

Computer Fundamental

What is a computer?

A Computer is an electronic device which can perform Arithmetic and Logical Operations at high speed.

Arithmetic Operations

Addition	+
Subtraction	-
Division	/ (Slash)
Multiplication	* (Astrik)

Logical Operations

Less than	<
Greater than	>
Equal to	=
Not Equal to	!= or <>

Example:

$4 < 9$ True
 $7 > 10$ False
 $8 = 4$ False
 $5 <> 9$ True

	A	B	C	D	E	F	G
1							
2		$4 < 9$		$=4 < 9$		TRUE	
3		$7 > 10$		$=7 > 10$		FALSE	
4		$8 = 4$		$=8 = 4$		FALSE	
5		$5 <> 9$		$=5 <> 9$		TRUE	
6							

Functionalities of a Computer

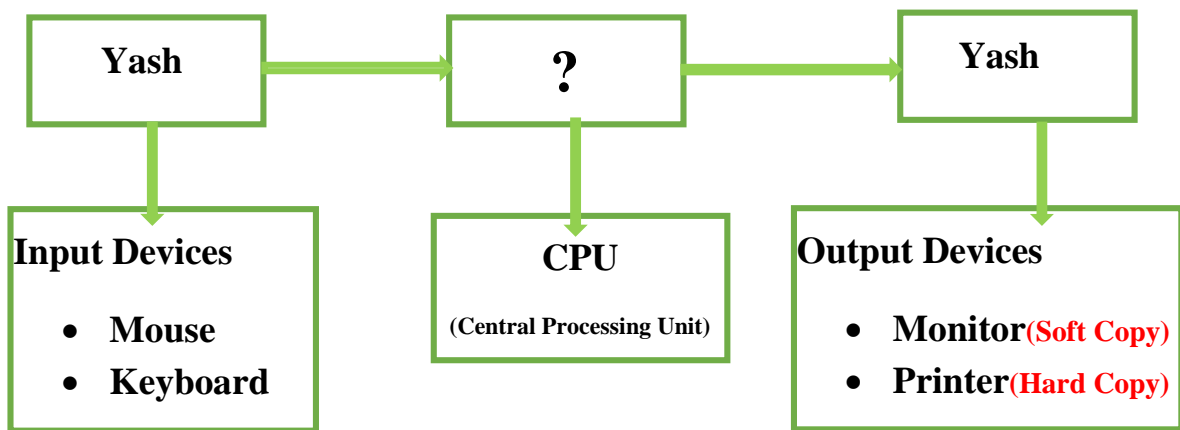
There are three basic functionalities of a Computer System and they are

1. Input
2. Process
3. Output

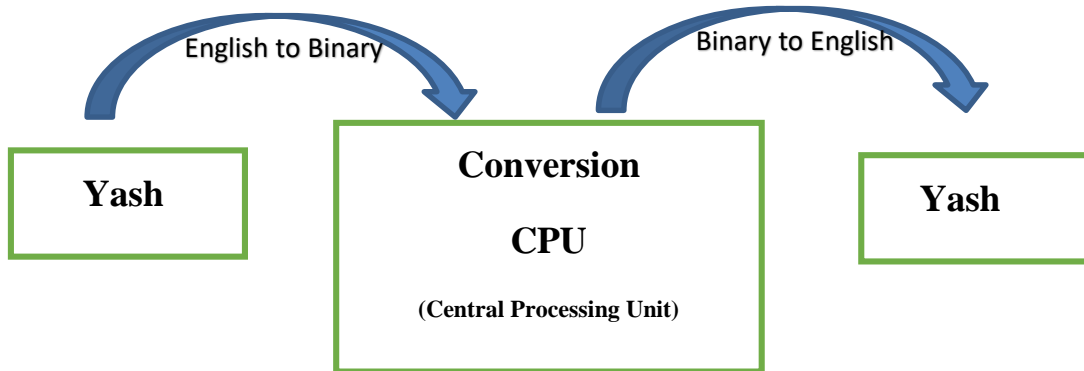
Block Diagram



Block Diagram



Block Diagram



Computer Understands only Binary Language i.e 0 or 1

Keyboard Characters

Alphabets → A,B, CZ

Digits → 0, 1, 29

Special Characters → #, @, \$, % etc.

Keyboard Character	Binary Code
A	01000001
B	01000010
C	01000011
1	00000001
2	00000010
3	00000011
#	00100011

Storage Units

1 Bytes → 8 Bits (Smallest)

1 KB → 1024 Bytes

1 MB → 1024 KB

1 GB → 1024 MB

1 TB (Biggest) → 1024 GB

Y	A	S	H
10101111	10110011	10000111	10111010
8 Bits	8 Bits	8 Bits	8 Bits
1 Byte	1 Byte	1 Byte	1 Byte

Bits → ? → 32 (8x4)

Bytes → ? → 4 (4x1)

YASH GOYAL

Bits → ?

Bytes → ?

Computer Keyboard Keys and Their Functions

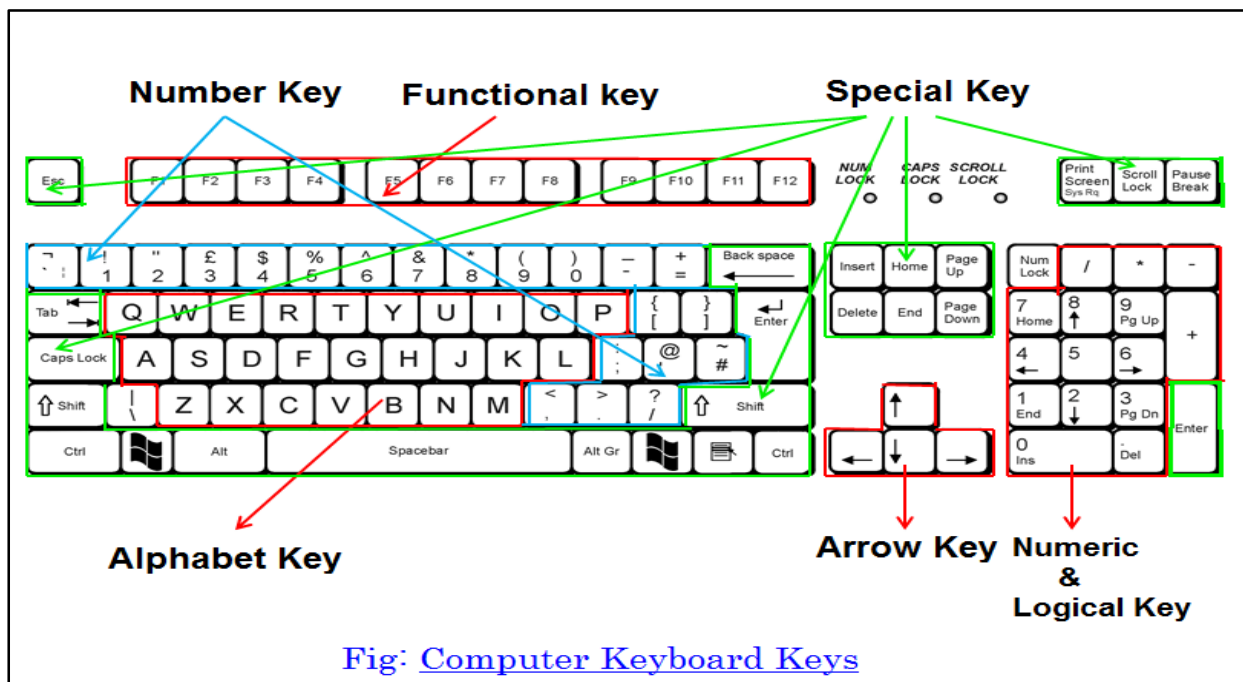
Computer Keyboard Keys:

The computer keyboard has a variety of keys that are dedicated to specific functions.

- Functional Key
- Alphabet Key
- Number Key
- Aero Key
- Numeric & Logical Key
- Special Key

Keyboard keys and their functions:

All Computer Keyboard Keys and Their Functions described below:



Function Keys on Keyboard:

The Functional Key is typically located across the top of a keyboard today. Current keyboards have 12 functional keys (F1 – F12).

F1:

- F1+Windows key open the help menu.

F2:

- In MS-Excel, F2 edits the active cell.
- Ctrl + F2 display a print preview in MS-Word.

F3:

- Shift+F3 change the text from upper to lowercase or a capital letter at the beginning of every word.

F4:

- Alt+F4 closes the program which is currently active in Microsoft Windows.
- Ctrl+F4 is a shortcut key most often used to close a tab or window within a program.
- Repeat the last action

F5:

- It reloads or refreshes the document window or page.
- Ctrl+F5 will refresh a web page and clearing the cache.
- It starts slide show in MS-PowerPoint.
- Choose the Go To command (Home tab)

F6:

- Ctrl+Shift+F6 switch between Microsoft Word documents.
- Go to the next pane or frame (This PC Window)

F7:

- F7 is mainly used to spell check and grammar check a document in MS Word.

F8:

- Extend a selection

F9:

- F9 key refresh a document in Microsoft Word.

F10:

- Ctrl + F10 used to maximize the window in MS-Word
- Shift + F10 Display a shortcut menu for a selected item such as a folder or file.
- Show KeyTips (Like Home Tab)

F11:

- Enter and exit full screen mode in all modern Internet browsers.

F12:

- Ctrl+F12 open a document in MS-Word.
- Display the Save As dialog box.
- Shift+F12 save the MS-Word document.
- Ctrl+Shift+F12 print a document in MS-Word.

Alphabetic key:

The alphabetic keys along with the row numbers and special characters. The alphabet Keys include All English Alphabet letters (A – Z).

Number Key:

This Number Key embedded on the alphabetic key. These keys are located on the top of the alphabetic keys. The Number Keys include of punctuation and special characters, such as

\	(backslash)
	(vertical bar)
/	(forward slash)
?	(question mark)

.	(period/dot)
>	(greater than)
,	(comma)
<	(less than)
;	(semi-colon)
:	(colon)
'	(single quote/apostrophe)
''	(double-quote)
[(open/left bracket)
{	(open/left brace)
]	(close/right bracket)
}	(close/right bracket)

Aero Key:

These keys are located to the right of the alphabetic keys. This group of keys has four smaller groups of keys, such as Left Arrow, Right Arrow, Top Arrow & down Arrow Key.

Numeric & Logical Key:

The Numeric keypad which is located on the extreme right side of keyboards. It contains keys for ten numbers (0 – 9), as well as the four arithmetic functions that says Logical Key. The Numeric keypad can also be used as a cursor control pad by toggling the NUM LOCK key.

Special keys on keyboard and Their Functions:

Scroll Lock:

In MS Excel When Scroll Lock selected, pressing the arrow keys resulted in scrolling through a page of text.

Caps Lock:

The CAPS LOCK key locks the alphabetic keys into uppercase characters.

Num Lock:

When the Num Lock key is pressed, the numbers on the number pad of the keyboard are activated. When the Num Lock key is not pressed, it's the arrows and special keys on the number pad which are active. The number pad is a block of numbers that looks like an upside-down numeric keypad.

Shift:

The SHIFT key is used to toggle a key between its lowercase and uppercase characters and also use to type special characters. Like #, \$, @ etc.

Enter:

This Enter key is the most used key on the keyboard. In word processors, the ENTER key is used to move next line of the paragraph.

Space:

The SPACEBAR key commonly referred to as the white space keys. The SPACEBAR produces one character of blank space.

Backspace:

The BACKSPACE key erases a character to left side.

Delete:

The Delete key deletes a character to right side.

Ctrl:

The Ctrl key is mainly used in many keyboard shortcuts. like Ctrl+C (Copy), Ctrl+V(Paste)

Alt:

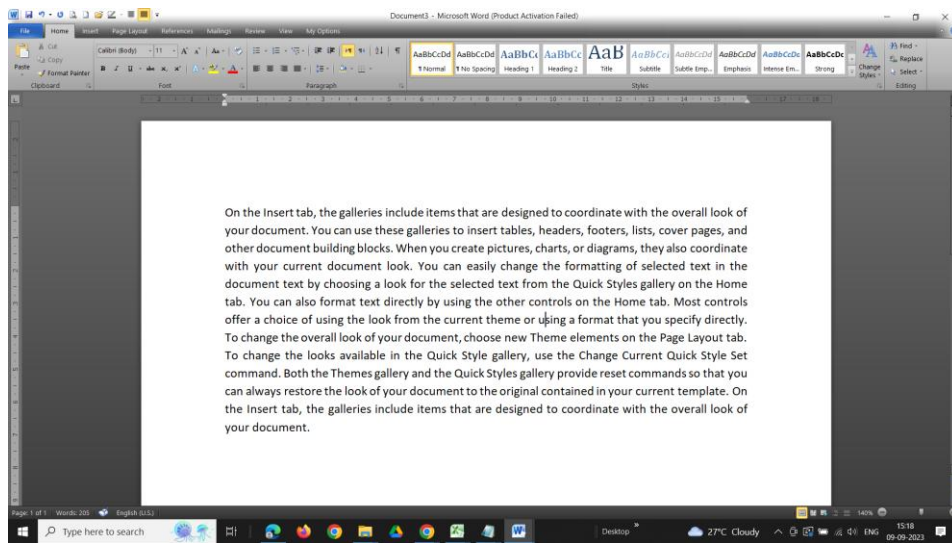
The Alt key is also used in many keyboard shortcuts.

Tab:

Tab key used to move between items or move forward 5 characters. The TAB key produces defaults to half an inch of blank space.

Print Screen SysRq:

When pressing the Print Screen key, it captures an image of your entire screen. Print Screen SysRq key mainly used to take screenshots of the entire screen.



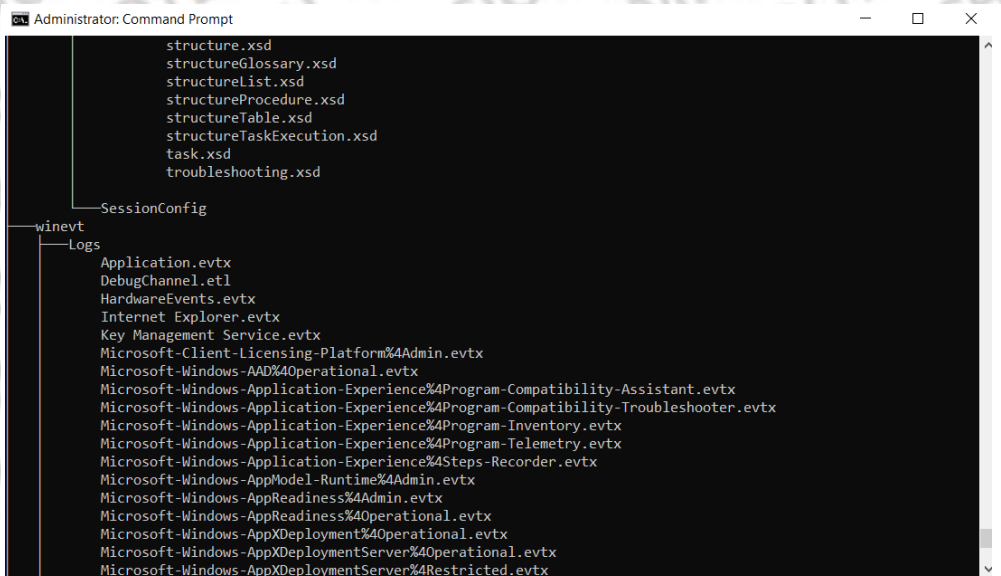
Pause Break:

In its default mode (PAUSE), this key will if enabled by software, pause the display or the action of an application program. Using the CTRL and BREAK keys together is to break an action.

Open Command Prompt (Run as administrator) → type Tree/f → Press Enter

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>tree/f_
```



```
Administrator: Command Prompt
structure.xsd
structureGlossary.xsd
structurelist.xsd
structureProcedure.xsd
structureTable.xsd
structureTaskExecution.xsd
task.xsd
troubleshooting.xsd
SessionConfig
winevt
  Logs
    Application.evtx
    DebugChannel.etl
    HardwareEvents.evtx
    Internet Explorer.evtx
    Key Management Service.evtx
    Microsoft-Client-Licensing-Platform%4Admin.evtx
    Microsoft-Windows-AAD%4Operational.evtx
    Microsoft-Windows-Application-Experience%4Program-Compatibility-Assistant.evtx
    Microsoft-Windows-Application-Experience%4Program-Compatibility-Troubleshooter.evtx
    Microsoft-Windows-Application-Experience%4Program-Inventory.evtx
    Microsoft-Windows-Application-Experience%4Program-Telemetry.evtx
    Microsoft-Windows-Application-Experience%4Steps-Recorder.evtx
    Microsoft-Windows-AppModel-Runtime%4Admin.evtx
    Microsoft-Windows-AppReadiness%4Admin.evtx
    Microsoft-Windows-AppReadiness%4Operational.evtx
    Microsoft-Windows-AppXDeployment%4Operational.evtx
    Microsoft-Windows-AppXDeploymentServer%4Operational.evtx
    Microsoft-Windows-AppXDeploymentServer%4Restricted.evtx
```

ESC:

The Escape key is typically enabled as an exit key by most software applications. For example, in Windows, the ESC key used to close a context menu.

Insert:

When pressing this insert key switches between two modes when you are typing. In the first mode, what you type appears before the cursor and pushes any text that comes after it to the right. In the second mode, any text that you type successively replaces any text that is to the right of the cursor.

Home:

The Home key move the cursor to the beginning of a line.

End:

The End key uses for moving the cursor to the end of the line.

Page Up:

If you are currently being worked has more than one page in a document, then this Page Up key is used to move or scroll up one page.

Page Down:

If you are currently being worked has more than one page in a document, then this Page Down key is used to scroll down one page.

Windows Key:

Windows Key is use to run Windows menus.