



BASIC OF COMPUTERS

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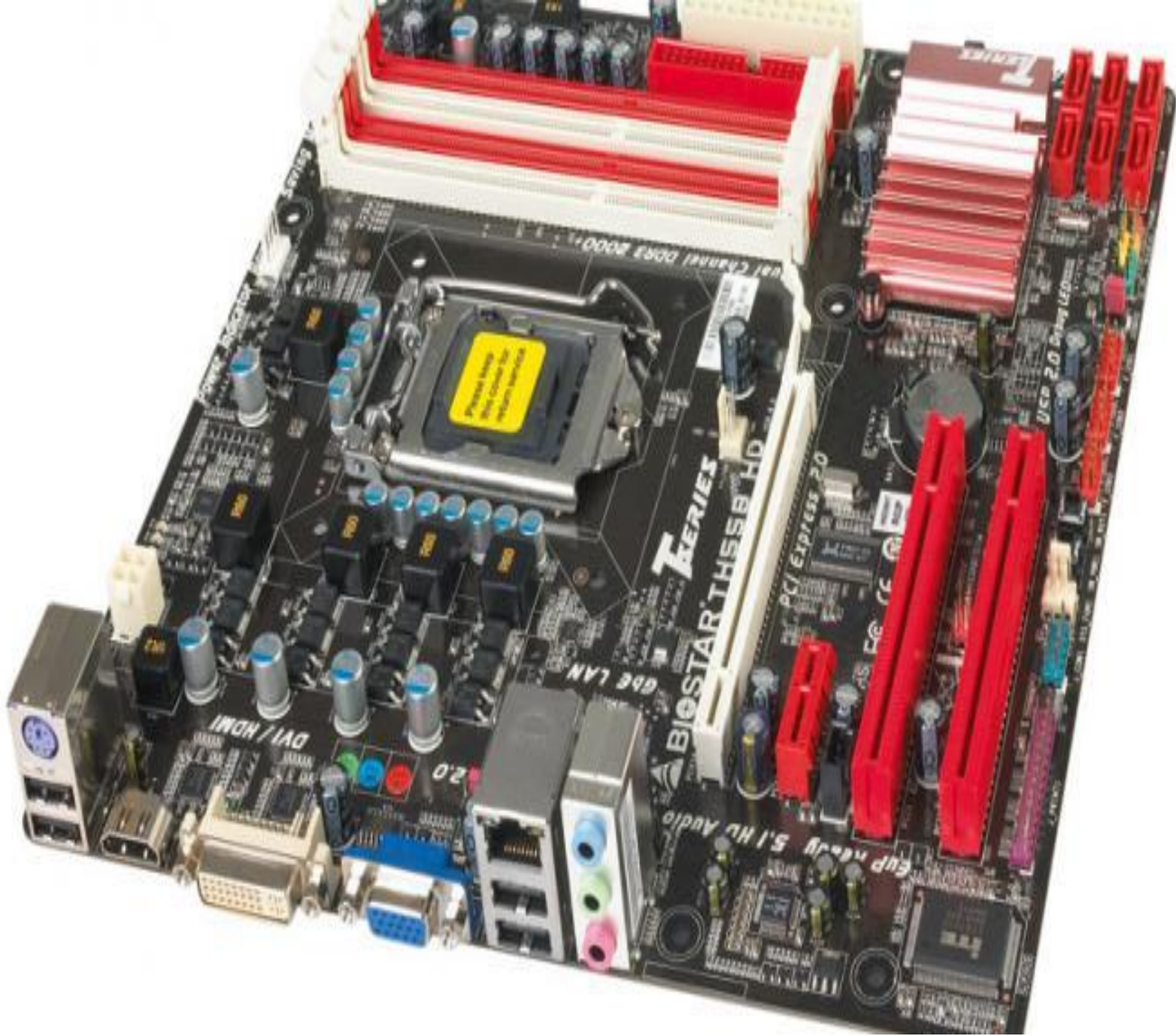
BASIC COMPONENTS OF COMPUTER

- A working computer system consist a number of hardware components, all the hardware have some own specific task. The list of basic required component as follow.

Motherboard	RAM	Processor
Cabinet	Hard Drive	DVD Drive
Printer	Keyboard	Mouse
Speaker	UPS	Monitor

MOTHER BOARD

- Mother board is main circuit board of computer system, mother board connect all the part of the computer system.



RAM

- Ram is a main memory of your computer system, all the data and application or software first loaded in ram then go for the further process.
- Data stored in ram is lost when power is removed because the ram is volatile class memory.
- latest technology in ram is DDR4 Type Ram.



PROCESSOR

- Processor is main part of computer system, the processor is responsible for do all the logical and arithmetic calculations.
- In current market Latest processor is INTEL i7 7th generation.



HARD DRIVE (DISK)

- Hard drive is secondary data storage or permanent data storage of your computer system.
- Hard Drive offers huge data storage capacity on low speed. Data can be easily move and access from hard drive.
- Capacity of hard drive generally calculated in Giga bytes / Tera bytes



SMPS

- SMPS stands for Switch Mode Power Supply, The SMPS Provides Electrical power supply to all the component of computer system.



OPTICAL DRIVE

- Optical drive use to read and write data on to optical media like CD, DVD, Blue Ray Disk.
- Optical drive use light to store and get data from storage disks.



CABINET

- Cabinet is one kind of compartment type box allows you to fit all the components of computer system in particular manner.
- Generally computer cabinet are made by electro galvanize metal.



MONITOR

- Monitor or display is the main output device of computer system.
- Monitor use to view and operate computer system.
- Monitor provides graphical user interface to any running program.



KEY BOARD

- Key board is main input device of computer system. Key board contains number of keyset like,
 - Alphabetic keys
 - Numeric keys
 - Function keys
 - Special keys
 - Toggle keys



MOUSE

- Mouse is pointing device to point out any area of the computer screen.
- Mouse is very useful when you working in Graphical user interface applications.



SPEAKER

- Speaker is device to convert signals to audio, computer systems generated the analog signals and speakers convert that signals into the audio.



PRINTER

- Printer is device to make hard copy of your documents and photos.
- Mainly three type of printers are available in market.
 - Dot matrix printer
 - Inkjet printer
 - Laser printer







UPS

- UPS is uninterruptable power supply for computer system, generally used when main power supply is fails.
- UPS Allows to run the computer system for 15 to 20 minutes for save your unsaved work and shutdown properly.



FILE EXTENSION

- A filename *extension* is an identifier specified as a suffix to the name of a computer *file*. The *extension* indicates a characteristic of the *file* contents or its intended use. A *file extension* is typically delimited from the filename with a full stop (period /dot sign)

IMPORTANT FILE EXTENSIONS

Extension	Use for
avi	Audio Video File
bat	Batch File
csv	Comma Separated Value File
doc or docx	Microsoft Word File
exe	Executable Files
GIF	Graphics Interchange Format (Image)
html	Web Pages
jpg or jpeg	Image file
mdb or accdb	Access database file
pdf	Portable Document Format (Acrobat)
png	Public Network Graphics (image)

Extension	Use for
psd	Photoshop File
rtf	Rich text Format WordPad File
txt	Text File Notepad Files
xls or xlsx	Excel File
ppt or pptx	Power point Files
zip	Compressed Files
apk	Android application files

COMMAND PROMPT

- *Command Prompt* is officially called Windows *Command Processor* but is also sometimes called the *command shell* or *cmd prompt*, or even referred to by its filename *cmd.exe*
- Note: *Command Prompt* is sometimes incorrectly referred to as "the *DOS prompt*" or as MS-DOS itself

BASIC COMMANDS

- | | | |
|---------------|--------------|--------------|
| 1. Copy con | 13. Tree | 25. Cls |
| 2. Move | 14. Dir | 26. echo |
| 3. Copy | 15. Cd | 27. exit |
| 4. Delete | 16. Cd .. | 28. fc |
| 5. Mkdir | 17. Vol | 29. Path |
| 6. Rmdir | 18. Ver | 30. Print |
| 7. Mk | 19. Time | 31. Type |
| 8. Rd | 20. Date | 32. Robocopy |
| 9. Systeminfo | 21. Tasklist | 33. prompt |
| 10. Label | 22. Taskkill | 34. Attrib |
| 11. Title | 23. Rename | 35. Sc |
| 12. Color | 24. Help | 36. Erase |

HOW TO OPEN COMMAND PROMPT

- Start menu -> Search cmd.exe
- Start menu -> All Programs -> Accessory -> Command Prompt
- Win Key + R -> cmd

NOTE :

- If you want to do administrative tasks from command prompt, must start command prompt with administrative privileges. Right click on cmd.exe and select run as administrator.
- Command prompt works in case insensitive mode so exit, EXIT and Exit All are considered as equal.
- By default command prompt open in current users folder.
- to open command prompt with current location press shift and right click and select **open command window here**.

```
Microsoft Windows [Version 6.1.7600]  
Copyright (c) 2009 Microsoft Corporation. All rights reserved.  
  
C:\Users\admin>
```

COPY CON

- Copy con is an MS-DOS and Windows command line command that allows the creation of a file through the command prompt. To use this command type copy con followed by the name of the file you want to create. After this command is typed press ctrl + Z to Exit.
- Syntax of command :
- Copy con data.txt

MOVE

- Move files and rename files or directory.
- Syntax of command is :
- Move source destination

COPY

- Copy command use to copy file or multiple files to another location.
- Syntax of command is :
- Copy source destination

DEL

- Use to delete one or more files
- Syntax of command is :
- Del filename

MKDIR

- Use to create new folder or folders
- Syntax of command is :
- Mkdir dir_name
- Also use to create intermediate directories
- Mkdir asia\india\gujarat\saurashtra\rajkot

RMDIR

- Use to remove folder or folders
- Syntax of command is :
- Rmdir folder_name

MD

- Use to create new folders, work same like mkdir command.

RD

- Use to remove the folder or folders work same as like rmdir.

SYSTEMINFO

- Use to view operating system configuration information.
- Syntax of command
- systeminfo

LABEL

- Use to change the volume name or partition label.
- Syntax of command is :
- Label drive: new_label
- * work only if command prompt run in administrative mode

TITLE

- Use to set title for the command prompt window.
- Syntax of command is :
- Title new_title

COLOR

- Use to set background color and foreground color for command prompt.
- Syntax of command is :
- Color color_code
- Color code range is (0 to F)

TREE

- Use to view graphically structure of directory and sub directory of current or given location.
- Syntax of command is :
- Tree [location]
- If location is not specified it displays tree of current working location.

DIR

- Use to display files and subdirectory of the current directory.
- Syntax of command :
- `dir`

CD

- Use to display current path and change directory
- Syntax of command :
- Cd path_to_move

CD ..

- When you run the `dir` command in directory you can see the two first two lines is always represent as `(. , ..)`.
- The `.` Means current working directory
- The `..` Means parent directory.

VOL

- Display the Current volume (Partition) volume label and serial number.
- Syntax of command is :
- vol

VER

- Displays current version of Windows operating system.
- Syntax of command is :
- Ver

TIME

- Use to display current time and set new time.
- Syntax of command is :
- Time [hh:mm:ss]
- Time

DATE

- Date function use to set current date of the system, date command also use to set date.
- Syntax of command is :
- Date [mm-dd-yy]
- Date

RENAME

- Rename command use to rename the existing file.
- Syntax of command is :
- Rename source destination

HELP

- Help command is use to view help of any command.

CLS

- Use to clear the current screen of command prompt.
- Syntax of command is :
- Cls

ECHO

- Use to display message on command prompt window.
- Syntax of command :
- Echo Your Text

Fc

- Compare two files and show differences.
- Syntax of command :
- Fc file1 file2

PATH

- Display and set the path of folders
- Syntax of command
- Path [path of file]

PRINT

- Use to print any file
- Syntax of command is :
- Print filename

TYPE

- Display the content of given file.
- Syntax of command is :
- Type filename

ROBOCOPY

- Use to copy files / folders
- Syntax of command :
- Robocopy source destination
- Add /E for empty directory

PROMPT

- Change the prompt of output window.
- Default prompt is : >
- Syntax of command is :
- Prompt prompt - latter

ATTRIB

- Use to display and change file attributes.
- Syntax of command is :
- Attrib filename

TASKLIST

- Use to list current running processes.
- Syntax of command is :
- Tasklist

TASKKILL

- Use to terminate, stop or kill and task
- Syntax of command is :
- Taskkill /pid process-ID

SC

- Use to view and manage running services of computer.
- Syntax of command :
- Sc query

EXIT

- Use to exit from command prompt window.
- Syntax of command is :
- exit

SHORTCUT KEYS

- Shortcut keys is combination of keys to do critical task in just two or more key strokes.
- Windows Shortcut Keys
- MS Office Shortcut Keys

WINDOWS SHORTCUT KEYS

- Windows Shortcut keys are use to work faster in Microsoft windows operating systems

LIST OF WINDOWS SHORTCUT KEYS

Sr	Key	Use For
1	Win key	Open start menu
2	Crtl + esc	Open start menu
3	Alt + f4	Close the current program
4	Alt + tab	Switch the Opened Windows
5	Win + tab	Switch the Opened Windows
6	Win + d	Show Desktop
7	Win + m	Minimize
8	Win + e	Open windows Explorer
9	Win + f	Search the files
10	Win + r	Run menu
11	F2	Rename the Files / Folders
12	Crtl + Shift + N	Create a New Folder

Sr	Key	Use For
13	Shift + f10	Right Click
14	F5	Refresh
15	Win + L	Lock The Window
16	F1	Help
17	Alt + Enter	View Properties
18	Print screen	Take Screen Shot
19	Delete	To Delete anything
20	Shift – Delete	Delete file Permanently
21	F10	Active Menu Bar
22	Crtl + Shift + esc	Task Manager
23	Alt + space	Main menu options
24	F4	Select the go to or Different folder
25	F3	Search for a file or folder
26	Win + t	Taskbar
27	Win + 1 [2,3,4...]	Open Program as arranged in Taskbar List

MICROSOFT OFFICE SHORTCUT KEYS

- Office Shortcut Keys use to work fast in Microsoft office applications like word, excel, power point and etc

LIST OF COMMON SHORTCUT KEYS

Sr	Key	Use
1	Crtl + a	Select All
2	Crtl + b	Make Font Bold
3	Crtl + c	Copy Text
4	Crtl + d	Font Menu / In excel Copy above cell with format and formula
5	Crtl + e	Center Align
6	Crtl + f	Find
7	Crtl + g	Go to
8	Crtl + h	Replace
9	Crtl + I	Italic
10	Crtl + j	Justify
11	Crtl + k	Insert Hyperlink
12	Crtl + l	Align Left

Sr	Key	Use For
13	Crtl + m	Indent Paragraph
14	Crtl + n	New Document
15	Crtl + o	Open Document
16	Crtl + p	Print Document
17	Crtl + q	Align to Left
18	Crtl + r	Text Set to Right Align
19	Crtl + s	Save File
20	Crtl + t	
21	Crtl + u	Text Underline
22	Crtl + v	Paste copied Text
23	Crtl + w	Close Current Document
24	Crtl + x	Cut Selected Text
25	Crtl + y	Redo
26	Crtl + z	Undo
27	F1	Help

Sr	Key	Use For
28	Shift + Del	Cut Selected Item
29	Shift + ins	Paste
30	Crtl + home	First Page
31	Crtl + end	Last Page
32	Page Up	Scroll Page to Up
33	Page Down	Scroll Page to Down
34	Shift + Home	Select Current Line
35	Crtl + Shift + >	Font size Increase
36	Crtl + Shift + <	Font size Decrease
37	Crtl + [Font size Increase
38	Crtl +]	Font size Decrease
39	Backspace	Remove single character
40	Crtl backspace	Remove whole word
41	Crtl + 1[2, 5]	Line Height
42	Crtl + alt + [1,2,3]	Style Change

Sr	Key	Use For
43	Shift + f3	Change Case
44	F4	Repeat Last Action
45	F7	Spelling Check
46	F12	Save as
47	Alt + Shift + D	Current Date
48	Alt + Shift + T	Current Time
49	Crtl + →	Move to next Word
50	Crtl + ←	Move to Previous Word

FULL FORM

- Generally in computer sector we are using the short form of many things and components, here is list of commonly used short forms with their full forms

LIST OF FULL FORMS

Sr.	Short Form	Full Form
1	ALU	Arithmetic logical unit
2	CU	Control unit
3	RAM	Random access memory
4	ROM	Read only memory
5	CD	Compact Disk
6	DVD	Digital Versatile Disk
7	USB	Universal serial bus
8	DPI	Dots per inches
9	SMPS	Switch mode power supply
10	LAN	Local area network
11	MAN	Metropolitan area network
12	CAN	Campus / corporate area network
13	WAN	Wide area network

Sr.	Short Form	Full Form
14	CPU	Central processing unit
15	DNS	Domain name system
16	HTTP	Hyper text transfer protocol
17	HTTPS	Hyper text transfer protocol secure
18	DHCP	Dynamic host configuration protocol
19	TCP	Transmission control protocol
20	IP	Internet protocol
21	WWW	World wide web
22	AGP	Accelerated graphic port
23	AMD	Advance micro devices
24	ASCII	American standard code for information interchange
25	INTEL	Integrated electronics
26	DDR	Double data rate
27	PCI	Peripheral component interconnect
28	VGA	Video graphics array
29	FDC	Floppy disk controller

Sr.	Short Form	Full Form
30	FSB	Front side bus
31	KB	Kilo Bytes
32	MB	Mega Bytes
33	GB	Giga Bytes
34	TB	Tera Bytes
35	GHz	Giga Harts
36	IC	Integrated Circuit
37	ISO	International Organization for Standardization
38	Kbps	Kilo Bit per second
39	KBps	Kilo Bytes per second
40	LCD	Liquid Crystal Display
41	LED	Light Emitting Diode
42	MAC	Media Access Control
43	MHz	Mega Harts
44	NIC	Network interface card
45	PC	Personal computer

Sr.	Short Form	Full Form
46	PCB	Printed circuit board
47	PDA	Personal Digital Assistant
48	PnP	Plug and Play
49	PSU	Power supply unit
50	UTP	Unshielded twisted pair
51	STP	Shielded twisted pair
52	VPN	Virtual private network
53	3G	3 rd Generation
54	OMR	Optical magnetic reader
55	OCR	Optical character recognition
56	PIN	Personal identification number
57	OTP	One time password
58	FAT	File Allocation Table
59	NTFS	New technology file system
60	SD card	Secure Digital Card
61	VLSI	Very large scale integration

Sr.	Short Form	Full Form
62	URL	Uniform resource locator
63	SIM	Subscriber identity module
64	GIF	Graphics interchangeable format
65	JPG	Joint photographic expert group
66	BMP	Bitmap
67	PNG	Portable network graphics
68	PDF	Portable document format
69	CRT	Cathode ray tube
70	DOS	Disk operation system
71	OS	Operating system
72	UPS	Uninterruptable power supply
73	GSM	Global system for mobile communication
74	GPRS	General packet radio service
75	BASIC	Beginners all purpose symbolic instruction code
76	DMP	Dot matrix printer

BASIC NETWORKING

- A computer network or data network is a digital telecommunications network which allows computers to share resources and services.
- In computer **networks**, networked computing devices exchange data with each other using a data link connection.
- The connections between computers are established using either cable media or wireless media.

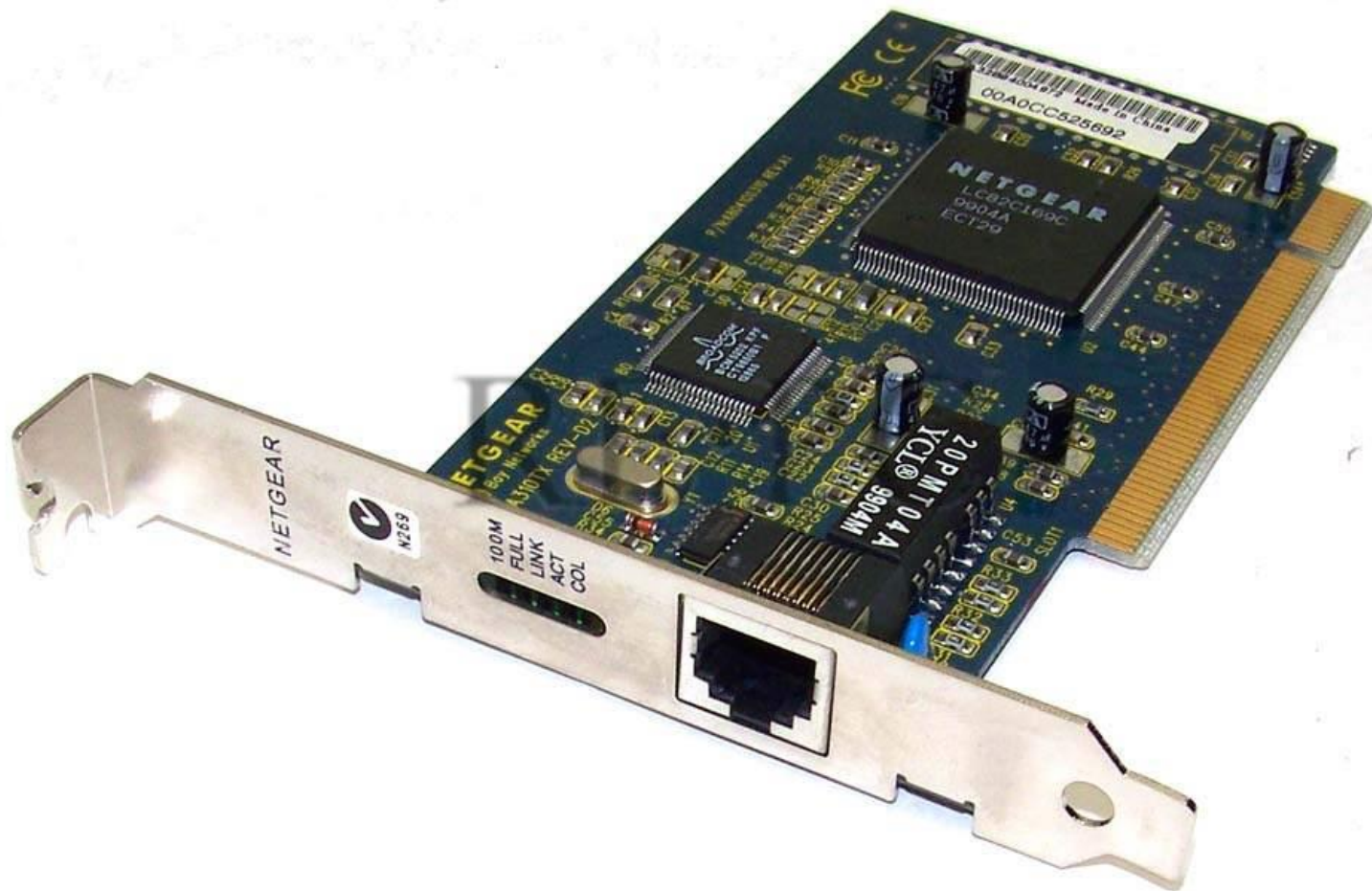
NETWORKING DEVICES

- Network devices are use to create, manage, monitor and expand computer network.
- Mainly we are using following network devices.

NIC Card	Hub
Bridge	Switch
Router	Repeater
Firewall	Trans receiver
Modem	

NIC CARD / LAN CARD / ETHERNET CARD

- A network interface controller (NIC, also known as a network interface card, network adapter, LAN adapter or physical network interface, and by similar terms) is a computer hardware component that connects a computer to a computer network.



HUB

- Network Hub is a networking device which is used to connect multiple network hosts.
- However, because of its working mechanism, a hub is not so secure and safe. Moreover, copying the data packets on all the interfaces or ports makes it slower and more congested which led to the use of network switch.



BRIDGE

- If a router connects two different types of networks, then a bridge connects two sub networks as a part of the same network. You can think of two different labs or two different floors connected by a bridge.



SWITCH

- switch is more intelligent than a hub. While hub just does the work of data forwarding, a switch does 'filter and forwarding' which is a more intelligent way of dealing with the data packets.



ROUTER

- A router is a network device which is responsible for routing traffic from one to another network. These two networks could be a private company network to a public network. You can think of a router as a traffic police who directs different network traffic to different directions.



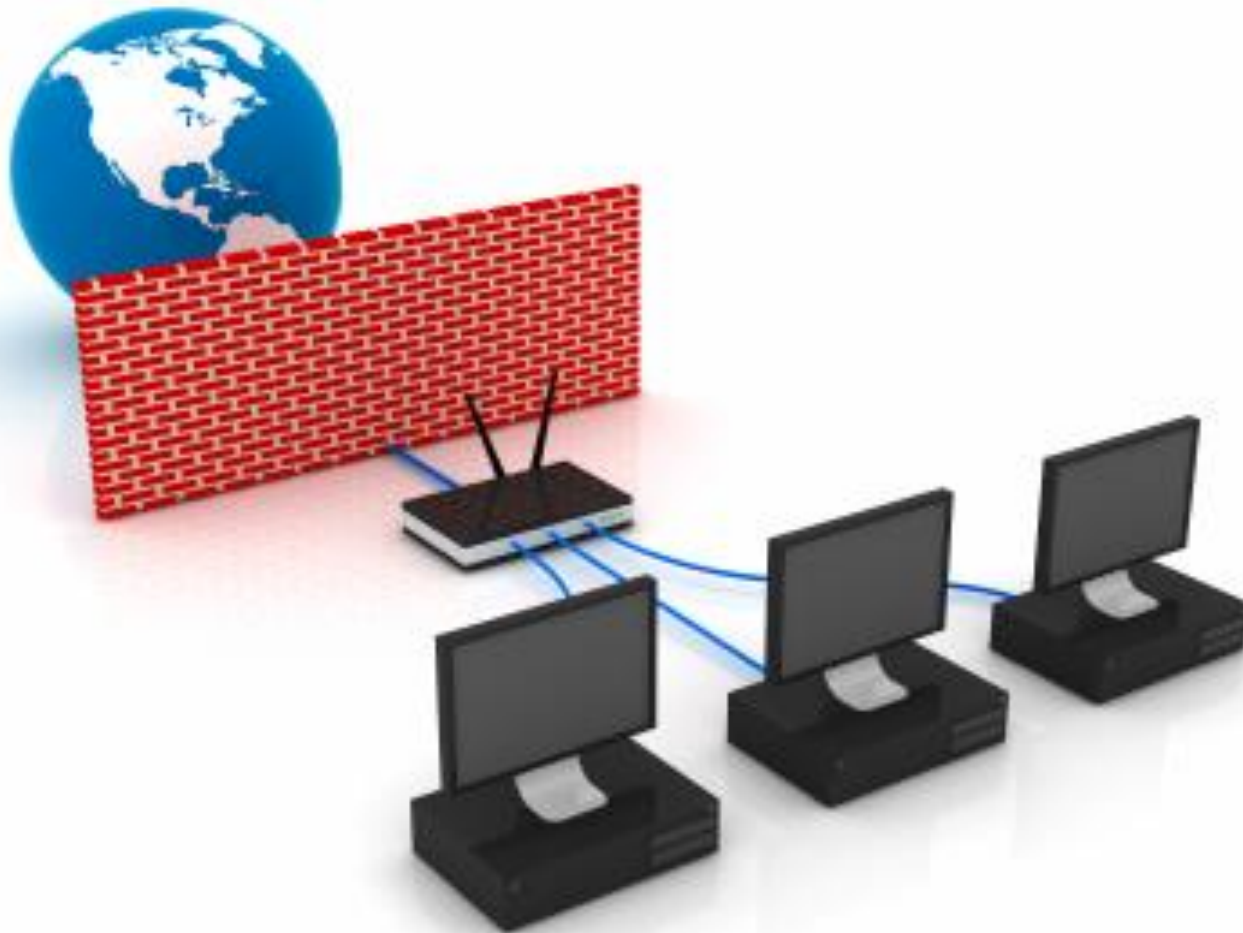
REPEATER

- A repeater is an electronic device that amplifies the signal it receives. In other terms, you can think of repeater as a device which receives a signal and retransmits it at a higher level or higher power so that the signal can cover longer distances.



FIREWALL

- A *firewall* is a network security system, either hardware- or software-based, that uses rules to control incoming and outgoing network traffic.



TRANS RECEIVER

- A **transceiver** is a device comprising both a transmitter and a receiver that are combined and share common circuitry or a single housing. When no circuitry is common between transmit and receive functions.



MODEM

- A modem stands for (**M**odulator+**D**emodulator). That means it modulates and demodulates the signal between the digital data of a computer and the analogue signal of a telephone line.

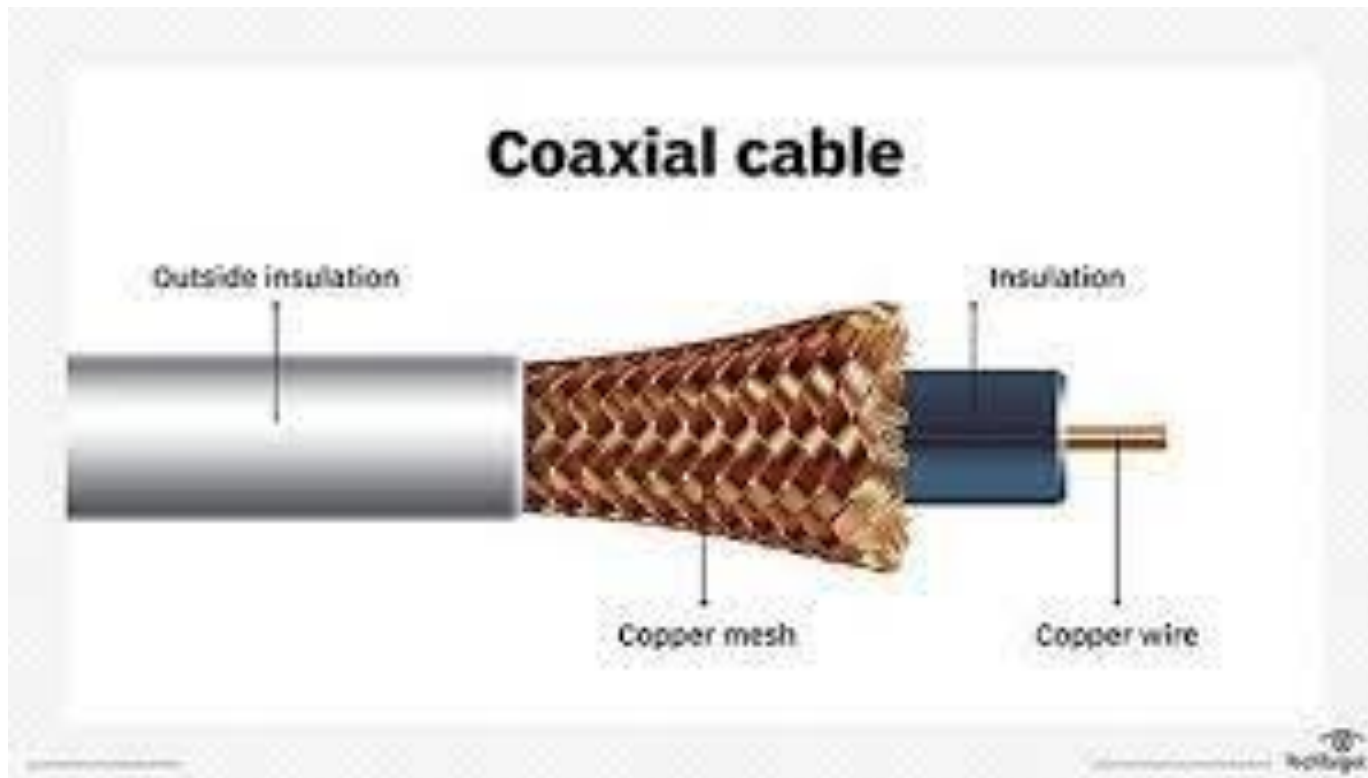


NETWORKING MEDIA

- Network media refers to the **communication channels used to interconnect nodes on a computer network**. Typical examples of network media include copper coaxial cable, copper twisted pair cables and optical fiber cables used in wired networks, and radio waves used in wireless data communications networks.

COAXIAL CABLE

- Coaxial cable is a **type of copper cable specially built with a metal shield and other components engineered to block signal interference**. It is primarily used by cable TV companies to connect their satellite antenna facilities to customer homes and businesses.



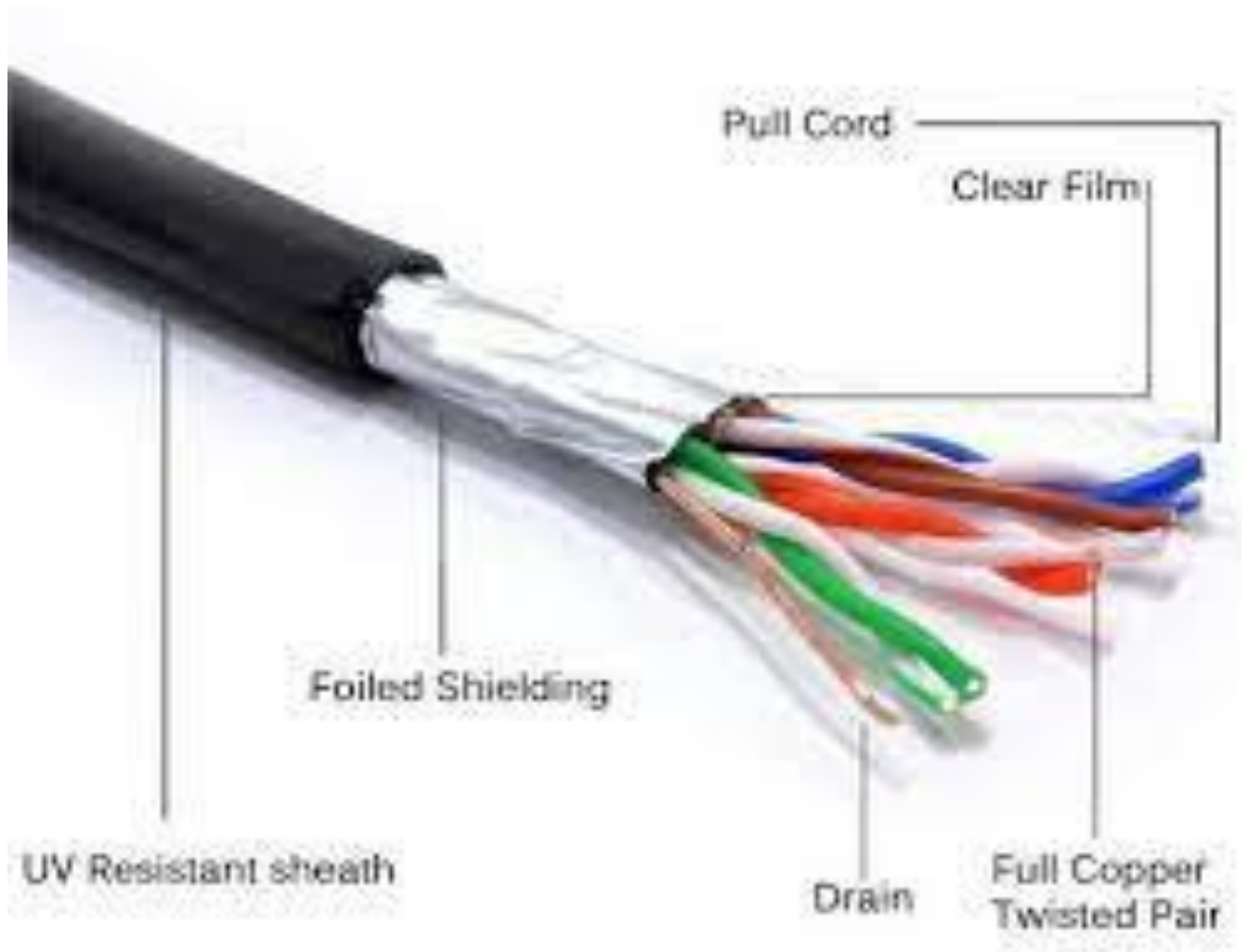
UTP

- Also known as **UTP**, this is currently the most common and basic method of **cable** construction, consisting of pairs of wires twisted together. There is no shielding.



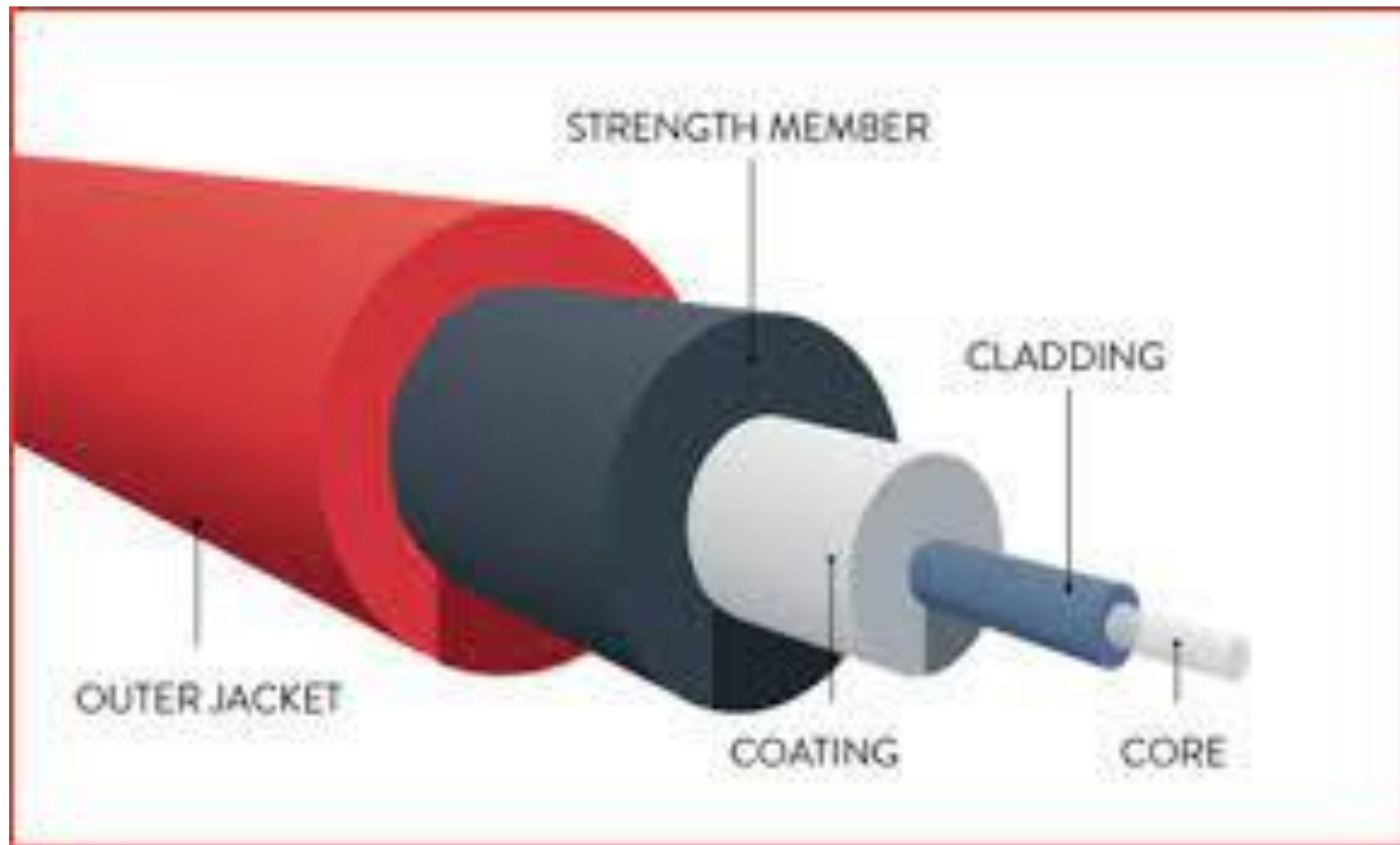
STP

- STP Cabling is **twisted-pair cabling** with additional shielding to reduce crosstalk and other forms of electromagnetic interference (EMI). Shielded Twisted-pair Cable. The outer insulating jacket contains an inner braided copper mesh to shield the pairs of twisted cables, which themselves are wrapped in foil.



FIBER OPTICAL CABLE

- A **fiber optic cable** is a network **cable** that contains strands of glass **fibers** inside an insulated casing. They're designed for long-distance, high-performance data networking, and telecommunications. Compared to wired **cables**, **fiber optic cables** provide higher bandwidth and transmit data over longer distances



Wi Fi

- Wi-Fi, often referred to as **WiFi**, **wifi**, wi-fi or wi fi, is often thought to be short for Wireless Fidelity but there is no such thing.



BASIC COMPUTER SETTINGS

- Change Wallpaper
- Power option
- Install / remove software
- Screensaver
- Desktop Icons
- Property
- Network Settings
- Snipping tool
- Create Shortcut
- Default Software

- Download Fonts
- Account Password
- Mouse settings
- Firewall

STORAGE SIZE

- Single Binary(0 | 1) = 1 bit
- 8 bits = 1 Byte
- 1024 Byte = 1Kilo Bytes
- 1024 KB = 1Mega Bytes
- 1024 MB = 1Giga Bytes
- 1024 GB = 1Tera Bytes