



COMPUTER STUDIES NOTES

INPUT DEVICES



JANUARY 29, 2018
MANYAM FRANCHISE
0728 450425



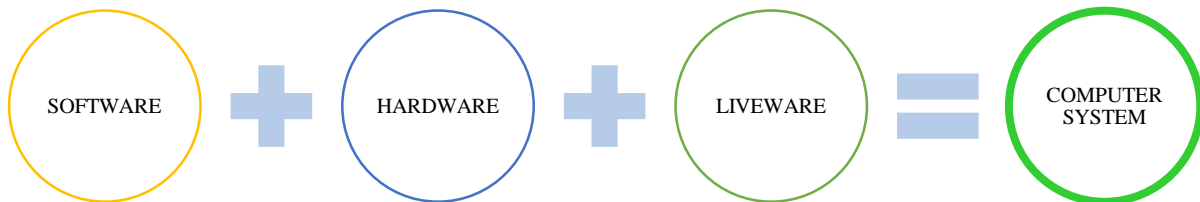
COMPUTER SYSTEMS

Definition of a Computer system

A computer system is a set of entities that work together to input, process and output raw data into a meaningful manner called information.

A computer system has four entities namely:

1. Hardware
2. Software
3. Liveware



Definition of terms

Liveware

Liveware can also be termed as *wetware and greyware*. This word is used to describe a computer user.

Hardware

Hardware is the tangible parts of a computer i.e. keyboard, mouse, CPU, monitor etc.

Software

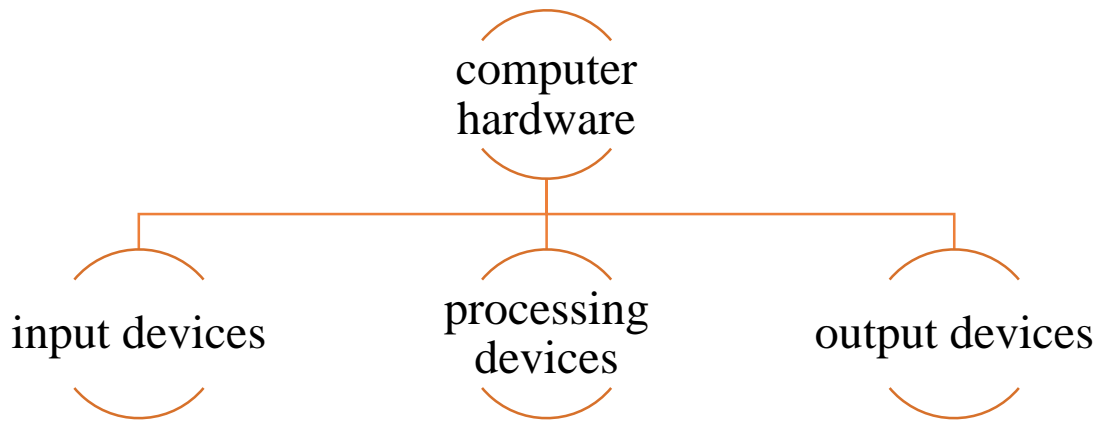
Software can be described as computer programs or this is the intangible parts of a computer i.e. computer programs etc.

Either

Computer Software is a set of instructions/ commands written and fed into a computer to achieve a purpose.



Classification of Computer Hardware



Input Devices

These are devices that convert input data from human readable form into machine readable form.

Human readable form

This is a kind of language that the user understands i.e. Kiswahili, English etc.

Machine readable form

This is a language that the computer understands i.e. binary language, assembly language etc.

Classification of Input Devices

Input devices are classified as:-

1. Keying devices
2. Pointing devices
3. Scanning devices
4. Other input devices such a digitizer, digital camera, voice input etc.

Keying Devices

These are devices that converts typed numbers, letters and special characters into machine readable form *examples*: keyboard and keypad

Keyboard



This is the most commonly used keying method with desktop and laptop computers. **Examples include:**

Traditional keyboard, flexible keyboard, ergonomic, wireless etc.

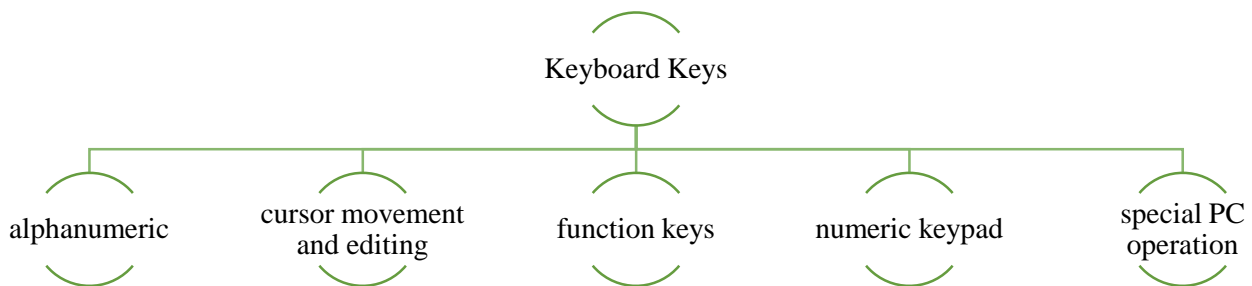
Keypad

This is a small keyboard used with hand held devices i.e. cell phones, calculators, notebooks etc.

Classification of the keyboard keys/ Parts of the keyboard

Keys on the keyboard are classified into five major categories namely:

Functional keys, alphanumeric keys, Numeric keypad keys, Special PC operation keys and Cursor editing and movement keys.



Numeric Keypad keys

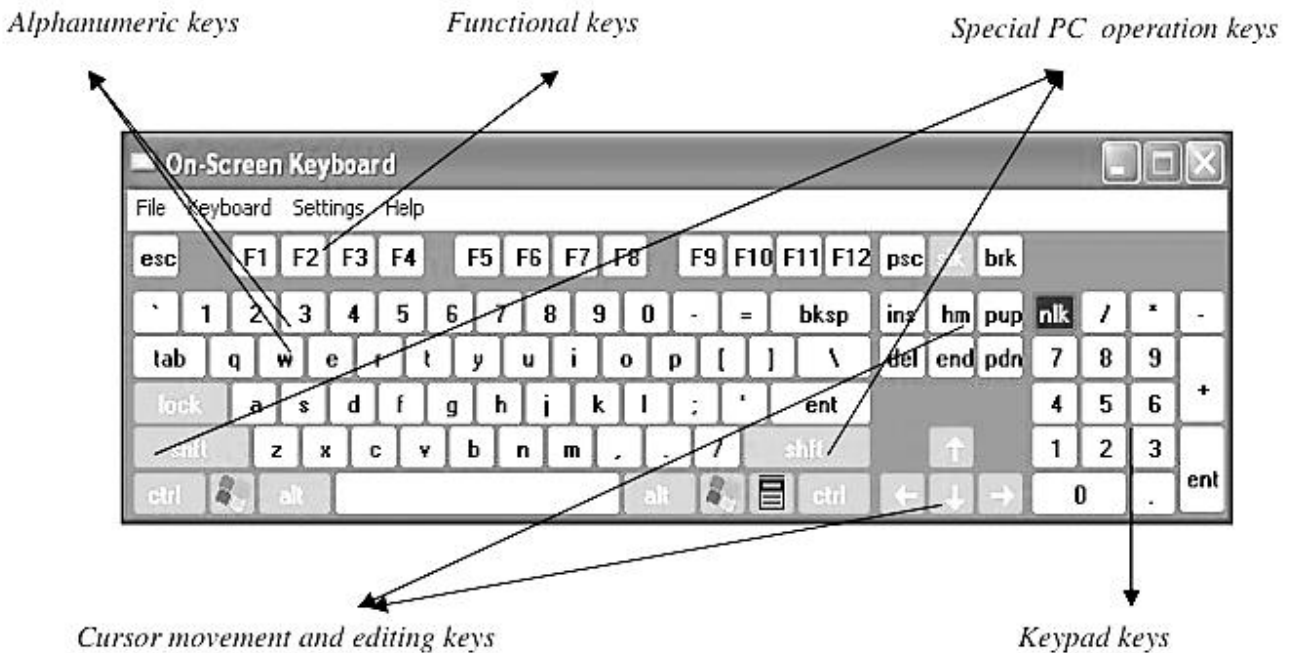
These are a group of keys located on the right side of the keyboard. They look like a calculator, because they have both numbers and symbols for mathematical equations. They also have their own plus sign, minus sign, Enter key, Delete key, and Num lock key.

They should be used to type numbers when you don't need to type letters. They great for typing things like phone numbers for numeric statistics

Note: The Num Lock key must be turned on in order to use the numeric keypad.



Alphanumeric Keys



These are a collection of keyboard keys with both numbers, symbols and alphabetical letters. They are the most commonly used sets of keys on the keyboard to type and issue various types of instructions to the computer when used with special PC operation keys.

Practical Activity

At this stage, the teacher should introduce students to typing skills by the use of a text editor such as notepad, MS dos editor and WordPad or any word processor available for use.


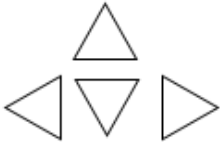
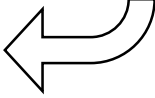
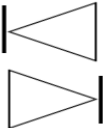
Cursor movement and editing keys

The cursor movement keys are used to move the cursor, objects and text along the screen on a text editor and editing keys are used to make necessary changes to a document while editing or formatting.

Common cursor movement keys and their uses

<u>Key</u>	<u>Symbol</u>	<u>Use</u>
DELETE KEY	delete	Used to erase a character on the right of the cursor position can also erase objects in that position



BACKSPACE KEY	Backspace or 	Used to erase a character on the left of the cursor position can also erase objects in that position
ARROW KEYS		They are used to move the cursor to the left, right, up and down on the document
ENTER (RETURN KEY)	 or enter	Used to move the cursor to the next line
END KEY	End	The end key is used to move the cursor to the end of the current line
PAGE UP	Pg up	Used to scroll pages upwards on the current document
PAGE DOWN	Pg dn	Used to scroll pages downwards on the current document
HOME KEY	Home	The home key is used to move the cursor to the start of the current line
SPACE BAR		Used to provide spaces between characters or objects
TAB KEY	tab or 	Used to indent (indenting means moving the text away from the page margin)
<i>Practical Activity</i>		
<i>The teacher should prepare a practical session to demonstrate to the students how the keys mentioned above function</i>		

Function keys

F1 through F12 are the function keys. They have special purposes. The following are mainly the purpose of the function keys. But it may vary according to the software currently running.

- i. F1 - Help
- ii. F2 - Renames selected file
- iii. F3 - opens the file search box
- iv. F4 - opens the address bar in Windows Explorer
- v. F5 - refreshes the screen in Windows Explorer

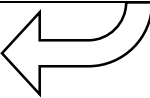





- vi. F6 - Navigates between different sections of a Windows Explorer window
- vii. F8 - opens the start-up menu when booting Windows
- viii. F11 - Opens full screen mode in Explorer ration.

Special PC operation keys

While the main function of the cursor movement and editing keys is to perform specific editing and formatting actions on a document and the alphanumeric keys are used to enter text data into the computer, the Special PC operation keys are used to input specific administrative instructions into the computer for execution. They can be used alone or with a combination of other keys on the keyboard.

Common Special PC operation keys and their functions

<u>Key</u>	<u>Symbol</u>	<u>Use</u>
ESCAPE KEY	Esc	Aborts the current operation and exits popup windows
CAPS LOCK	CAPS LOCK	Activates the use of uppercase letters
NUM LOCK	NUM LOCK	Activates the use of numerical keypad keys
ENTER (RETURN KEY)	 or enter	Acts as both cursor movement and special PC operation key. It is used to activate the currently selected button or option either way, it sends the final instruction to the CPU for execution. In palmtops it's called OK key
SHIFT	 or shift	The shift key is a modifier key on a keyboard, used to type capital letters. It also activates roles of the 2 nd function keys
CONTROL	Ctrl	A Control key is a key which, when pressed in conjunction with another key, will perform a special operations it is never used alone
ALTERNATE	Alt	An alternate key is a key which, when pressed in conjunction with another key, will perform a special operations it is never used alone
MENU/APPLICATION		Display the shortcut menu for the selected item.
WINDOWS LOGO		Display or hide the Start menu, or works with a combination of other keys for other functions i.e. +r, +u, +h etc.



PRINT SCREEN	Print Screen SysRq	Takes screen shots on the desktop
Insert Key	Insert	Switch editing modes from insert mode to type over editing modes and vice versa
Space bar		It is used both as editing key and special pc operation key. As a special key, it can be used to check or uncheck selected options from the menu. Mostly when filling forms.
<i>Practical Activity</i>		
<i>The teacher should prepare a practical session to demonstrate to the students how the keys mentioned above function</i>		

Exercise

Fill in the blanks with the following words. Use each word only once

F1	F4	Delete	BackSpace	End
Start	UpArrow	Shift	Pause	Pause

- Usually by pressing _____ key the 'help' menu associated with an application will be displayed.
- To erase a character at the right of the cursor position, we need to press _____ key.
- In order to stop a running program, we need to press _____ key.
- In order to print the characters displayed on the top of a key, we need to press _____ key along with that key.
- In order to move the cursor one row up in a document, we need to press _____ key.
- The _____ key is pressed to move the cursor to the end of the current row.
- _____ Key is pressed to move the cursor to the start of the current row.
- _____ Key is used to erase the character on the left of cursor position.
- _____ Toggle key is used to toggle the insert mode on or off.
- For opening the address bar in the browser, press the _____ functional key.



Pointing devices

These are devices used to control the pointer/cursor on the screen.

Examples: mouse, joystick, trackball, light pen etc.

Mouse

A computer mouse lets us click buttons, pick options, highlight sections, access files and folders, move around your computer, and more. There are different types of mice namely: PS/2, optical, wireless/cordless etc.

Mouse skills

As the mouse moves on a flat surface, it moves a ball beneath or a photosensitive signal that corresponds by moving the pointer/cursor on the screen.

Mouse terminologies

Clicking

This is pressing the left button of the mouse once to execute a command or highlight an icon/object

Double clicking

This is clicking the left button of the mouse twice in quick succession it is used instead of the enter key on the keyboard. Used to start an action such as opening a file.

Drag and drop

This involves clicking on an icon, dragging it, and releasing the button on destination. This is a technique used to move and resize objects.

Scrolling

Scrolling is the art of moving the document pages up and down on the screen using the mouse's scrolling wheel.

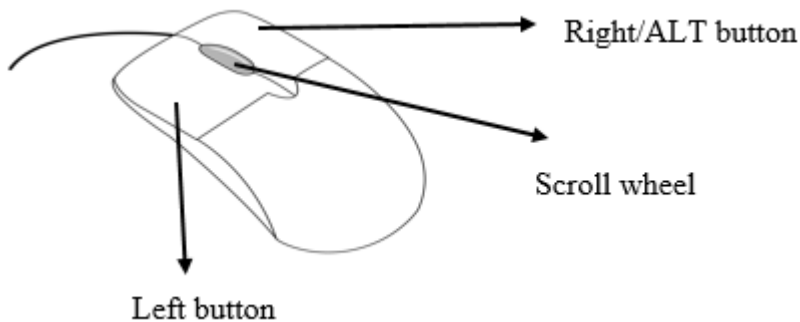


Right clicking

This is pressing the right button of the mouse once. Right clicking triggers a dropdown list of commands for the user to select from. Right clicking and pressing the menu key on the keyboard works the same way.

Cursor

A cursor is an indicator used to show the current position for user interaction on a computer monitor or other display device that will respond to input from a text input or pointing device. The mouse cursor is also called a **pointer**, owing to its resemblance in usage to a pointing stick.



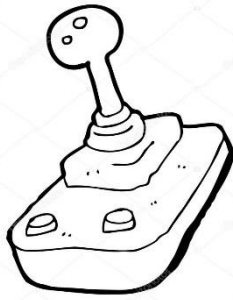
Track ball

This is just like a mouse whose ball is located at the top. The pointer on the screen is moved as the user moves the ball with a finger.



Joy stick

Looks like a car gear. When the lever like part is moved, the pointer moves on the screen. Mostly used to play games.



Light pen and stylus

A light pen, also called a *selector pen*, is a computer input device in the form of a light-sensitive wand used in conjunction with a computer's CRT display. It allows the user to point to displayed objects or draw on the screen in a similar way to a touch screen but with greater positional accuracy.



PRACTICAL ACTIVITIES

1. Keyboard and mouse drills, skills, usage, connection in relation to booting, troubleshooting and technical terms
2. A video, PowerPoint presentation or academic trip that exposes students to various input devices that are not found in your local computer laboratory such as trackballs, light pens, touchpads etc. their usage and advantages/disadvantages of each of the input devices exposed.