint

Starting Calculator

Windows includes a program, called **Calculator** that enables you to perform simple calculations. You can use Calculator in **Standard View** to do simple calculations or use it in **Scientific View** to do advanced scientific and statistical calculations.

- To start **Calculator**:
Start button → All Programs → Accessories → Calculator

Switching between Windows

You can switch to another opened programs or a window by clicking its button on the **Taskbar** or click on anywhere inside the window (if not minimizes). Switching doesn't close the program window you were working in; it just changes the view on your screen.

Cascading and Tiling Windows

Cascading means arranging windows one over the other, while **Tiling** means arranging windows side by side. Use the right mouse button to click on the empty space of **Taskbar** and then click **Cascade Windows** (arrange windows on over the other) and **Tile Windows horizontally** or **vertically** (To arrange windows side by side) from the pop-up menu, as you want.

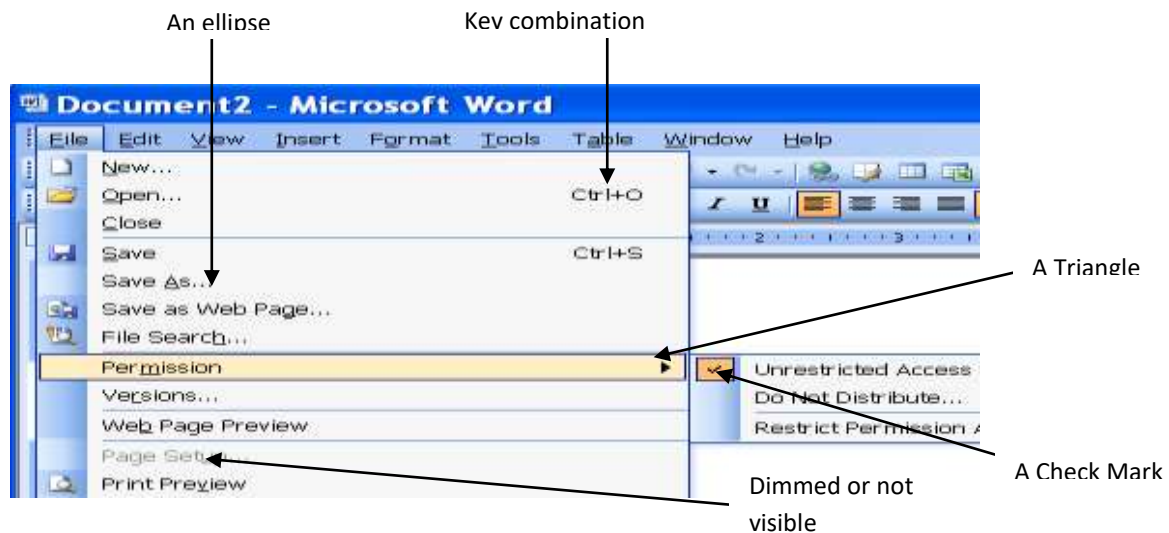
2.7 Menu Conventions

Commands or sometimes characteristics are listed on menus. Most applications have their own menus, which are listed on the menu bar along the top of the application window. To choose commands from a menu, click on the menu, move the mouse pointer on the menu item and click on the item you want.

The following menu conventions are used in windows

- a) **A Check Mark (✓)** to the left of a command: shows the command is in effect at the Current time.
- b) **A Triangle (▶)** to the right of a command: shows you that if that command is chosen, another files or folders are placed.
- c) **Dimmed** or **not visible menu**: The command cannot be used at the current condition.

- d) **A key combination to the right of a command:** shows the shortcut for the chosen command by using the keyboard.
- e) **An ellipse (...)** following a command: A dialog box appears when the command is chosen.



Dialog Boxes

Dialog boxes are specialized windows, which appears when you need to supply additional information to complete a task. The elements of dialog boxes are:

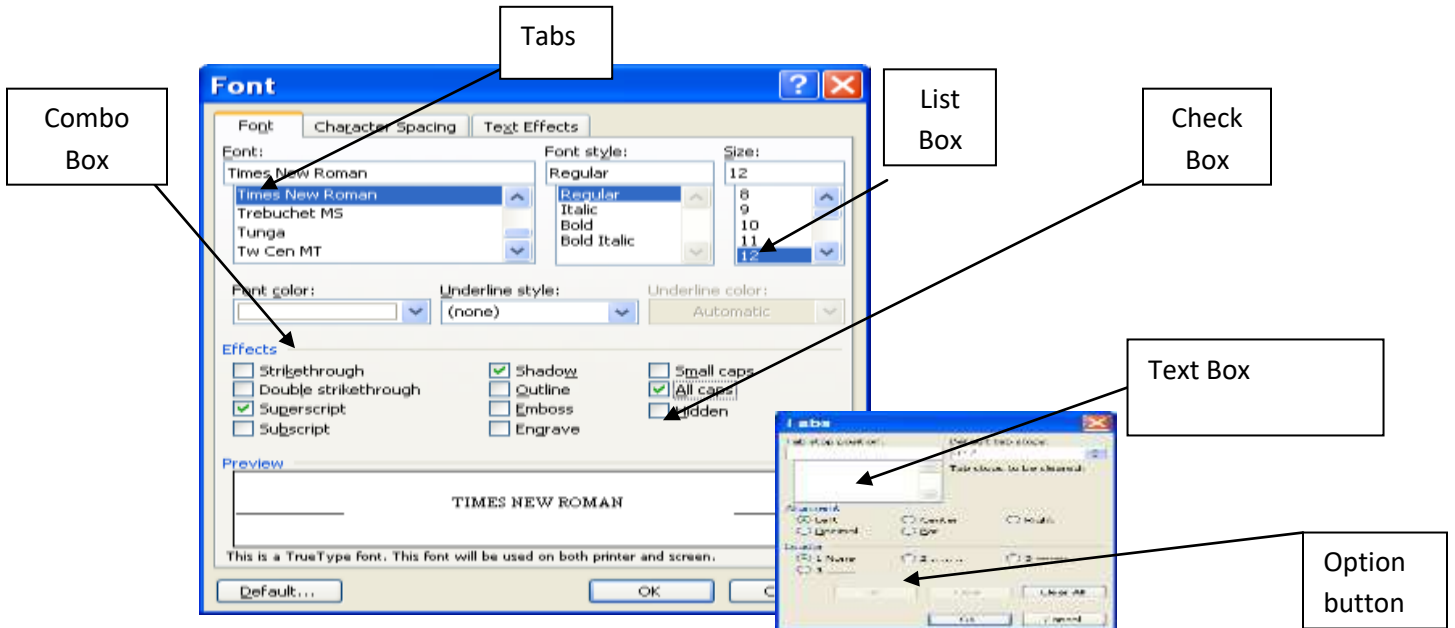
Combo Boxes (Drop-Down List Boxes): provides features of a text box and list box because you can type right into it or select from a list of choices. To choose an item in combo box, click on the down arrow, and from the choices that appear click on your choices.

Text Boxes: Boxes in which information is typed against on insertion point.

Check Boxes: Are used to set ON or OFF. You can check more then one check box in a group.

Option Buttons: Option button are some times referred as radio buttons. Only one option button in a group can be selected. Click on the one you want to choose it.

Command and buttons: Buttons to choose a command to initiate and action. The action the button will perform will indicate on the button itself. The action can either be indicated by graphics as on a toolbar or by text as on the OK, Cancel, Quit Open and Help button found in many dialog boxes.



Tabs: Some dialog boxes have multiple sections and categories. Tabs separate such section and only the option on currently highlighted tab can be viewed. When you select different tabs, the original tab move back and the new tab is brought in to foreground. To move between different tabs in a dialog box, click on the tab required.

Quitting an Opened Program

- To close a program:
 - 1) Click on the **Close (X)** button from the top-right corner of the window, or
 - 2) **File → Exit**
 - 3) From keyboard press **Alt+F4**

If you are using multiple windows, and want to close all opened windows, hold the Shift key and then click the **Close (X)** button in the upper right corner of the title bar.

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Differentiate between cascading and tiling windows.
2. Select one program and explain the steps to open that program.
3. What are the common elements of an opened window? Mention at list four elements

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation Sheet-1	Opening a program
--------------------------	--------------------------

Objectives:

- Understand how to open a program you want to work in
- To locate the directory in which the program is located


Procedures to follow

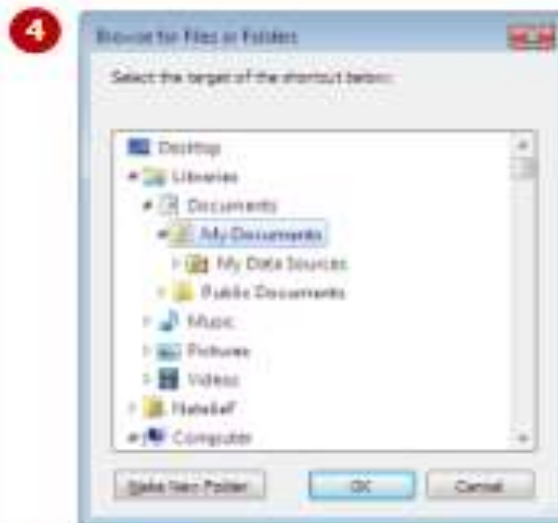
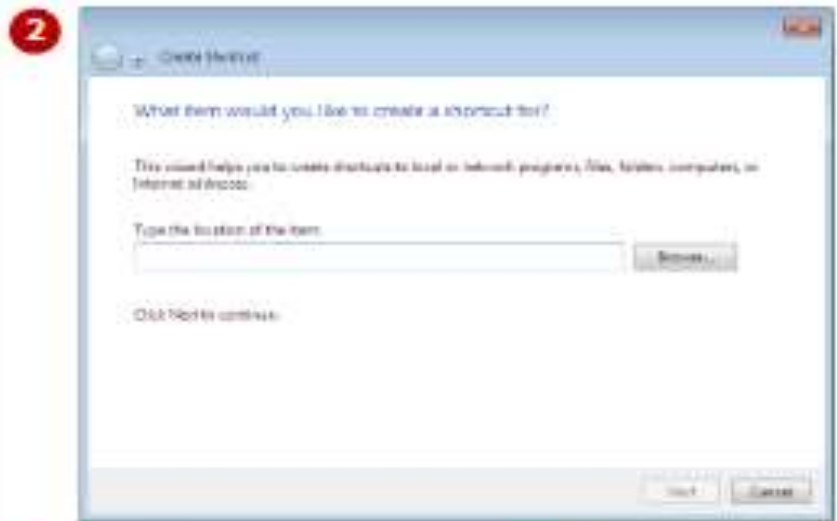
- To start Word pad:
 - Step 1: Click Start button on the bottom left corner of the computer
 - Step 2: Click All Programs
 - Step 3: Click Accessories
 - Step 4: Finally double click Word pad

Desktop icons are designed to enable quick access to frequently-used programs, files, folders and so on. Many of these icons will be shortcuts, which are used to launch a program (or whatever) from another location. You can create desktop shortcuts for pretty much anything on your computer: programs, files, folders, windows and the like

Try This Yourself:

Before starting this exercise ensure you are viewing the desktop...

- 1** Right-click on a blank area of the desktop to display a shortcut menu
- 2** Select **New > Shortcut** to display the **Create Shortcut** dialog box
- 3** Click on [**Browse**] to display the **Browse for files and folders** dialog box
- 4** Click on the white arrows ▾ beside **Libraries** and then **Documents**, and then click on **My Documents** to select it
- 5** Click on [**OK**] and then click on [**Next**]
You will then be asked to name the shortcut but you will keep it as My Documents...
- 6** Click on [**Finish**]
The My Documents folder now appears as a shortcut on your desktop...
- 7** Double-click on the **My Documents** shortcut to launch **Windows Explorer** and display the contents of the **My Documents** folder
- 8** Click on *close*  to close **Windows Explorer**



Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. How can you create a shortcut in desktop window?
2. What is the important of creating shortcut ?

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____



Ministry of Agriculture ATVET

BASIC AGRICULTURAL PRODUCTION AND NATURAL RESOURCE CONSERVATION OPERATIONS

Level I

Learning Guide #17

Unit of Competence: Operate a Personal Computer

Module Title: Operating a Personal Computer

LG Code: AGR BAN1 M17 0919

TTLM Code: AGR BAN1 TTLM17 0919

L03: Organize files using basic directory and folder structures

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Creating folders/subfolders
- Saving files
- Renaming and moving folders/subfolders
- Identifying folders/subfolders and file attributes
- Moving folders/subfolders and files
- Saving folders/subfolders and files in appropriate media.
- Searching folders/subfolders and files
- Restoring deleted folder/sub folder and files

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:-

- Start computer, system information and features
- Navigate and manipulate desktop environment
- Organize files using basic directory and folder structures
- Print information
- Shutdown computer

Learning instruction:

19. Read the specific objectives of this Learning Guide.
20. Read the information written in the "Information Sheets.
21. Accomplish the "Self-check" listed under each information sheet.
22. If you earned a satisfactory evaluation proceed to "Operation Sheet" under each learning outcomes. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity.
23. Read the "Operation Sheet" and try to understand the procedures discussed.
24. You are delivered with lessons on how to prepare for ground support operations. Before you begin the operation read the information written in the "Information Sheets. You will be also provided with additional reference reading materials.
25. Read all the contents of each information sheet and try to understand the procedures discussed. Additional readings are provided in Operation Sheet under each learning outcomes. Go to your teacher if you need clarification or you want answers to your questions or you need assistance in understanding a particular step or procedure.

26. Request your teacher to arrange for you to join a ground support operation Team. You will join the Team as an observer. Prepare a report of learning experience. Your report will be evaluated and will form part of your training portfolio.
27. Do the “LAP test” in each learning outcomes (if you are ready) and show your output to your teacher. Your teacher will evaluate your output either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to the next Learning Guide.

Information Sheet-1

Creating folders/subfolders

1.2 Working with Folders

In widow, you store your work in folders just like you would in your office or at home.

Both the Explorer and My computer objects allow you to look at your programs, files and folders stored on disk.

The Explorer: Allow you to see the hierarchy of all folders on your computer. Windows explorer displays folders in the left hand-panda and the contents of the folder in the right hand-pane.

- To open explorer and look at the hierarchy of folders:
 1. Right click on the **Start** button and click **Explore** from the pop-up menu.
 2. Click a folder on the left side of the window to display its contents on the right. Click the **plus (+)** sign to display more folders.

Creating a New Folder

Your documents and programs are stored in folders, which you can see in **My Computer** and Windows **Explorer**.

- To create a new folder Right click on desktop →New→Folder
- To change the name of a file or folder(Rename):

Right click on the folder→Rename

- To open a file or folder:

Double click on the Folder or file Or Right click on the file or folder →open.
- To select the Whole files or folders:
 1. Click the first icon.
 2. Hold down the **Shift key** while you click the last icon to be selected.
- To select only some files or folders:

Hold down the **CTRL** key while clicking each one.

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. How can you store the files you created?
2. _____ Allow you to see the hierarchy of all folders on your computer.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation sheet	Create new folder
------------------------	--------------------------

Objectives:

- Understand how to create a new folder

Procedures to follow

- To create a new folder
 - Step 1: Right click on the empty space on desktop
 - Step 2: point to New
 - Step 3: select/click Folder

1.1 Creating File


MS-Word

Word processing is computer program or application software that enables computer users to create, edit, format, print and save documents or textual files for future retrieval and revision.

The main advantage of word processing over typewriter in preparing documents is that word processing enables you to make changes to already written documents.

Starting Word

To start Ms-Word

- click start button 
- Point to all programs
- Point to Microsoft office
- Click Microsoft Word

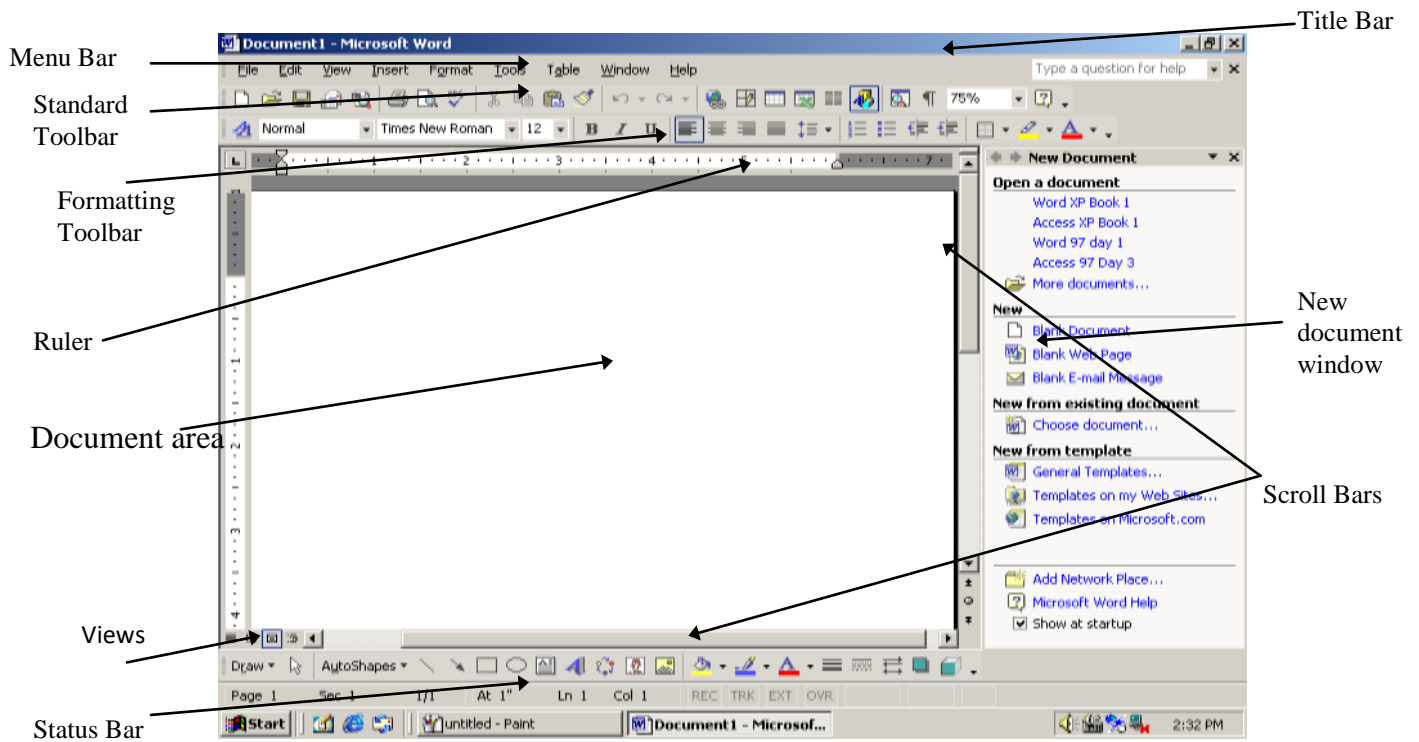


Screen elements

The following are main screen elements of the word window

Title bar, Menu bar, Toolbars, Ruler, Typing area, View buttons, Browse buttons & Status bar

- **Title Bar** -Indicates application and current document in use
- **Menu Bar** -General headings for accessing commands
- **Standard Toolbar** -Quick access to basic features of Word
- **Formatting Toolbar**-Quick access to change the look of text
- **Ruler** -Indicates Margin, Tab and Indentation settings.
-Can also be used to change these settings.
- ⊕ **Scroll Bars** -Allows quick movement around document
- ⊕ **Status Bar** -Shows position of Insertion Point and document status



Typing text in word

When you are typing your text:

1. Do not press Enter to start new lines within a paragraph. Word wraps the lines for you. Press Enter to end short lines of text, to create blank lines, and to end paragraphs. Each time you press Enter, you insert a paragraph mark (¶) into your document.
2. Press the Tab key to indent the first line of a paragraph.
3. To type the same key repeatedly, hold the key down Word automatically converts some repeated characters into different types of lines. For example, if you type three or more asterisks (*) and press Enter, Word replaces them with a dotted line. Use the equal sign (=) for a double line, the tilde (~) for a wavy line, the pound (#) symbol for a thick decorative line, the hyphen (-) for a thin single line, or the underscore (_) for a thick single line.
4. To produce all uppercase letters without having to hold down the Shift key, press the Caps Lock key once and then type. Press the Caps lock key-again when you're ready to switch off this feature.


5. Click on the Show/Hide button in the Standard toolbar to see where you pressed the spacebar, Tab, and Enter keys. A dot(.) represents a space, an arrow(➔) represents a tab, and a paragraph mark(I) indicates where you pressed Enter. You can use the show/Hide button to check whether you accidentally typed an extra space between two words (you'd see two dots instead of one, for instance) or to see how many blank lines you have between paragraphs. To turn Show/Hide off, just click on it again.
6. If you accidentally type the wrong character, press the Backspace key (with the left-pointing arrow above the Enter key) to delete it. Do the same if you accidentally press Enter, Tab, or the spacebar).

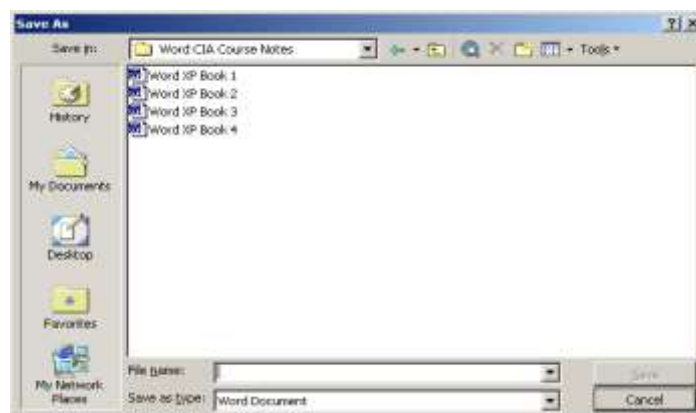
2.2 Saving a file

After text has been entered, if it is to be used again it needs to be saved.

There are two ways to save a document; **Save As** and **Save**.

To save a newly created document

- ⊕ Select the **File** menu and choose the **Save As...** Command. Or click on the **Save** button 
- ⊕ The **Save As** dialog box will then appear on the screen, in front of the current document.



Options are given on:

what **File Name** will be given to the document

Where to save the document, i.e. which **Drive** and **Folder**.

- ⊕ Enter the name of the file in the **File name** box.

⊕ In the **Save in** area select the correct drive and folder.

⊕ Click **Save** .

To update an existing document

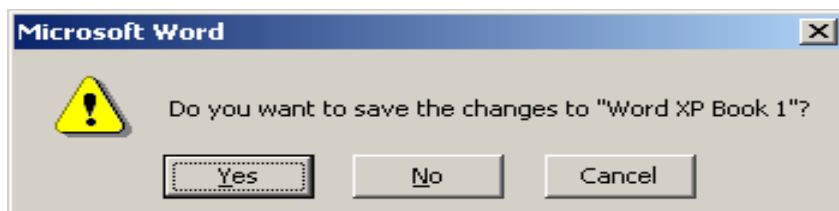
⊕ Select **File | Save**

or. click on the **Save** button .

Closing a Documents

⊕ Click File menu | **Close** command. /exit

⊕ If the document has not been previously saved, or if it has been updated, *Word* displays a **Message Box**



⊕ Three options are given:

- | | |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Yes | displays the Save As dialog box if the document has just been created or automatically saves the document if it is being modified. |
| No | clears the document from the active window. |
| Cancel | returns to the document. |

Starting a new document & opening a document from a disk

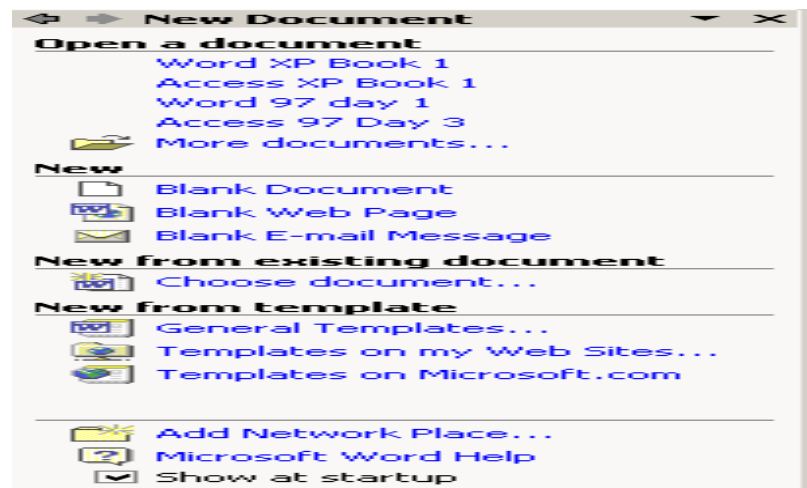
Creating a New Document

A new document can be opened at any time within Word:

⊕ Select **File | New**. Or click on the **New** button .

⊕ The **New** dialog box will appear on the screen.


➤ Double Click Blank Document,

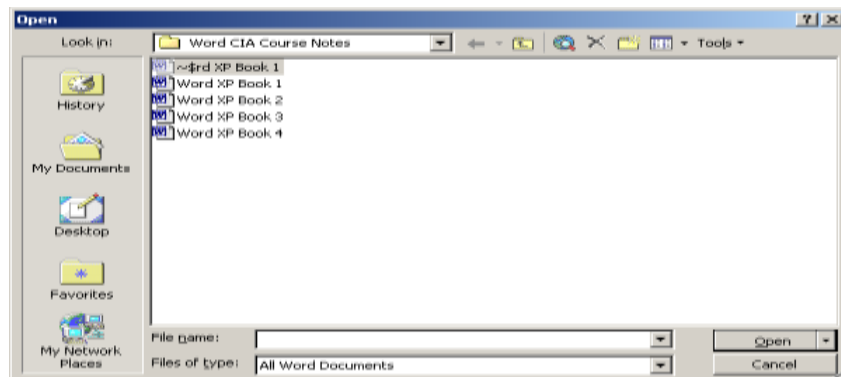


from the dialogue box

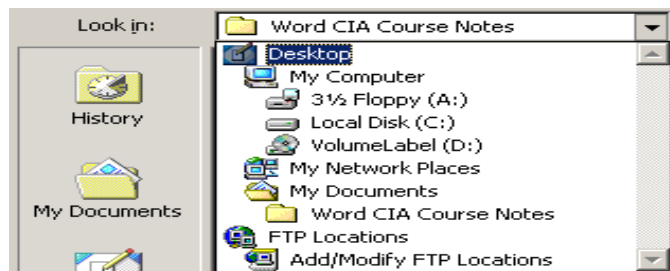
Opening an Existing Document

Once a document has been created, it can be opened at any time.

- ✦ To open an existing document, select the **File | Open** command. Or Press the **Open** button  on the **Standard Toolbar**. This will display the **Open** dialog box.



- ✦ Click on the **Look In:** box and from the drop down list, select the drive and folder from which to open the document.



- ✦ Finally, click on the name of the file to be opened. It will appear highlighted.
- ✦ Click on the **Open** button to open the file. Double clicking the file name also opens the file.

Cursor Movement

The cursor keys can be used to move the cursor character by character and line by line. Some of the more useful movement keys are as follows:

Description

Key Press

Beginning of a line	<Home>
End of a line	<End>
Beginning of a document	<Ctrl Home>
End of a document	<Ctrl End>
Up one window	<Page Up>
Down one window	<Page Down>
Beginning of the next paragraph	<Ctrl + >↓
Up one paragraph	<Ctrl + ↑ >
Next word	<Ctrl + → >
Previous word	<Ctrl + ← >
Up one page	<Ctrl +Page Up>
Down one page	<Ctrl + Page Down>

Opening a Document from a Disk

To open a document:

1. Click on the Open button in the Standard toolbar (or choose File, Open).

The open dialog box will be displayed.

2. Click the disk drive containing the document.

All of the folders and files in the drive you clicked on are displayed in the dialog box.

3. Click the document you want to open, and double-click on it.

Alternative methods

- ✓ Double click on my computer

Double Click the disk drive containing the document

Editing and formatting a text

Editing

Inserting and Deleting Text

Deleting Text

- ⊕ To erase a mistake position the cursor to the right of the mistake and use the <Backspace> key (a left arrow or Del or BkSp with a left arrow). The or <Delete> key can be used to delete a character to the right of the cursor.

Inserting Text

- ⊕ To insert text, position the cursor where the text is required. Type in the text. New characters are inserted to the left of the cursor.

Remember

- ⊕ Both the mouse and the cursor keys can be used to move the insertion point.

Selecting Words and Sentences

Most features of *Word* work on the basis that text is first selected and an action is then performed upon the selected text.


- ⊕ Select text.

To select a word move the I-beam pointer /cursor over the word and double click using the mouse.

To select a sentence hold down the <Ctrl> button and click once anywhere within the sentence.

- ⊕ To remove the highlighting, click once with the mouse anywhere within the active document or press one of the arrow keys.

Selecting Lines & Paragraphs

A line positions the mouse next to the line and **click once** when the cursor changes to 

A paragraph position the mouse next to the paragraph to be selected then **double click** (treble clicking in the paragraph also makes the selection).

An entire document position the mouse in the selection bar then **treble click**.

Dragging the mouse in the selection bar will select text one line at a time.

To select small areas of text:

- ❖ Click once with the mouse at the start of the desired text.
- ❖ Drag to the end of the desired text by moving the mouse whilst keeping the left mouse button pressed down.
- ❖ Release the mouse button to end text selection.

Undo and Redo

The **Undo** command allows the reversal of some of the last actions performed and Redo allows reversal of the Undo.

- ❖ To correct a mistake by reversing an action, select the **Edit** menu immediately after the action has been carried out.
- ❖ From the **Edit** menu select **Undo** (this is the uppermost command - the exact name of the command will depend on the last action performed).
- ❖ After using **Undo**, selecting **Edit | Redo.....** will **Redo** that particular cancelled feature.

Select the **Undo** or **Redo** button on the **Standard Toolbar**



Cut, Copy and Paste

The Cut, Copy and Paste commands are found within the **Edit** menu. This group of commands allows text to be moved around a document, from one place to another, quickly and easily.

Cutting or Copying:

- ❖ Select the area of text to be cut.
- ❖ Choose the **Edit | Cut** command. The selected text is removed from the active document and is placed in a temporary storage area known as the clipboard.

The **Copy** command works in the same way, except that the original text remains in the active document.

Text contained within the clipboard is available for use in most Windows-based products. Text remains in the clipboard until it is either deleted from there or it is replaced by further text being cut or copied to the clipboard.

Pasting:

- ❖ Move the insertion point to the position where the contents of the clipboard are to appear and select the **Edit | Paste** command. The text that was cut or copied will appear at the current insertion point. Note that the contents of the clipboard will remain unchanged - the text can be pasted many times.

Cut, Copy and Paste buttons are on the toolbar.



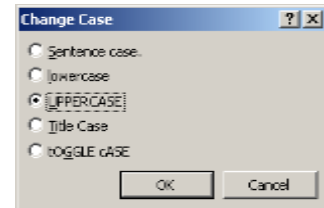
Quick key press: Cut <Ctrl X>, Copy <Ctrl C>, Paste <Ctrl V>.

Editing Text:

Changing Case

There are three character cases available within *Word*: uppercase, lowercase and sentence case (the first letter in the sentence being in uppercase).

- ❖ To change the case of a group of characters, first select the characters.
- ❖ Select **Format | Change Case...** to open the **Change Case** dialog box.



The selected text can then be changed to any of the five options:

Sentence case has the first letter of the sentence in upper case.

Lowercase has all the words in small case.

Uppercase has all the words capitalized.

Title Case has all words beginning with an upper case letter.

tOGGLE cASE changes upper case to lower and vice versa.


- ❖ If text is entered and the Caps Lock key has been left on, *Word* can automatically correct the case of the text (e.g. capital to Capital) and turn the Caps Lock off. Carry on typing in the text and when either **<Spacebar>** or **<Enter>** is pressed *Word* will automatically correct the mistake. N.B. This is dependent on the correct selection being made within **Tools | AutoCorrect**.

To change the case of a single word, position the cursor within the word.


Quick key press <Shift F3>. Pressing **<Shift F3>** will change the case of the text. Pressing **<Shift F3>** a second time will change the case once more. Further presses of **<Shift F3>** continues to change the case following the cycle lowercase, sentence case, uppercase, lowercase, etc.

Move/Copy Text (Drag and Drop)

The **Drag and Drop** facility within *Word* speeds up the process of moving text from one location to another within a document.

- ❖ Select the text to be moved and position the pointer over the selected text so that the pointer should appear as an arrow rather than the I-beam.
- ❖ Click and hold down the mouse button. The pointer now takes on the form of  and the message **Move to where?** appears at the bottom of the screen in the **Status Bar**.
- ❖ Continue to hold down the mouse button and move the pointer to the position the text is to appear.
- ❖ When the mouse button is released, the text appears at the current position of the insertion point associated with the pointer and disappears from its original position.

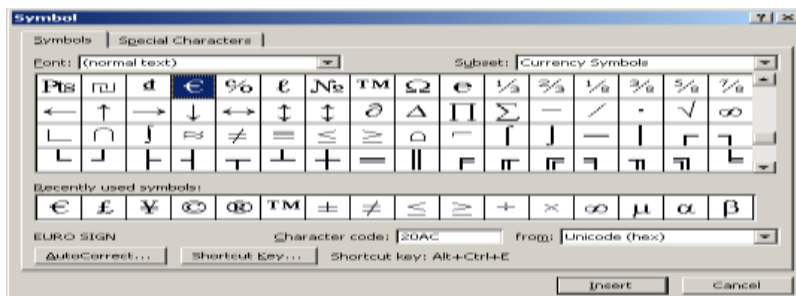
Note :The drag and drop feature becomes drag and copy if the <Ctrl> key is held down


*whilst the text is being dragged. The cursor appears as  and the **Status Bar** reads **Copy to where?**.*

Special Characters and Symbols

Word has special characters that are not available directly from the keyboard. The keyboard produces the letters, numbers and punctuation marks needed for most documents, but some situations call for special characters, like ™, © and ô.

- ❖ To use the special characters, first position the insertion point at the position the character is to appear.
- ❖ Choose the **Insert | Symbol...** command to display the **Symbol** dialog box. This will display the range of available symbols.



- ❖ Change the **Font** to view more symbols. To position a symbol in the document either **double click** on the symbol, or click once and then click on **Insert**.
- ❖ Within the **Symbol** dialog box, there is an option to  select **Special Characters**. This will give a list of shortcut key presses that can be used to insert certain symbols. Select **Close** to exit the **Symbol** dialog box.

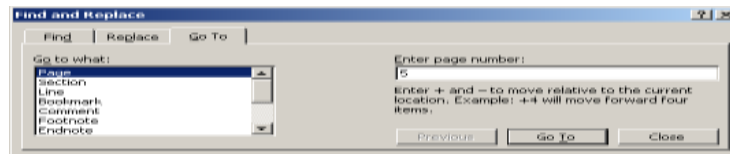
Go To

By using **Go To** it is possible to move the insertion point to a specific location within the current document. This includes pages, section, lines, etc.

- ❖ Select **Edit | Go To....** The **Find and Replace** dialog box appears.



- ❖ From the **Go to what** box make a selection.
- ❖ Type in the location in the **Enter** box.



- ❖ Click on **Go To**. The screen has moved to the specified location.
- ❖ Click **Close** to remove the **Find and Replace** dialog box.

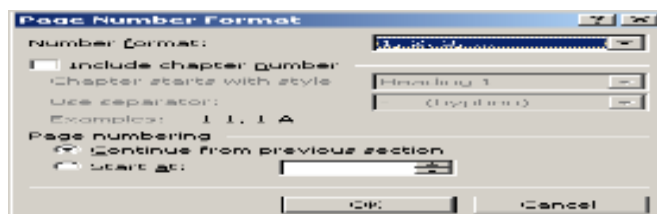
Page Numbering can be added to documents by one of two methods.

Insert | Page Numbers

- ❖ To add page numbering, select the **Insert | Page Numbers...** command.



- ❖ Select the **Position** and **Alignment** for the page number.
- ❖ Click **Format...** to change the style of numbering.



- ❖ Select the required style from **Number Format**. Click **OK**.
- ❖ Click **OK** again to insert the page numbering.

To Remove Page Numbers

- ❖ Select **View | Header and Footer**.
- ❖ Select the page number.
- ❖ Press **<Delete>**.
- ❖ This will remove the numbers from the whole document.

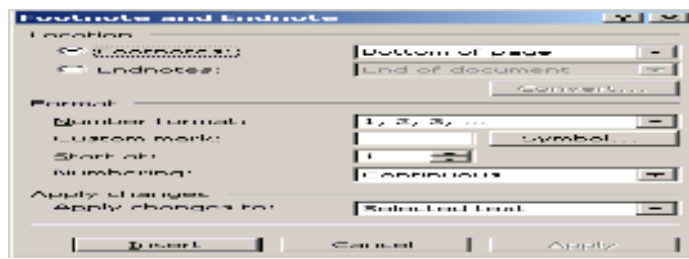
Footnotes

Footnotes are a formalised way of documenting sources for quotations, facts and ideas in a report. A footnote number is automatically placed in the document next to the text to be referenced. The same number appears at the bottom of the page with details about the source of the information.

Footnotes can be edited and formatted, just as normal text. If a footnote is deleted, the footnote reference mark, i.e. the number within the main text of the document, is not removed. However, if the footnote reference mark is deleted, the corresponding footnote is removed along with it. Exercise great care when removing footnote reference marks.

There is a widely observed convention that footnotes' reference numbers are entered in superscript form.

- ❖ Position the cursor after the word to which the footnote refers. Select **Insert | Reference| Footnote...**



- ❖ Select whether a **Footnote** (text appears at bottom of page) or an **Endnote** (text appears at end of document) is required.
- ❖ Set the **Start at** number.
- ❖ Click **OK**. The screen changes. Type in the footnote in the given space.

FORMATTING TEXT


Underline, Bold and Italic

As text is entered into a document, it is possible to format it as it is being typed.

From the keyboard

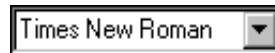
- ❖ Activate underline, bold and italic features using the key presses **<Ctrl U>**, **<Ctrl B>** and **<Ctrl I>** respectively.
- ❖ Return to a normal format by pressing **<Ctrl Spacebar>**, or repeat the key press.

Using the mouse

- ❖ Click once on the Toolbar buttons . When a particular feature is in operation, the 3-dimensional button on the Toolbar appears as if it is depressed.
- ❖ Type in the desired text.
- ❖ Turn the selected feature off by clicking once more on the depressed button.

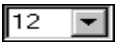
Fonts

A font is a type or style of print. Examples of fonts are Courier, Times New Roman, Modern, Arial, etc. A combination of the software in use and the selected printer determines which fonts are available. Fonts may be changed either prior to or after text entry. Change fonts using the **Font** box located on the **Formatting Toolbar**.



- ❖ To define a font prior to text entry, click once on the downward pointing arrow and click on the name of the font that is to be used. The selected font will be used from this point onwards in the document.
- ❖ To change the font of existing text, select the text in the usual manner and then change the font using the font box. Using this procedure, only the font of the selected text will be changed. Once the font has been applied, click once elsewhere in the document to remove the highlight.
- ❖ To preview fonts before formatting text, use **Format | Font**.

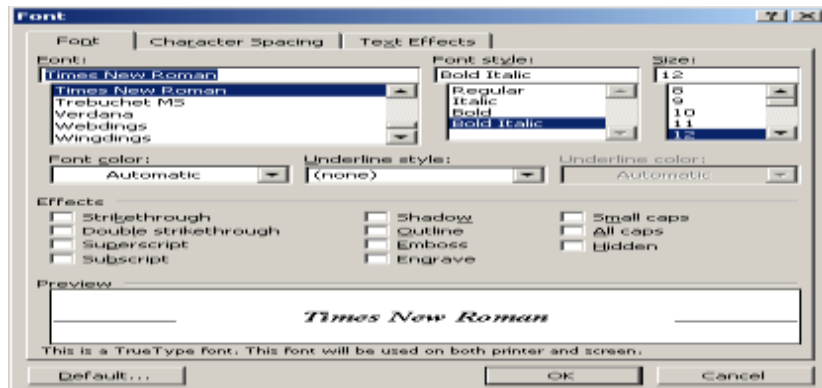
Changing the Size of Text

The size of printed text can be changed either before or after the text is typed. The range of sizes available will be determined by a combination of the printer and font in use. *Word* defines size in terms of point sizes - the larger the point size, the larger the character appears. Size is changed using the **Size** box located on the **Formatting Toolbar**. 

- ❖ To change size before typing, position the insertion point where the new size is to be applied, then drop down the list from the **Size** box and select from the available sizes. The new size will apply until either a new size is selected or the insertion point is moved into an area of text that is a different size.
- ❖ On previously entered text, the size is changed by first selecting the text and then changing the size using the **Size** box. The new size will be applied to the selected text and will appear within the selection. Click once with the mouse to remove the selection.
- ❖ To preview text size prior to changing text selects **Format | Font**.

Changing the Appearance of Text

Appearance features are applied using the **Format | Font** command, which opens up the **Font** dialog box. Several features can be chosen at once, as well as obtaining a preview of the text prior to changing.



- ❖ To change appearance before/after typing, open up the **Font** dialog box and select from the following appearance options:

Font Style → Regular, Bold, Italic, Bold Italic.

Underline → includes None, Single, Words Only, Double and Dotted.

Others → Font, Size, Color.


Effects → includes Strikethrough, Superscript, Subscript, Hidden, Small and All Caps.

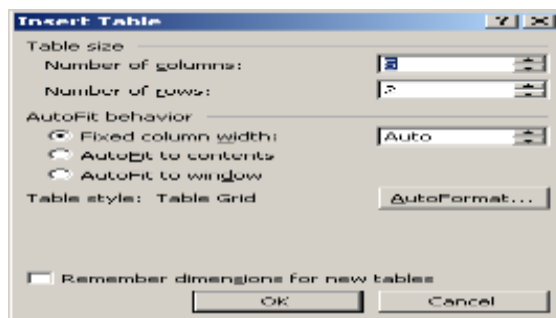
- ❖ To change the color of text use the **Font Color** button, , on the **Formatting Toolbar**.

Tables and drawing objects

Tables

Word provides an easy way to create and edit organised rows and columns of tabular data (without tabs) using the TABLE feature. This is also useful for creating forms such as invoices that are formatted in tabular form. Tables consist of rows, from top to bottom and columns that run from left to right, to create CELLS as in spreadsheets.

- ❖ To insert a table, select **Table | Insert | Table...**. Or use the **Insert Table** button  on the **Standard Toolbar**
- ❖ The following dialog box appears.



- ❖ Select the **Number of columns** and **Number of rows** required.
- ❖ Click **OK**. The table is visible.

Setting up a Table: Entering Text

Once a table has been created, it is simple to enter text and move around it.

It is probably easier to type the text into the table first and then return to format the table, i.e. correct column widths, etc.

- ❖ Movement forwards within a table is with **<Tab>**, or click in the appropriate cell.
- ❖ Use **<Shift Tab>** to move backwards.
- ❖ The cursor keys can be used, but are slow when a table is full of text.
- ❖ When entering text do not use **<Enter>**, unless a new line is required within the same cell, e.g. as in an address.
- ❖ Text may be formatted within individual cells in the same way as ordinary text, i.e. select the text and make it bold, larger, centered, etc.

Selecting Cells

To act on a group of cells they must be selected first, just like a block of text.

To select a cell move the mouse to the left side of the cell. Click once and the cell will be highlighted.



To select a row move the mouse to the left of the row. The arrow will change as shown. Click once and the row will be highlighted.



To select a column move the mouse to the top of the column. The mouse will change into an arrow pointing down as shown. Click once and the column will be highlighted.



- ❖ Dragging the mouse selects a block of cells. When the desired cells are selected release the mouse. These cells can then be acted upon by the table commands.

*Note: To select a row or column, position the cursor within the row/column then use **Table | Select Row** or **Table | Select Column**. **Table | Select Table** will select the entire table.*

Deleting a Table

- ❖ To delete a table it is necessary first to select it.
- ❖ Either select **Table | Select | Table**, or click and drag in the selection bar.
- ❖ Select **Table | Delete | Rows** or **Table | Delete | Columns**, depending on which way the selection was made.

*Note: To delete the text only within a table, select the table and press **<Delete>**.*

Merging and Splitting Cells

Cells in a table can be merged or split. To merge or split, the cells must be selected before choosing the appropriate command.

Merge Cells

To merge cells means to join two or more cells together to make one large cell.

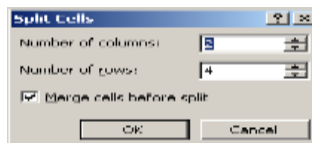
- ❖ Select the cells to be joined.
- ❖ Select **Table | Merge Cells**. The cells are then merged.

Note: Cells from different rows can be merged.

Split Cells

To split means to divide a cell into two or more cells.

- ❖ Position the cursor in the cell to be split.
- ❖ Select **Table | Split Cells...**



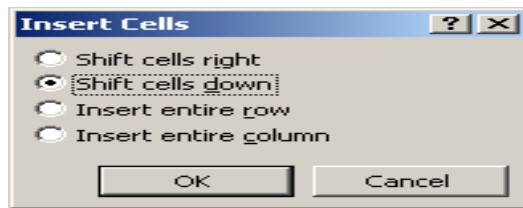
- ❖ Increase the **Number of Columns** to the required amount.
- ❖ Click **OK**.

Note: Cells that have not been merged can still be split.

Inserting and Deleting Cells

It is possible to insert cells into a table.

Insert Cells



- ❖ Select the cell.
- ❖ Select **Table | Insert | Cells....** A dialog box opens.

- ❖ The options are:

Shift cells right, which will insert the new cell and move the other cells to the right.

Shift cells down, which will move the cells down after insertion of the new cell.

- ❖ Click **OK**.

Delete Cells


- ❖ Deleting cells is a similar process.
- ❖ Select the cell to be deleted.
- ❖ Use **Table | Delete | Cells**.
- ❖ From the dialog box select either **Shift cells left** or **Shift cells up**.
- ❖ Click **OK**.

Inserting Rows and Columns

It is easy to increase a table in size by adding rows or columns to the edges, or even between existing rows or columns.

Insert rows or columns



- ❖ Move to where the new row/s (above the cursor) or column/s (to the left of the cursor) is to be inserted.
- ❖ Select **Table | Select Row** (or **Column**) to select the row/column. Select **Table | Insert / Rows (or Columns)**.
- ❖ The new rows/columns are then inserted.
- ❖ To insert more than one row or columns select by highlighting the required number of rows/columns before using the **Select** and **Insert** commands.

- ❖ Alternatively, position the cursor below where the new row is to be inserted and click on the **Insert Rows** button, , from the **Standard Toolbar**. Highlight a column and the button will change to **Insert Columns**.

Delete rows or columns

- ❖ Select **Table | Select | Row** (or **Column**).
- ❖ Select **Table | Delete | Rows** (or **Columns**).

To add more rows to a Table place the cursor in the last cell of the table and press **<Tab>**. New rows are added accordingly.

Alternatively, when a row or column is selected the **Insert Table** button changes to **Insert Rows**, , or **Insert Columns**, . Click once to insert the appropriate item.

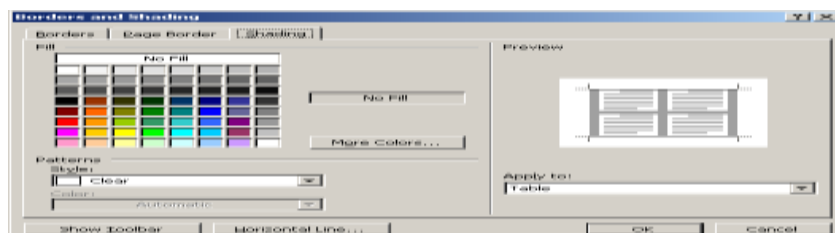
Borders and Shading....

- ❖ Position the cursor within the table.
- ❖ From the menu select **Format | Borders and Shading**
- ❖ Make a selection from **Setting**:. Choose the line style by clicking on it from the **Style** box.
- ❖ Click **OK**.

Click the **Borders** button  from the **Formatting Toolbar** and choose where the borders will appear.

Shading can be used to enhance the appearance of a table or to call attention to a particular cell. A few minutes spent adding lines, merging and splitting cells and adding some shading, enhances the appearance of a document drastically.

- ❖ To shade cells, select the cell or group of cells.
- ❖ Select **Format | Borders and Shading...** and select the **Shading** tab.

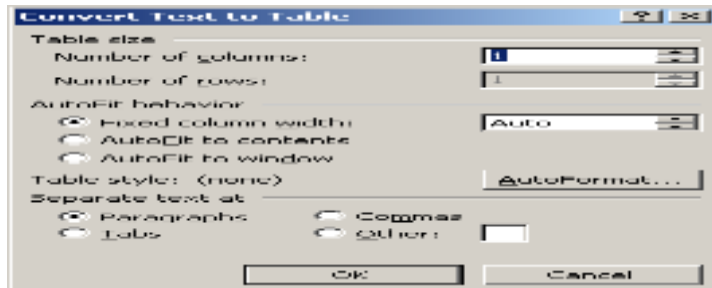


- ❖ From the **Fill** box, choose the required **Shading**.
- ❖ Click **OK**.

Converting Text to a Table

Word allows previously entered text to be placed into a table providing the text is separated by either commas, tabs or paragraph marks. It may be necessary to remove any extra commas or tabs to reach the required format.

- ❖ Select the required text.
- ❖ From the menu select **Table | Convert | Text to Table....**
- ❖ The **Convert Text to Table** dialog box appears allowing specification of number of columns and rows.



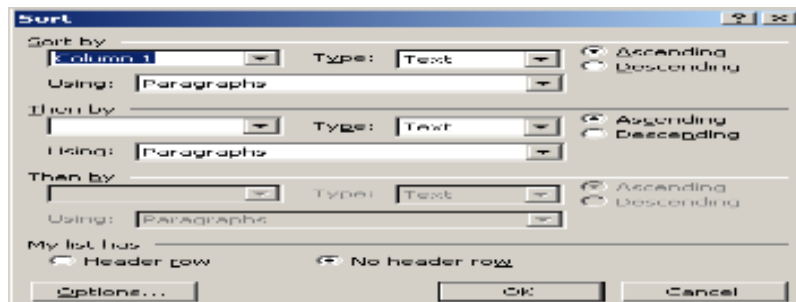
- ❖ Click **OK**.
- ❖ The text will now appear in table format.
- ❖ **Borders/Shading** can be added accordingly.

*Note: To convert a table into text, select the table and from the menu choose **Table | Convert | Table to Text**. From the **Separate text with** dialog box, choose how the text is to be separated. Click **OK**.*

Sorting

Sorting can be carried out by any column and secondary sorts can be applied, if required.

- ❖ With the cursor within the table, select **Table | Sort....**
- ❖ The **Sort** dialog box is now displayed.



- ❖ From the **Sort By** box select which column is to be sorted.
- ❖ From **Type** select if it is text, number or date.

- ❖ Choose to sort in **Ascending** or **Descending** order.
- ❖ Click **OK**.






*Note: If the **My List Has Header Row** is checked then the **Sort By** choices will show the column headings.*

Drawing a Table

Tables can be drawn within *Word*, very handy when trying to recreate forms, etc.

- ❖ From the menu select **Table | Draw Table**.
- ❖ The **Table** toolbar will appear and the mouse will change to a pencil.



- ❖ Draw the table by positioning the mouse over the page and click and drag to draw the table. Draw subsequent lines in the same way.
- ❖ Once the table has been drawn click on the **Draw Table** button, , to remove the pencil.
- ❖ Use the **Eraser**, , to remove lines.
- ❖ Highlight the **Rows/Columns** and use the **Distribute Rows**, , or **Columns**, , **Evenly** buttons to make the selected rows/columns heights/widths even.
- ❖ Select the required text, then click the **Change Text Direction** button, , to change direction of the text.
- ❖ Format it in the usual way either by using the buttons on the toolbar or by using **Format | Borders and Shading**.

OBJECTS

WordArt

WordArt is a facility within *Word* that allows special text effects to be created.

- From the menu, select **Insert | Picture | Word Art....** Select a style from the **WordArt Gallery** then click on **OK**.

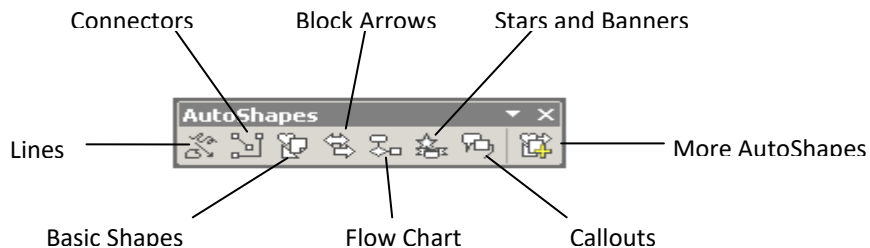


- In the **Edit WordArt Text** box, type in the text, choose a font style and size.
- Click **OK** to show the text entered.
- The **WordArt** toolbar appears.
- From the **WordArt Toolbar**, click a box to change the effects.
- Choose **Word Art** shape to change the shape of the text.
- ♣ Click on the background to return to *Word* and view the WordArt. Click once on the text to view the handles. Resize if necessary. Click and drag to move. Click and drag the yellow handle to change the slant of the text.
- ♣ To edit **WordArt** text, double click on it. Select **View | Toolbars | WordArt** to view the **WordArt** toolbar.

Insert AutoShapes

To insert an AutoShape

- ♣ From the menu select **Insert | Picture | AutoShapes**.
- ♣ The **AutoShapes** toolbar appears.



- ♣ Select an **AutoShape** button and choose a shape from the list.

- ♣ Position the mouse over the page where the shape is required, click and drag to draw the shape.
- ♣ Resize using the usual techniques.
- ♣ Use the yellow handle, where possible, to reshape the **AutoShape**.
- ♣ Use the green handle to rotate the **AutoShape**.
- ♣ Move the shape by positioning the mouse over the shape until the mouse pointer has a four headed arrow on it. Click and drag to the required position.
- ♣ The shape can be formatted as required using the drawing toolbar or **Format | Auto shape**.
- ♣ Select the **AutoShape** and press **<Delete>** to delete it.

Hold **<Shift>** whilst drawing to create a shape of the same proportions.

Drawing

Drawings can be easily created within *Word*.

- ♣ From the menu, select **View | Toolbars | Drawing**, to view the **Drawing** toolbar. Or click on **Drawing** 

Creating/Deleting a Drawing Object

By using the different buttons on the **Drawing** Toolbar, different shapes can be created.

- ♣ To draw a shape, select the required button.
- ♣ Move the mouse to where the shape is required. Click and drag to create the chosen shape.
- ♣ Holding **<Shift>** whilst drawing a line, will draw a straight line or force it to 30°, 45° or 60° angle.
- ♣ Holding **<Shift>** whilst drawing a circle/square/AutoShape, etc., will keep the object in proportion.
- ♣ Click once on the shape to view the handles.
- ♣ Position the mouse pointer over any of the handles and resize if necessary.

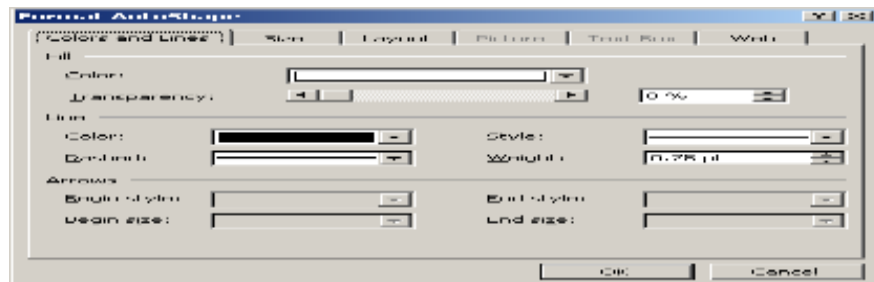
Deleting objects

- ♣ To delete a drawing object, click on the shape once to view the handles.
- ♣ Press **<Delete>**.

Formatting Drawing Objects

Once a drawing object is created it can be formatted to adjust the colour, style and thickness of the lines and the colour and pattern that fill the object.

- ♣ Click once on the object to be formatted. From the menu, select **Format | AutoShape**.



- ♣ Select the appropriate tab and choose the required options.

MS-EXCEL

Starting Excel

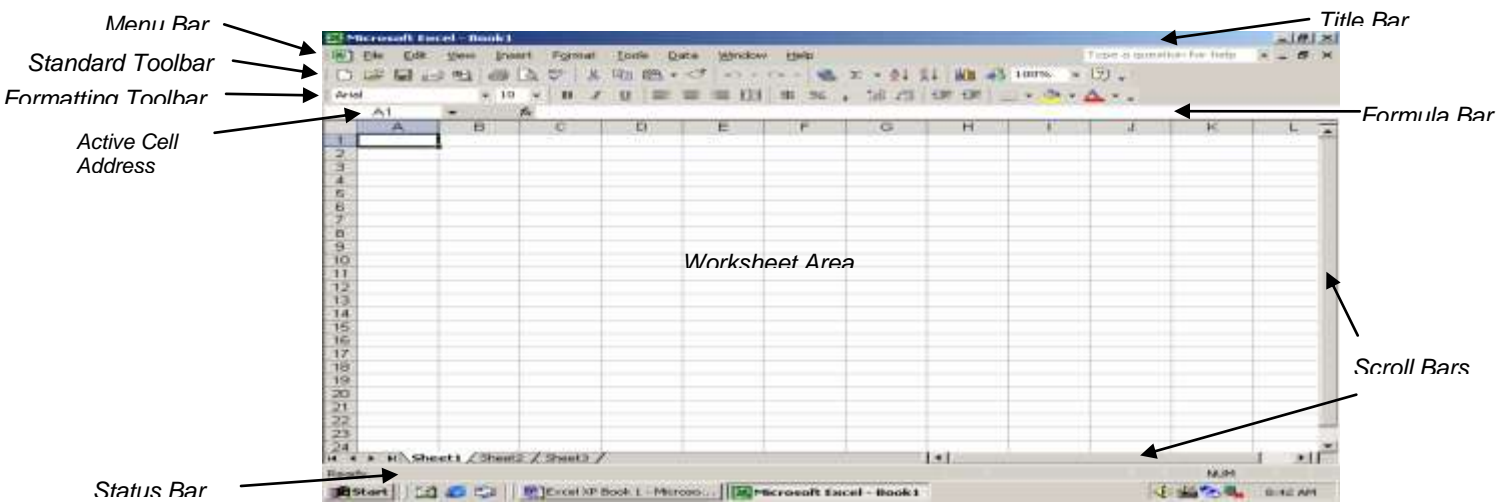
To start excel

- ⊕ Click **Start**
- ⊕ Point on **All Programs**
- ⊕ Point on **Microsoft office**
- ⊕ Then click **Microsoft Excel**

Spreadsheet Principles

A spreadsheet package is a computer program created specifically to help in the processing of tabular information, usually numbers. The spreadsheet stores information in rows (across the screen) and columns (down the screen), forming a worksheet (the *Excel* term for a spreadsheet).

The Layout of the Excel Screen



- | | | |
|---------------------------|---|------------------------------------------------------------------------------------------------------------------|
| Title Bar | - | Indicates application and current workbook in use |
| Menu Bar | - | General headings for accessing commands |
| Standard Toolbar | - | Quick access to basic features of <i>Excel</i> |
| Formatting Toolbar | - | Quick access to change appearance of cells |
| Formula Bar | - | Indicates active cell address and displays cell contents |
| Scroll Bars | - | Allows quick movement around the worksheet |
| Active Cell | - | Position to insert information |
| Status Bar | - | Displays information about the selected command and to the right, the state of certain keys e.g. CAPS, NUM, etc. |

To Exit Excel:- From the Menu Bar click on **File**. A drop down menu will appear.

Place the mouse pointer over **Exit** and click once.

Save, open and close workbooks

Saving a newly created workbook

- 🖱️ Select the **File** menu and choose the **Save As...** Command.
- 🖱️ The **Save As** dialog box will then appear on the screen, in front of the current worksheet.
- 🖱️ Enter the name of the file in the **File name** box.
- 🖱️ Select the correct drive from the **Save in:** box.
- 🖱️ Click **to** save.

*Note: When a new workbook is to be saved, selecting **Save** displays the same dialog box as **save as**.*

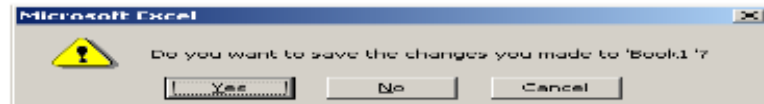
Saving a Named Workbook

- ◆ Select **File | Save** to update a document that has already been named.

Closing a Workbook

To close the current, open workbook from the screen and begin working on a new one:

- ◆ Select the **File | Close** command.
- ◆ If the workbook has not been previously given a file name, or if it has been modified in any way, *Excel* displays a **Message Box**.



- ◆ Three options are given:

Yes	displays the Save As dialog box if the workbook has just been created or automatically saves the workbook if it has been modified.
No	closes without saving
Cancel	returns to the active worksheet without closing or saving

Starting a New Workbook

A new workbook can be opened at any time within *Excel*:

- ◆ Select **File | New** the **New** dialog box is displayed, click **OK**.
- ◆ A new workbook is opened, pushing any other open workbooks to the back. The new workbook is named by default using the next number in the sequence e.g. **Book2**.
- ◆ Any other open workbooks can be brought to the front using the **Window** command on the **Menu bar** and selecting from the open workbook list at the bottom of the menu.

The open workbooks are numbered, click on the one required, to display it.

Opening an Existing Workbook

Once a workbook has been created and saved, it can be opened at any time.

- ◆ To open an existing workbook, select the **File | Open** command. This will display the **Open** dialog box.
- ◆ Use the drop down list of **Look in:** to select the correct drive and folder, from which to open the document.
- ◆ Finally, click on the name of the file to be opened. This will now be highlighted.

- ◆ Click the **Open** button to open the file. (Double clicking the file name in the list also opens the file).

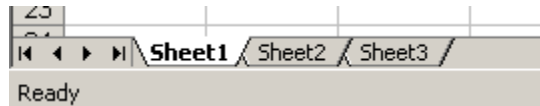
Opening recently used workbooks

- The last four Workbooks that have been used by *Excel* are listed at the bottom of the **File** menu. Click once on the file name to open the file - the file must, of course, be on one of the disks currently being used by the machine.

Workbooks

Using Sheets

Workbooks are made up of worksheets named Sheet1, Sheet2, etc. The worksheet tabs are arranged across the bottom of the worksheet window.

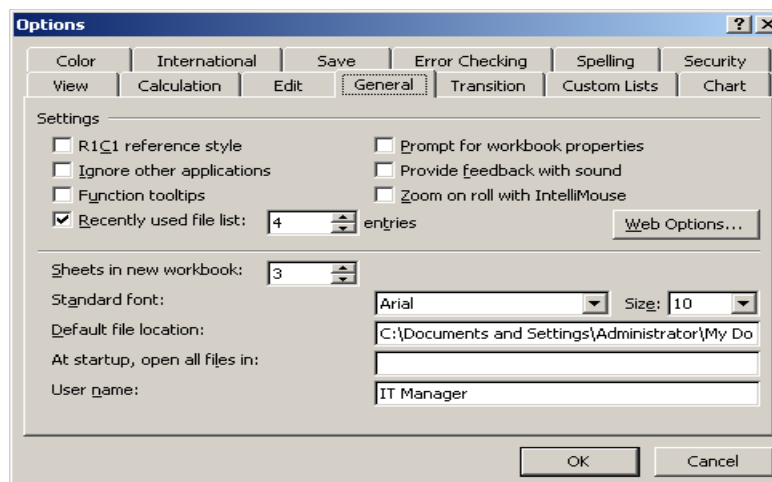


- Click on a worksheet tab to display a particular sheet

By default there are only 3 sheets to a workbook. The maximum number of sheets that can be set in a workbook is 255.

To change the default number of sheets in a workbook

- Select **Tools | Options** and the **General** tab.

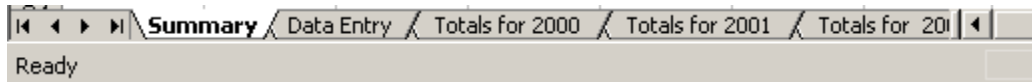


- Change the number within **Sheets in new workbook**.
- Click **OK**.

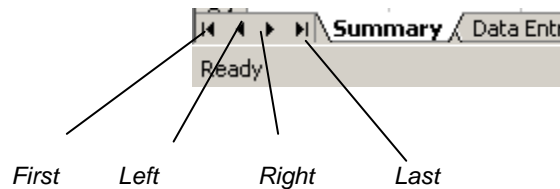
- Every new workbook started after this will contain the new amount of sheets.

Moving around the sheets

When more sheets are added or more descriptive (longer) sheet names are used they take up more space and can become hidden.



When this happens the movement buttons on the left are then used to show hidden sheet tabs.



Renaming Sheets

To rename a sheet

- Double click on the required sheet tab or select **Format | Sheet | Rename**.
- Type the new name.
- Press **<Enter>** or click away from the sheet tab to complete the renaming.

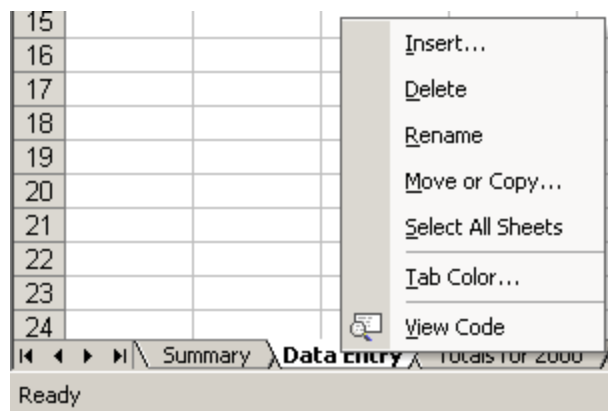
Note: Sheet names can include punctuation e.g. spaces and be as descriptive as required to relate to the contents. Totals for 2001

Insert and Delete Sheets

Individual sheets can be added to, or deleted from, any workbook.

To insert a sheet

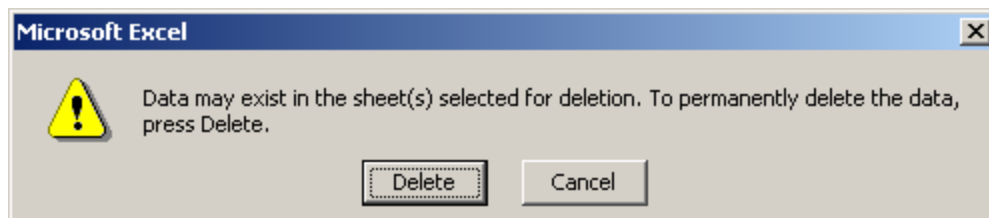
- Either
- Select **Insert | Worksheet**.
- or
- Right click on a sheet tab and select **Insert**.



- Choose Worksheet and click **OK**.

To delete a sheet

- Click on the sheet tab to make the required sheet active and either
 - Select **Edit | Delete Sheet**
- or
- Right click on the sheet tab to delete and select **Delete**.



- Confirm the deletion by clicking **Delete**.

Editing in worksheets

Overtyping


Overtyping is used to replace data in cells by typing new information.

Editing by Overtyping



- ◆ Click on the cell to be changed.
- ◆ Enter new data.

- ◆ Any time before **<Enter>** is pressed, the user may click on the **Cancel** button on the formula bar or press **<Esc>** which will cancel the new input, leaving the originally entered data unchanged.
- ◆ Press **<Enter>**.
- ◆ After completing the cell entry the new information replaces the old.


Undo/Redo

When editing a worksheet, the last change made can be **Undone** by selecting either **Edit | Undo ...** Or the **Undo** button, .

After completing a replacement entry, this action can be undone with **Undo**.

- ◆ Select **Edit | Undo** or click **Undo** button  to reverse the last action.
- ◆ After Undoing an action, it can be **redone** by selecting **Edit | Redo ...** or clicking the **Redo** button .

All actions that can be undone are stored in the **Undo** history. To use:

- ◆ Click the drop down list next to the **Undo** button .
- ◆ Select the number of required **Undo** actions to a maximum of 16.

Editing Cells

Cell contents can be changed by editing when the information is more complicated and overtyping becomes impractical.

Formula bar editing

- ◆ Click on the cell to edit and click in the contents in the Formula Bar.
- ◆ The cursor can be moved around using the cursor movement keys and the **Home** and **End** keys.
- ◆ To complete the entry press **<Enter>**. Other keys such as the down cursor do not complete the entry after editing.

In-cell editing

Editing can take place directly in the cell.

- ◆ Place the cursor within the cell.
- ◆ Double click to start **In-cell** editing.

The same rules apply as with Formula Bar editing.

- ◆ Any part of a cell's contents can be formatted, by clicking and dragging, during the edit process.

Erasing Data

The contents of cell/s can be erased by:

- ◆ Clicking on the required cell or highlight a group of cells.
- ◆ Select Edit | Clear | Contents.


*Note: Selecting **All** clears contents, comments and any formatting. **Formats** clear all the formatting and leaves the contents. **Comments** only clear the cell comments.*

Copy, Cut and Paste Cells

The copy command can be used to copy labels, values and formulas of a single cell or a group of cells to other areas of the worksheet.

The selected cells are placed in an area of *Windows* called the **Clipboard**, from where they can be **pasted** back into the required place.


Copy

- ◆ Select the cell or cells to be copied.
- ◆ Select **Edit | Copy** or the **Copy** button,  on the toolbar.

Note: Excel places a marquee (a dotted line around the selected cells to be copied).

Paste

- ◆ Select the cell or click and drag a range or select the top left cell of the paste area for a range.

Click **Paste** , if required, more than once (see Note) Or

- ◆ Press **<Enter>**, to paste and clear the clipboard.

*Note: When using **Paste**, the original cell can be pasted repeatedly whereas **<Enter>** terminates the copy process.*

Cut

- ◆ The same as copy except the original cell/s are removed after pasting.
- ◆ **Edit | Cut** or click .

- ◆ Select destination cell and **Edit | Paste** or  or press **<Enter>**.

Paste Special

Paste Special is used to paste cell information when a straight forward copy is not required.


Examples of when to use Paste Special:

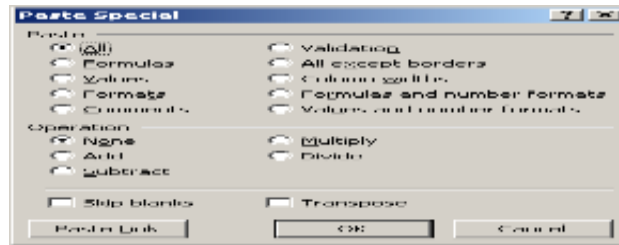
To combine 2 ranges by adding, subtracting, etc.

To transpose a range (rows to columns and columns to rows).

To convert formulas to values by pasting to the same location.

To use paste special

- ✂ Highlight cell/s to copy.
- ✂ Select **Edit | Copy** or click  or right click and select **Copy**.
- ✂ Place active cell at the destination cell.
- ✂ Select **Edit | Paste Special**.



- ✂ Choose the required options.
- ✂ Click **OK**.

*Note: Use of the **Paste Link** button is covered in a later section.*

Move & Insert Cells by Dragging

Moving cell contents

- ◆ Highlight the cell/range to move.
- ◆ Place the cursor at the edge of the range (move cursor - white arrow).
- ◆ Click and drag to the new location.
- ◆ Release mouse button to move.

Note: This method is quicker than cut and paste described in an earlier section.

Inserting cells by dragging

Ranges can be moved from one location and inserted into another without first clicking on the destination cell in which it is to be placed.

- ◆ Highlight the original range.
- ◆ Hold <Shift> and click and drag the edge to the new location.

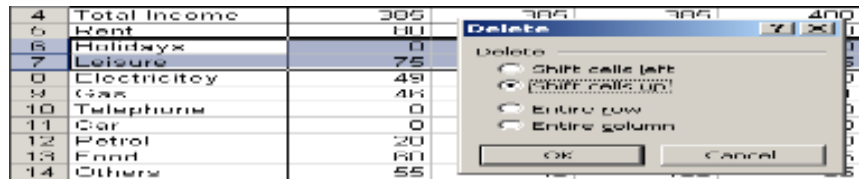
Note: Holding <Ctrl Shift> copies and inserts.

Delete Cells

Cells can be deleted from a worksheet and the space left is filled by the surrounding cells moving in.

To delete cells

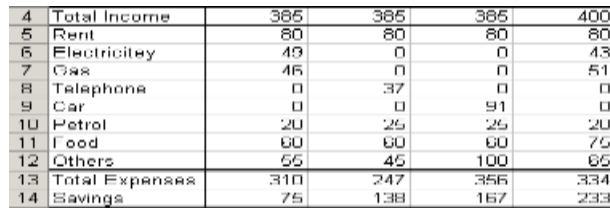
- ✎ Highlight the required cell/s.
- ✎ Select **Edit | Delete**.
- ✎ Select the direction to move the remaining cells.



4	Total Income	385	385	385	400
5	Rent	80	80	80	80
6	Holidays	0	0	0	43
7	Leisure	75	0	0	51
8	Electricity	49	37	0	0
9	Gas	46	0	91	0
10	Telephone	0	0	0	0
11	Car	0	0	91	0
12	Petrol	20	25	25	20
13	Food	60	60	60	75
14	Others	55	45	100	65

*Note: Entire rows and columns can be deleted via this menu but they are normally deleted by selecting the rows or columns headings before selecting **Edit | Delete**. This deletes them directly.*

- ✎ Click **OK**.



4	Total Income	385	385	385	400
5	Rent	80	80	80	80
6	Electricity	49	0	0	43
7	Gas	46	0	0	51
8	Telephone	0	37	0	0
9	Car	0	0	91	0
10	Petrol	20	25	25	20
11	Food	60	60	60	75
12	Others	55	45	100	65
13	Total Expenses	310	247	356	334
14	Savings	75	138	167	233

- ✎ The above diagram shows the same worksheet with the cells below moving up to fill the space left by deleting the highlighted cells.

*Note: This option removes the entire cells and their contents. To delete contents, formatting or notes use the **Edit | Clear** menu, this leaves the cells in place.*

Editing cells:

Bold, Italic and Underline

Formatting is changing the way cells look in order to improve readability, appearance and ease of use.

Applying bold, italic and underline

- ◆ Highlight the required cell/s.
- ◆ Select **Format | Cells, Font** tab.
- ◆ Choose the required formatting from within **Font Style** and **Underline**.

Note: When using the Format dialog box all selections are previewed to show what the results will look like.

- ◆ Click **OK** to add the formatting.

From the keyboard

- ◆ Select the cell/s.
- ◆ To add **Bold**, press <Ctrl B>.
- ◆ To add **Italic**, press <Ctrl I>.
- ◆ To add **Underline**, press <Ctrl U>.

For part of a cell only, while entering

- ◆ To start **Bold** press <Ctrl B>, type text and <Ctrl B> to turn bold off.
- ◆ To start **Italic** press <Ctrl I>, type text and <Ctrl I> to turn italic off.
- ◆ To start **Underline** press <Ctrl U>, type text and <Ctrl U> to turn underline off.

Part of a cell only, while editing

- ◆ Enter edit mode by double clicking on the required cell or press <F2>.
- ◆ Click and drag any part of the cell contents and use any method described previously to add the required formatting.
- ◆ Press <Enter>, to exit edit mode.

Using the mouse

- ◆ Select the required cell/s and click once on the required toolbar button from **B I U**.
- ◆ When a feature is in operation the button changes color and appears to be pressed.

Removing bold, italic and underline

- ◆ Select the required cell/s.
- ◆ Turn off by clicking once on the depressed button.

Change Font and Font Size

A font is a type or style of print. Examples of fonts are Arial, Roman, Modern, Script, etc. A combination of the software in use and the selected printer determines which fonts are available for use.

The default font is Arial, 10 point. Font size is measured in points. There are 72 points to 1 inch in height.

- ◆ Select the range.
- ◆ Select **Format | Cells**.
- ◆ Select **Font** tab.
- ◆ Select **Font** from Font box and **Size** from Size box.

Note: Text can be typed into these boxes, especially the size box, when a size is not displayed in the list.

- ◆ Check the **Preview** box for an example of the chosen options.

Change of base font and size

To change the base font for all new workbooks:

- ◆ Select **Tools | Options**, click the **General** tab.
- ◆ Choose the required **Font** and **Size**.
- ◆ The changes will only take effect after *Excel* is restarted.

Format Numbers

Numbers can be displayed in various formats with options for decimal places and the display of negative values.

Formatting numbers

- ◆ Select the range.
- ◆ Select **Format | Cells**.
- ◆ Choose the **Number** tab.
- ◆ Select required Category, Number of decimal places and **Negative** number display (for currency).
- ◆ Check the sample box.
- ◆ Click **OK** to apply the chosen formats.

Date and Time

Date and **Time** is stored as a number including a decimal part. The whole number represents the number of days since 1 January 1990 and the decimal part represents the time as a fraction of a day.

Formatting date and time

- Select the range.
 - ◆ Select **Format | Cells**.
 - ◆ Choose **Number** tab.
 - ◆ Select **Date** or **Time** in **Category** and the required format from within **Type**.
 - ◆ A preview is available in the Sample box.

Note: Elapsed time calculations are carried out by subtracting one time from another.

Alignment

Alignment is the positioning of text in a cell relative to its edges. By default **Labels** (Text) are aligned to the left and **Numbers** to the right.

Aligning cell contents

- ◆ Highlight the required range.
- ◆ Select **Format | Cells | Alignment** tab.



- ◆ Select the required option from within **Horizontal** (choosing **Left (Indent)** optionally enter the amount in the **Indent** box, changing the **Indent** automatically selects **Left (Indent)** in the **Horizontal** box).
- ◆ Select the required option from within **Vertical**.
- ◆ Click **OK** to apply the formatting.

Text Wrap

When text needs to fit a cell without widening the column, text wrap can be used.

To apply text wrap

- Highlight the cell/s.
- Select **Format | Cells** and the **Alignment** tab.
- Check **Wrap text** under Text control.
- Click **OK** to apply the formatting.

	A	B	C	D	
1					
2					
3	Excel Course Notes Book 1				
4					
5	Lesson 1				
6	formatting	5			

Merge


Merge and centre is used to centre a title across a range of cells, either horizontally or vertically.

- Enter text into a cell.
- Highlight the range starting with the cell that contains the text.
- Select **Format | Cells, Alignment** tab.
- Under text alignment, select Center (vertical or horizontal, as required).

- Check **Merge cells** under **Text control**.
- Click **OK**.

To remove merge and centre



- Highlight the merged cell.
- Select **Format | Cells, Alignment** tab.
- Uncheck **Merge cells** under **Text control**.
- Click **OK**.

*Note: The **Merge and Centre** button  does not remove merged cells as in previous versions.*

Text Color

Text color is called Font Color.

To change font color

- Highlight the required range.
- Click the Font color button  to change to the displayed color or
- Click the  to display the drop down list and choose from the palette of colors.

Cell Borders

Lines are added to worksheets via **Cell Borders**. Options are given on line style and location within the cell or range of cells.


To add cell borders

- Select the required cell/range.
- Select **Format | Cells** and **Border** tab.
- Choose from **Style, Color** (if required) and then from either **Presets** or **Border** to add lines to the required areas.

Cell Shading

Background cell color is added to cells to enhance the appearance of worksheets.

To add cell shading

- Highlight the required range.
- Click the **Fill Color** button  for the default color or
- Click the down triangle to display the range of colors.
- Click on the required color to apply to the range of cells.

To add cell patterns

- Highlight the range and select **Format | Cells** and **Patterns** tab and choose from Pattern.
- Click **OK** to add pattern and color.

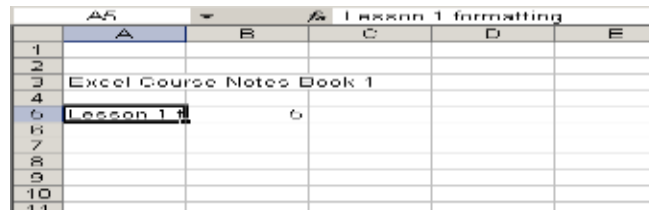
Formatting worksheets

Long Labels

A long label is text that is wider than the cell into which it is entered.

If adjacent cells are empty, then the text flows into them, as when entering titles.

If the adjacent cell is occupied, then the label is truncated (the cell only shows what it can). The label can still be seen in the formula bar.



To display long labels

- Widen the column so that the label fits Or
- Reduce the size of the font so that the label fits or
- Apply the formatting features **Word Wrap** or **Shrink to Fit** (both covered in the next section).


Change Column Width

Individual column widths can be changed in a number of ways:

Using the menus

- Place cursor anywhere in the column to change.
- Select **Format | Column | Width** .
- Enter the column width in character units (the default column width is 8.43).
- Click **OK**.

Using the mouse to change column width

- Point in the Column Border, at the border between two columns, the mouse pointer changes to .
- Clicking and dragging to the left or right now alters the width of the column to the left (Take care when dragging left as width 0 hides the column).

Click and drag to change the width of column A

	A	B	C	D
1				
2				
3	Excel Course Notes Book 1			
4				
5	Lesson 1	5		
6				

To adjust multiple columns

- In the column headings, click and drag to select the required columns.
- Display the adjust cursor at any vertical column edge within the range.
- Click and drag one column border to change them all or double click to adjust all columns to the widest entry within each column.


Change Row Height

Row heights can be changed in exactly the same way as changing column widths, except the adjust cursor is between two rows and the adjustment changes the row above.

Using the menus

- Place cursor anywhere in the row or click the row number to change.
- Select **Format | Row | Height**.
- Enter the row height in point size (the default row height is 12.75).
- Click **OK**.

Using the mouse to change row height

- Point in the Row Border, at the division between two rows, the mouse pointer changes to .
- Clicking and dragging up or down now alters the height of the row above (careful when dragging up as a row can be hidden - 0 height).

To adjust multiple rows

- In the row headings, click and drag to select the required rows.
- Display the adjust cursor at any row horizontal edge within the range.
- Click and drag one row border to change them all or double click to adjust all rows to the highest entry.

Note: If row height has not been manually changed then an increase in font size automatically increases row height to display the text correctly.

Insert Rows and Columns

To insert entire rows or columns

- Click on a cell or a range of cells (remember new columns are inserted to left and new rows are inserted above).
- Select **Insert** and then either **Rows** or **Columns**.

To insert a group of cells

- Highlight the range of cells to insert.
- Select **Insert | Cells**.
- Choose the required option from **Shift cells right** and **Shift cells down**.
- Click **OK**.

Delete Rows and Columns

To delete rows, columns or a range of cells


- Highlight the appropriate row/column/cells.
- Select **Edit | Delete**.
- Choose the required option in the **Delete** dialog box.
- Entire rows or columns may be deleted or just selected cells, moving the surrounding cells up or left to fill the gaps.
- Selecting the row number or column letter before selecting **Edit | Delete** will delete the row or column without displaying the **Delete** dialog box.

Note: The results in cell formulas may be altered by deleting parts of the worksheet, resulting in errors, indicated by #REF in the cells.


Hide/Unhide Rows and Columns

Rows or columns of data can be hidden when the data is not required to be seen.

To hide a row

- Drag the adjust cursor  up (effectively making the height 0).
or
- Select **Format | Row | Hide**.

To hide a column

- Drag the adjust cursor  left (effectively making the width 0).
or
- Select **Format | Column | Hide**.

Note: Dragging the adjust cursor across several columns or rows hides multiple columns/rows.

To unhide rows

- Highlight the rows above and below the hidden data.
- Select **Format | Column | Unhide**.

To unhide columns

- Highlight the columns either side of the hidden data.
- Select **Format | Column | Unhide**.

Functions

Functions are specialized formulas that make calculations easier. There are various types, some examples include:

Statistical	AVERAGE, COUNT, MAX, MIN, STDEV, VAR
Financial	NPV, FV, PMT, RATE, IRR
Logical	IF, TRUE, FALSE
Math & Trig	MOD, SIN, LOG, SQRT
Text	LEFT, RIGHT, MID, LEN
Date & Time	DATE, NOW, TIME
Lookup & Reference	HLOOKUP, VLOOKUP, CHOOSE

All functions, like formulas, are preceded by an = sign.


=SUM (N12:N16) adds the values in the range N12:N16 and is equivalent to the formula **=N12+N13+N14+N15+N16**. The bigger the range the more effective the function. To add 5000 numbers in a column is just as easy as adding 3 numbers.

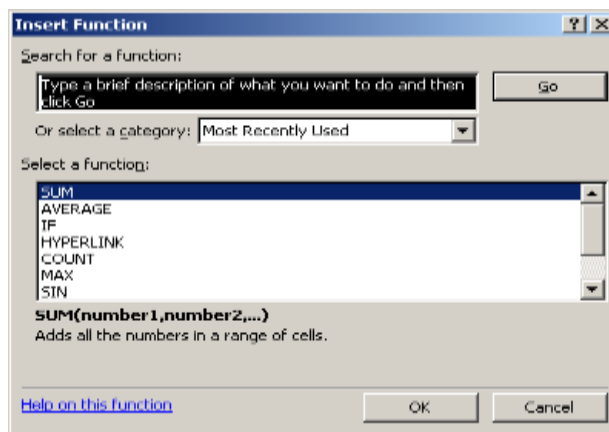
The syntax (the makeup) of a **Function** is as follows:

= Function Name (arguments, separated by commas)

Insert Function

Insert Function helps in the entering of functions and replaces the function wizard in previous versions of *Excel*. To enter a function:

- Click the **Insert Function** button  to display the **Insert Function** dialog box.



- Select from the **Function category** (a small description is displayed, for further help, click **Help on the function**).
- Select the required function from within **Select a function**.
- Click **OK** (the specific function dialog box is displayed).
- Select or type in the arguments (ranges or cells, different functions require different information).
- Click **OK** to complete the function entry and display the result.

Common Functions

Sum

This most common of all functions and adds a column or row of numbers. As **SUM** is the most common it has been placed on the standard toolbar and the button is called **AutoSum** Σ .

- Select the cell where the sum is required.
- Click the **AutoSum** button Σ .
- The function is entered with a suggested range.
- It uses the numbers in close proximity to the active cell. If the range to sum is incorrect (it stops at a blank cell), click and drag the required range.
- Press <**Enter**> to complete the function and enter the result.

	A	B	C	D
1				
2				
3		Apples	Pears	Oranges
4	Jan	5	8	8
5	Feb	4	3	2
6	Mar	5	4	3
7	Total	14	13	11
8	Apr	5	5	4
9	May	1	2	0
10	Jun	8	0	8
11	Total	14	7	12
12	Grand total	=SUM(B11,B7)		
13				

*Note: If numbers have been summed to create totals then the **AutoSum** button sums the sub totals and ignores the individual numbers, in effect creating a grand total.*


All other functions can be entered using the **Insert Function** button , although they can be typed if the correct syntax is known.

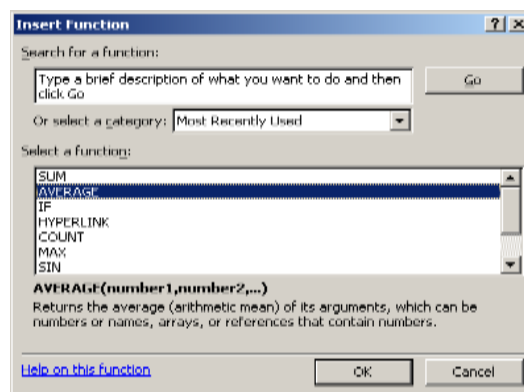
Average

The AVERAGE function combines a simple formula, a sum divided by a count. An example of the function:

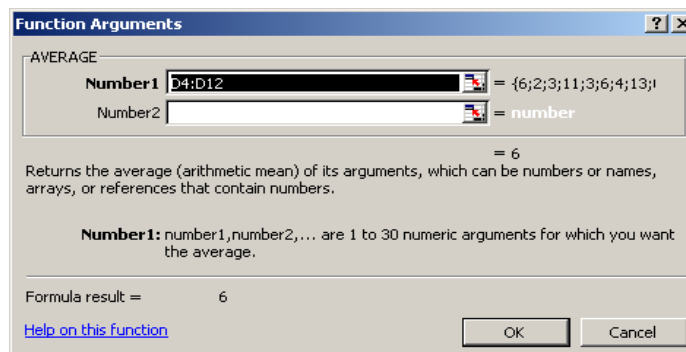
=AVERAGE (C5:C19)

To enter the Average function

- Select the cell where the Average is required.
- Click the **Insert Function** button  to display the **Insert Function** dialog box.




- Select **Average** from within **Select a function**.
- Click **OK** to display the Average function dialog box.



- If the range taken from the numbers suggested in the Number 1 cell matches the required range, click **OK**.

If not,

- Click the collapse button, , to return to the worksheet to select the required range.

or

Note: Click on the expand button  to review the dialog box.

- Type in the arguments in **Number1**.
- Click **OK** to complete the function entry and display the result.

Count

Count is a statistical function that only counts non-blank numeric cells (0 is counted, blank cells are not). Count is used to analyze large lists where the data changes frequently.

Max

Max (maximum) is a statistical function that returns the largest number in a specified range.

Min

Min (minimum) is a statistical function that returns the smallest number in a specified range.

When used together, MAX and MIN give the spread in a range of numbers.

Standard Deviation


The STDEV (standard deviation) is a statistical function and is a measure of how far values vary from the average.

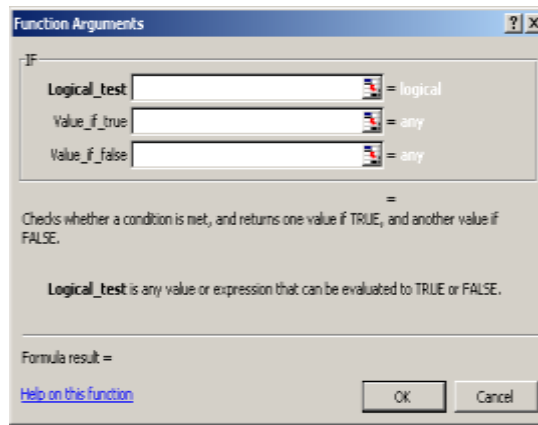
There are other variations of standard deviation:

STDEVA	Statistical function, standard deviation based on a sample including logical values and text
STDEVP	Statistical function, standard deviation of an entire population
DSTDEV	Database function, standard deviation of a range in a database
DSTDEVP	Database function, standard deviation of an entire population in a database

IF

The logical function **IF** compares the contents of a cell and, if a logical test is met, performs one action and, if not, performs another.

- Select the cell for the result.
- Click the **Insert Function** button  to display the **Insert Function** dialog box.
- Select **Logical** from the **Function category**.
- Select **IF** from within **Function name**.
- Click **OK** to display the **IF** function dialog box.



- As an example:
 - For **Logical test** enter **A1<10**
 - In **Value_if_true** enter **A1*3**
 - In **Value_if_false** enter **A1*2**
- Click **OK** to complete the entry
- Enter a number in A1 and if the contents of cell A1 is less than 10 then the number is multiplied by 3, if not, the number is multiplied by 2. The function is expressed as:
 - =IF (A1<10, A1*3, A1*2)**
- The IF function is sometimes described as IF Then Else. **IF** the condition is true, **then** do these, **Else** do that?


Charts

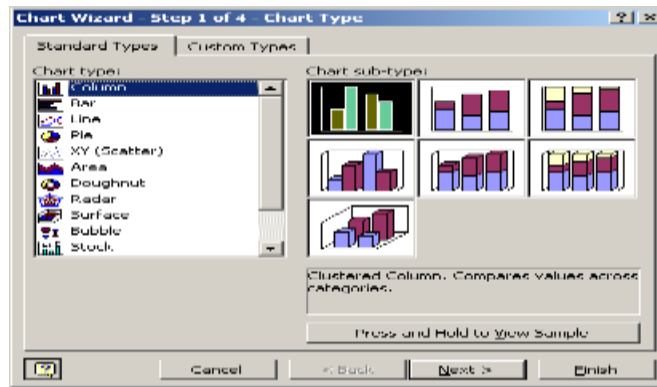
Charts

It can be difficult to find vital information like changes in trends or performance from rows and columns of numeric data. A picture of the figures - **a graph or chart**, helps to identify subtle changes that may have otherwise been missed. Charting data is quick, easy and flexible

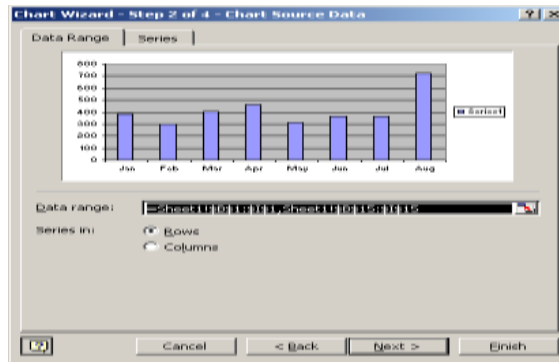
Creating Charts

To create a chart



- Using the mouse select the data you want to create a chart of.
- Select **Insert | Chart** or click the **Chart Wizard** button .



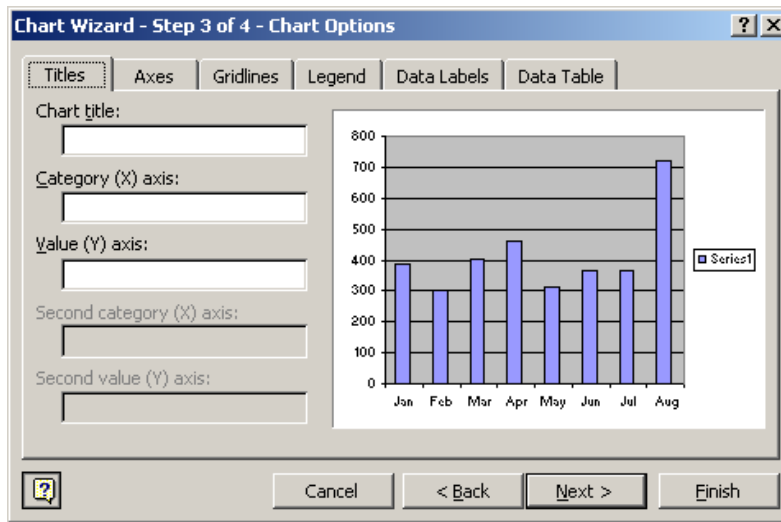
- Select from **Chart type**.
 - Then from **Chart sub-type**.
- Note: The chart can be viewed by holding **Press and hold to view sample**. This only works when a range has been selected first.*
- Click **Next>**.
 - Step 2 of the Chart Wizard.



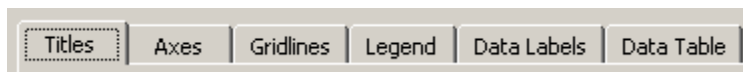
- Check or enter Data range (the data to be charted) and **Series in**, check rows or columns to match the data.

*Note: To select a data range click on the collapse button  in the **Data range** box. Click and drag a range. Separate each data range by a comma. Press **<Enter>** or click  to continue.*

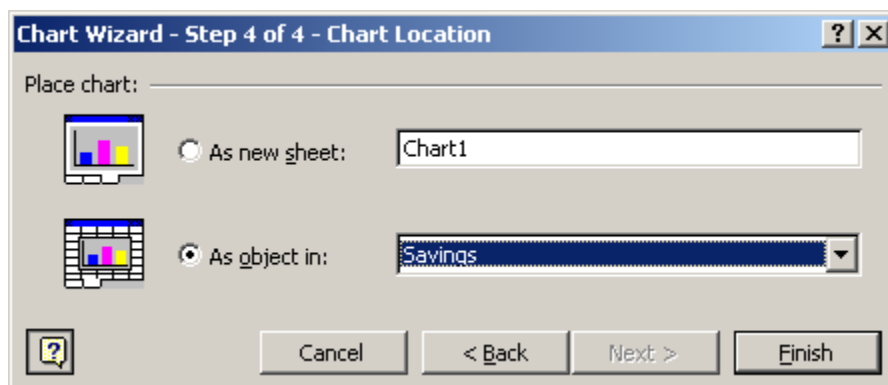
- Click **Next>**.



- At step 3 complete the required **Chart Options**. Remember to view each of the tabs to see the available options. There may be six tabs.



- Click **Next>**.

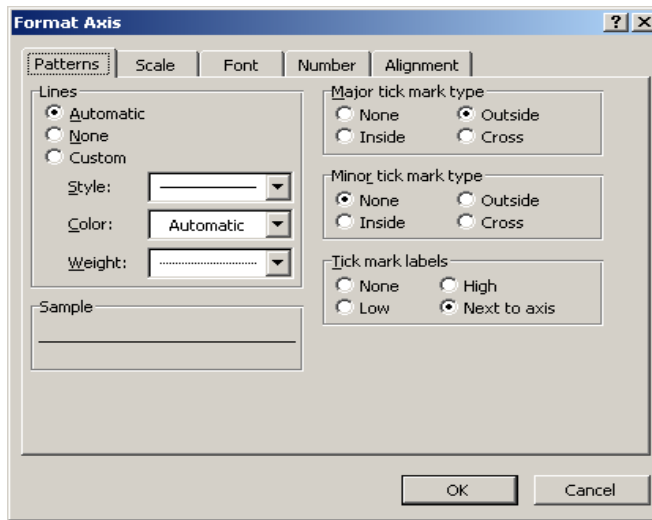


- Select either, **As new sheet** and name the sheet (Default Chart1), or, **As object in** and select a sheet to place the chart (Default is the active sheet).
- Click **Finish** to create the chart.

Formatting Charts

To format a chart

- Select the part of the chart to change (place the cursor over it and click) and select **Format Selected ...** or
- Double click on the required part.
- The **Format** dialog box is then displayed for that part of the chart (some parts have a tabbed dialog box). Make the changes, as required.



- The above picture is the dialog box used to format an axis. Use scale to set the number range on the vertical axis.
- Click **OK**.

Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____
Rating: _____

Objectives:

- **To open and work on Microsoft word program**

Procedures

The following steps are used to open MS-Word

Step 1: click start button located at the left corner of desktop window

Step 2: Point to all programs

Step 3: Open or point the folder labeled 'Microsoft office'

Step 4: Finally select from the list of Microsoft programs that labeled 'Microsoft Word'

LAP Test	Working with MS-Word
-----------------	-----------------------------

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions:

1. You are required to perform any of the following:
 - 1.1 Request your teacher to arrange a desktop computer.
 - 1.2 Do the following activities by your own
 - a. Open Microsoft word window
 - b. Prepare some writing up to 500 letter and one table with a column and width of 3 and 4 respectively
 - c. Work on your writing with font size 12,font style Times new roman, justified and spacing with 1.5
 - 1.3 Request your teacher for evaluation and feedback.

Copying and Moving Files and Folders

Copying means duplicating (producing) a copy of files while moving (Cut) a file is removing it from its original position reside on the another location.

➤ To copy a file or folder:

- 1) Select the file or the folder → Right click on it → Copy
- 2) If it is opened program: - **Edit** → **Copy**.
- 3) Open the folder or disk where you want to put the copy.
- 4) On the **Edit** menu or standard toolbar or from the pop-up menu click **Paste**.

Note: Use **Ctrl + Left drag** to force a copy.

Remark: To move a file or folder, follow the same procedure as copying except that instead of clicking copy from the edit menu or standard tool bar to copy a file or folder, click **cut** to move.

Note: - Use the left mouse button to drag the object from one folder to another on the same drive.

- Use **Shift + Left drag** to force move.

Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. How you copy files to a folder?

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Copying a File to a compact disk, flash disk and Floppy Disk

➤ To copy a file or folder to a compact disk, flash disk and floppy disk or to other drivers

1) Insert the disk into the disk drives.

2) In **My Computer and Explorer**

Click the file you want to copy.

3) On the **File** menu, point of **Send to** and then select and click

Example click **CD-R drive**

Or - right click on the file to be copied.

- Point to **Send to** and then click **3 ½ Floppy or other folders**.

➤ To make a copy of a disk:

1. Click the icon for the disk you want to copy.

2. On the **File** menu, point to the **Disk Copy** and click **Copy Disk**.

3. In **Copy From**, click the drive you want to copy from.

4. In **Copy To**, click the drive you want to Copy to.

5. Click **Start**.

Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is flash disk ?

2. How can you send files to a flash disk ?

Note: Satisfactory rating - 10 points and above

Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation Sheet-1	Copying file to a flash disk
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Objectives:

- **To send/copy a file an external storage drive such as flash disk**

Procedures

The following steps are used to copy files to flash disk

Step 1: insert the flash to the computer with the space for flash

Step 2: right click on the file you want to send/copy to the flash

Step 3:point to send to

Step 4:select the name of your flash from the list

Step 5:when you select your flash the file will be sent

Information Sheet-7	Searching folders/subfolders and files
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Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Information Sheet-8

Restoring deleted folder/sub folder and files

Deleting Files and Folders

Whenever you delete a file, it is temporarily moved to the **Recycle Bin**, on the **Desktop**. If you need the files you have deleted, you can restore the files. However, when you empty the **Recycle Bin**, all of the items in are permanently deleted from your computer.

➤ To delete a file temporarily :

Right click on deleted file or folder → Delete Or

Select the file you want to delete → press delete from the keyboard

➤ To delete files (temporarily) or moving them to Recycle Bin:

To retrieve deleted files:

Double-click the **Recycle-Bin** icon → Click on the file you want to retrieve → Click

Restore

➤ To empty the **Recycle Bin**

1. Double-click the **Recycle Bin**.

2. Click **Empty Recycle Bin**.

➤ To delete files (permanently) or without moving them to Recycle Bin:

Select the file or folder to be deleted → Hold down the **Shift Key** or click **Delete** pressing the **Delete key** if you are using the keyboard

Self-Check -1

Written Test

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation Sheet-1

Restoring deleted file/folder

Objectives:

- Understand how to retrieve deleted file

Procedures

Step 1: Double-click the **Recycle-Bin** icon

Step 2: Click on the file you want to retrieve

Step 3: Click **Restore**



Ministry of Agriculture ATVET

BASIC AGRICULTURAL PRODUCTION AND NATURAL RESOURCE CONSERVATION OPERATIONS

Level I

Learning Guide #17

Unit of Competence: **Operate a Personal Computer**

Module Title: **Operating a Personal Computer**

LG Code **AGR BAN1 M17 0919**

TTLM Code: **AGR BAN1 TTLM17 0919**

LO4 Print information

Information Sheet-1	Printing information
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1.1 Print a Document

When we finalize our work either it be word or excel document and if we want to print out the following simple steps can be followed:

Steps 1

Open or create a Microsoft Word document. To do so, click on the blue app with a white document icon and bold "W," then click on File in the menu bar at the upper-left of the screen. Click on Open... to open an existing document or New... to create a new one.

When you are ready to print, open the Print dialog box.



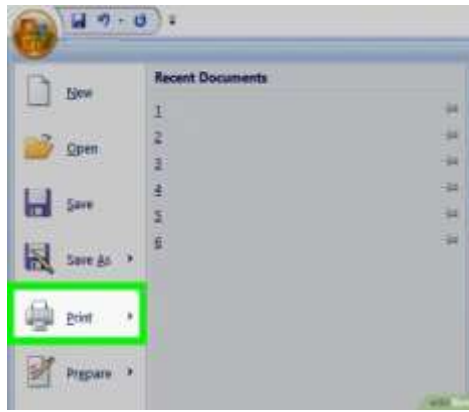
Step 2

Click on File. It's in the menu bar at the upper-left of the screen or a tab at the upper-left of the window.



Step 3

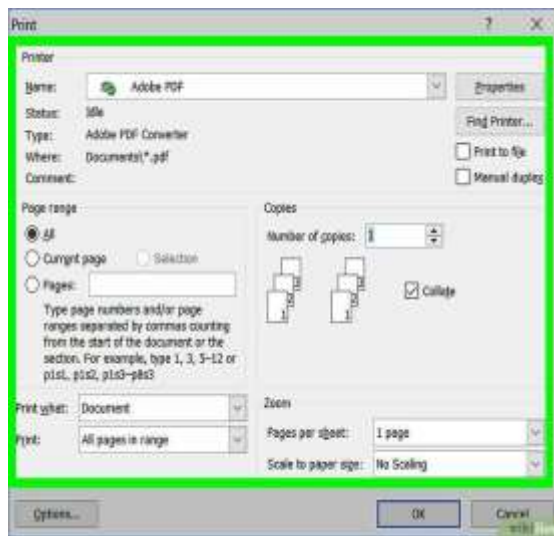
Click on Print.... The Print dialog box will open.



Step 4

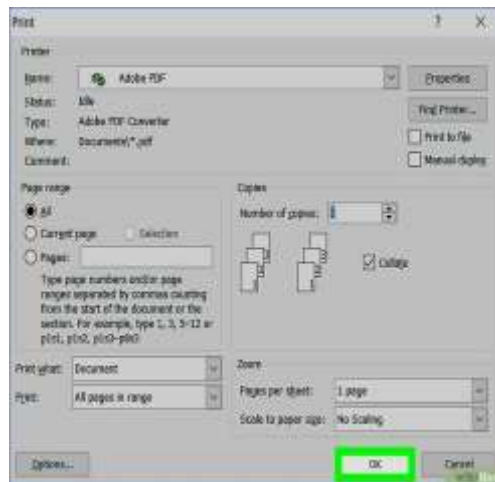
Select your printing options. Use the selections in the dialog box to select:

- Your default printer is displayed. Click on its name to select another printer from the drop-down menu.
- The number of copies to print. The default is 1; increase the quantity to print more copies.
- Which pages to print. The default is to print all the pages in the document, but you can choose to print the currently-displayed page, a highlighted selection, specific pages in the document, odd-numbered pages only, or even-numbered pages only.
- The size of paper to print on.
- The number of pages to print per sheet.
- Orientation of the paper. Select either Portrait (paper length vertical, width horizontal) or Landscape (paper width vertical, length horizontal).
- Margins. You can adjust the top, bottom, left, and right margins with the labeled up and down arrows or by typing numbers in the boxes.



Step 5

Click on Print or OK. The button label will vary based on the version of Word you're using. Your document will print to the printer you selected.



Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Operation Sheet-1	
--------------------------	--

Objectives:

Procedures

LAP Test	
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Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions:

1. You are required to perform any of the following:

- 1.4 Request your teacher to arrange
- 1.5 Request your teacher for evaluation and feedback.

Information Sheet-	Viewing and deleting progress of print jobs.
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Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Information Sheet-	Installing default printers
---------------------------	-----------------------------

1. Click on the Windows button on the taskbar



2. Click on Devices and Printers



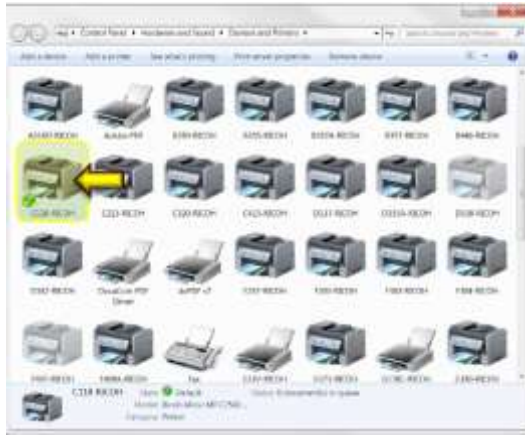
3. Once the window opens, look over the list of printers that are available to you. The printer with the green check mark on it is the current default printer.



4. Once you locate the printer you want like to set as your default, right click on the printer icon, select Set as default printer



5. The printer you chose should be selected as the default printer similar to the example shown.



Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____
Rating: _____

Operation Sheet-1	
--------------------------	--

Objectives:

Procedures

Information Sheet-	Closing all open applications
---------------------------	-------------------------------

Self-Check -1	Written Test
----------------------	---------------------

Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1.

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Information Sheet-	Shutting down a computer
---------------------------	--------------------------

- To avoid damaging programs, always shutdown windows (the programs you opened) before you turn off your Computer.
- Simple steps to follow when shutting down a Computer:

Step 1: To **shut down** your computer, click "Start" on the main menu.

Step 2: **Highlight** and click on "Shut Down."

Step 3: You will see a gray dialogue box. Click "Shut Down," then click "OK."

Step 4: Please wait while your computer shuts down.

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Self-Check -1	Written Test
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Name: _____

Date: _____

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Write down the steps to shutdown a computer

Note: Satisfactory rating - 10 points and above Unsatisfactory - below 10 points

You can ask your teacher for the copy of the correct answers.

Answer sheet

Score = _____

Rating: _____

Reference

interiorconcepts.com