Mobile Apps. When you open an application, it runs inside the operating system until you close it. Usually you would have more than one application opened or running at the same time; this is a process known as Multitasking.

There are many desktop applications available, and each one is grouped into many different categories. Some are more full-featured (like Microsoft Word), while others may only do one or two things.

iii.   Operating System (OS).

An operating system is the most important software that runs on a computer. This system allows computer applications to be operated by users. The operating system manages the following key activities and components:

- Computer memory and storage
- Computer processes
- Computer applications
- Computer hardware.

Mobile phones use more advanced operating systems such as Windows Mobile, OS 9.0 iPhone on the Apple iPhone, Linux on the Blackberry and Google Android. All of these have their own unique features.
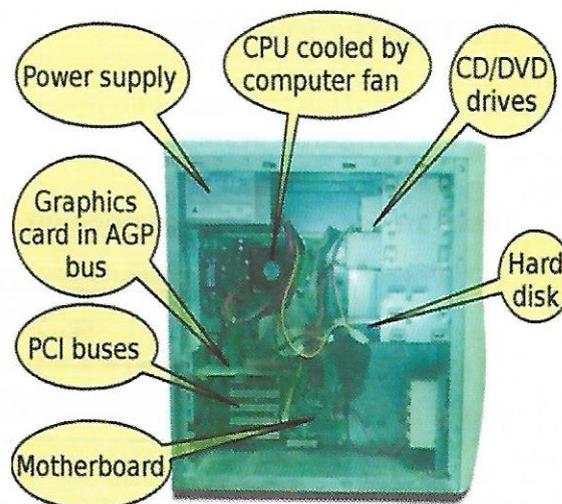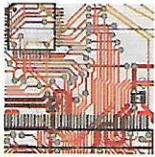

iv.   Hardware

The term Computer Hardware simply refers to the tangible parts of the computer system. Computer hardware refers to the various electronic components that are required for you to use, along with the hardware components inside the computer case.

Components inside a PC

Component	Function
Motherboard (Mainboard)	The motherboard is the body or mainframe of the computer, through which all other components interface. It is the central circuit board making up a complex electronic system. The motherboard provides the electrical connections by which the other components of the system communicate. The mother board includes many components such as: central processing unit (CPU), random access memory (RAM), firmware, and internal and external buses.
Central Processing Unit (CPU)	The CPU or processor is sometimes called the brain of the computer. Its primary job is to process instructions. Whenever you press a key, click the mouse, or start an application, you're sending instructions to the CPU. There are four steps that nearly all CPUs use in their operation: fetch, decode, execute, and write-back.

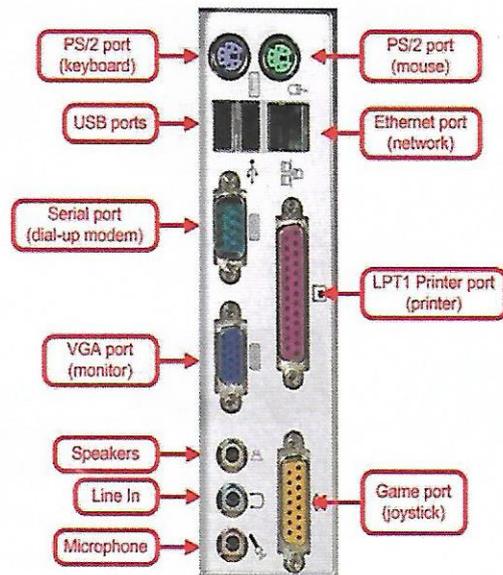|		
Data Bus		The internal bus, also known as internal data bus, memory bus, system bus or Front-Side-Bus, connects all the internal components of a computer, such as CPU and memory, to the motherboard. The bus carries the varying signals, addresses and data that move between the computer's main components.
Expansion Slots		Expansion slots increase the capabilities of the system. Expansion slots allow you to add special higher performance features to your computer. One of the most common is the high performance graphics card. However, some other possibilities include an I/O card if used in a laboratory, a music card if used as a home entertainment system or for editing. One can also add additional USB ports to tie in more peripherals.
Power Supply Unit		The power supply unit converts electrical power from the power outlet to the type of power needed by the computer. It sends power through the cables to both the motherboard and other components. The power supply converts about 100-120 volts of AC power to low-voltage DC power for internal component use.
Random Access Memory (RAM)		RAM is the computer system's short-term (temporary) memory. Whenever a CPU processes instructions, the computer temporarily stores the data in the RAM until it is required. RAM is fast-access memory that is cleared when the computer is powered-down. RAM attaches directly to the motherboard, and is used to store programs while the computer is active.
Hard Drive		A hard disk drive (HDD) is a non-volatile storage device that stores digitally encoded data on rapidly rotating platters with magnetic surfaces. Almost every new computer comes with a hard disk; the exception being those with a new solid-state drive. Here, software is installed and user documents and other files are stored. Typical desktop hard disk drives store between 120 and 400GB, rotate at 7,200 rpm, and have a media transfer rate of 1 Gbit/s or higher. This is the most common storage device in a computer system.
Optical Drive		Optical drives retrieve and/or store data on optical discs like CDs and DVDs. The main uses for DVDs are video and data storage. Most DVDs are of the same dimensions as compact discs. Just like CDs, there are many different variations. DVD-ROM has data which can only be read and not written. DVD-R and DVD+R can be written once and then function as a DVD-ROM. DVD-RAM, DVD-RW, or DVD+RW hold data that can be erased and re-written multiple times

Computer Ports

Ports are computer components designed to connect **peripheral devices** to the computer. There are three common types of ports.
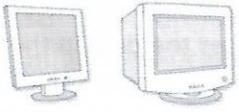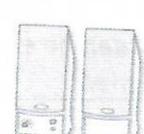

1. **Serial Ports** (COM & PS/2) are normally used by modems and communication devices.

2. **Parallel Ports** (LPT1) are used for devices that send and receive data in groups of bits like printers.

3. **Universal Serial Bus** (USB) is the most common connection port used today. Almost every computer comes with one or more Universal Serial Bus connectors. These USB connectors let you attach mice, printers, flash drives, digital cameras and other accessories to your computer quickly and easily.

4. **VGA port** is used for connecting a computer to a monitor.

Common PC Peripheral Components	Functions
Monitor	Displays information in visual form, using text and graphics.
Keyboard	A keyboard is used mainly for typing text into your computer.
Mouse	A mouse is a small device used to point to and select items on your computer monitor.
Printers	A printer transfers data from a computer onto paper. You do not need a printer to use your computer, but having one allows you to print e-mails, cards, invitations, announcements, as well as other documents.
Optional PC Peripheral Components	Functions
Speakers	To play sound. Speakers allow you to listen to music and hear sound effects from your computer.

Scanner		Scanners are used for visual information such as photographs or drawing, or teamed with type-reading software to import documents to the PC.
Web Cam		A webcam is a small camera attached to a computer. They serve a variety of purposes, from taking still images to sending live videos over conference calls
External storage devices		Devices that store information for transferring data from computer to computer. Such devices are not permanently fixed inside the computer.

Activity 1.3

1. For each of the components below, fill the space with an outline of their key functions.

Component	Function
Motherboard (Mainboard)	
Central Processing Unit (CPU)	
Data Bus	
Expansion Slots	
Power Supply Unit	
Random Access Memory (RAM)	
Hard Drive	
Optical Drive	