



INFORMATION AND COMMUNICATION AND TECHNOLOGY

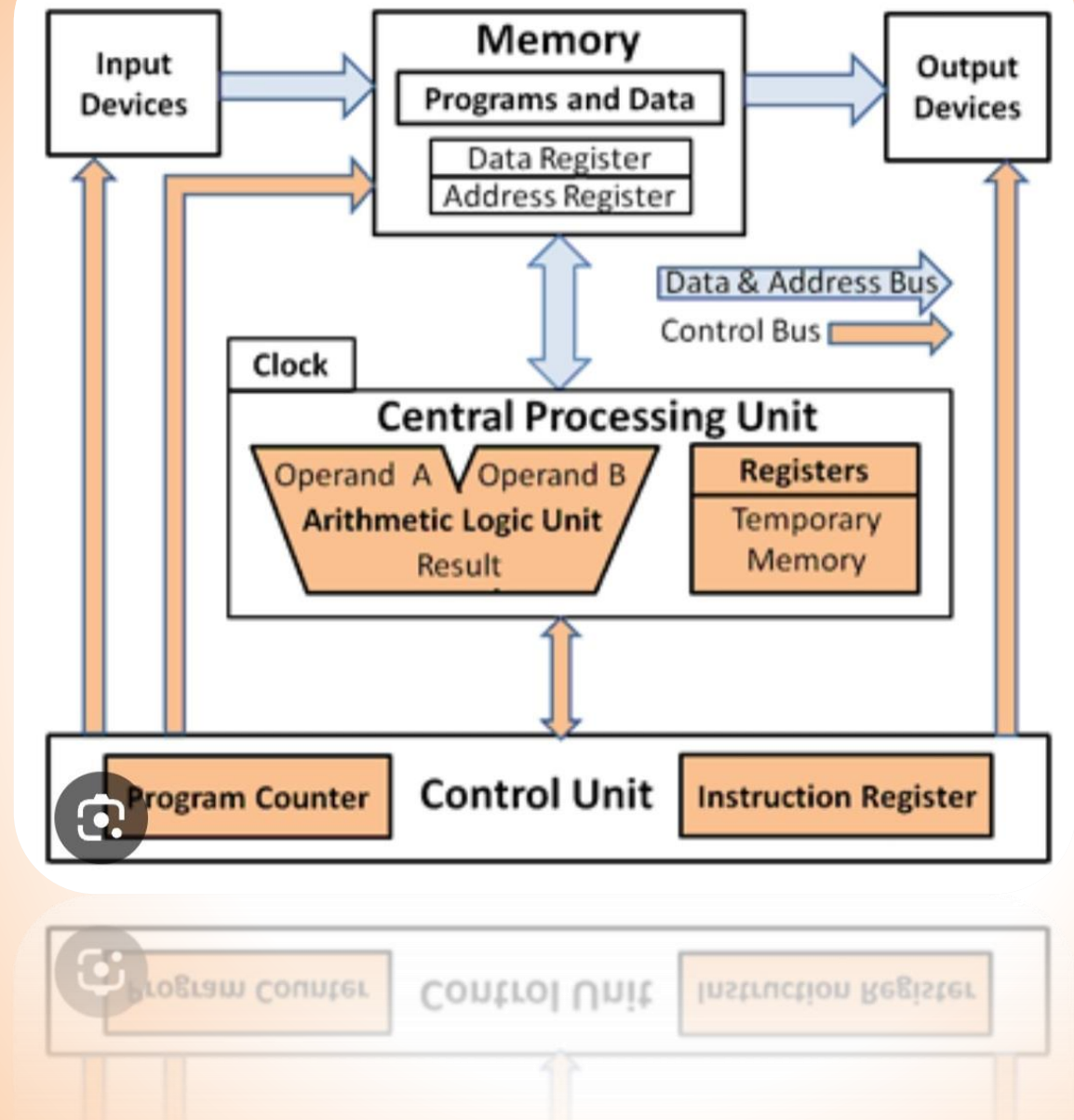


For Information Call Now
8777279548 / 8240968588



**Install
BSSEI APP**

Von Neumann Architecture



- By input device data transfer to central processing unit (CPU)
- CPU has mainly two part –
 1. Arithmetic logical unit(ALU)
 2. Control unit(CU)
- ALU- processing / manipulation of data , working any type of arithmetic work eg: addition, multiplication also sort put any kind of logical expression.
- CU- Generate control signal, timing signal generate, CU is the medium between input and output device.
- Control unit has direct relationship with main memory
- All the information which are stored in main memory transfer to ALU fo logical manipulation by CU.
- Than it generate actual information by any kind of output device.



Hardware and Software



Hardware



Software



For Information Call Now
8777279548 / 8240968588



Install
BSSEI APP

- Comparison between hardware and software:
Definition

HARDWARE

**The device that are
Required to store , execute
(run) the software. Machine,
Gadgets all are hardware.**

SOFTWARE

**Software is a collection of
instructions that let users
interact with hardware and
Command to do a particular
task.
programming run in the
hardware is basically called
software.**

- TYPES

HARDWARE

Processing, input device

Output device, control

**Storage, external device(speaker,
Modem)**

- FAULT

HARDWARE

Hardware fault happened

Randomly.

SOFTWARE

Application software

**system software (utility
programme are part of
system software)**

SOFTWARE

Software fault happened

**Systematic way that is major
minor way.**

- **TYPES OF SOFTWARE**

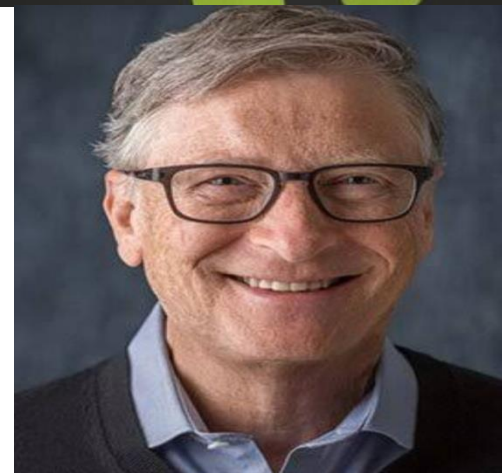
- **SYSTEM SOFTWARE**

Main software which operate hardware. It is also called main operating system. OS – collection of programme-collection of instruction.

WOBNTY/ ANDROID SYSTEM

- **WINDOWS-** Microsoft company made windows. Bill Gates made Microsoft company. (Microsoft word/ Microsoft excel, Microsoft power point, Microsoft email, calendar, contacts)
- **APPLE** –Apple was founded by Steve Jobs, Steve Woznaik, Ronald wayne. Current CEO of Apple company Tim Cook.

[pages(words), Numbers(Excel), Keynote(PowerPoint), Outlook(email, calendar, contacts)]



For Information Call Now
8777279548 / 8240968588



**Install
BSSEI APP**

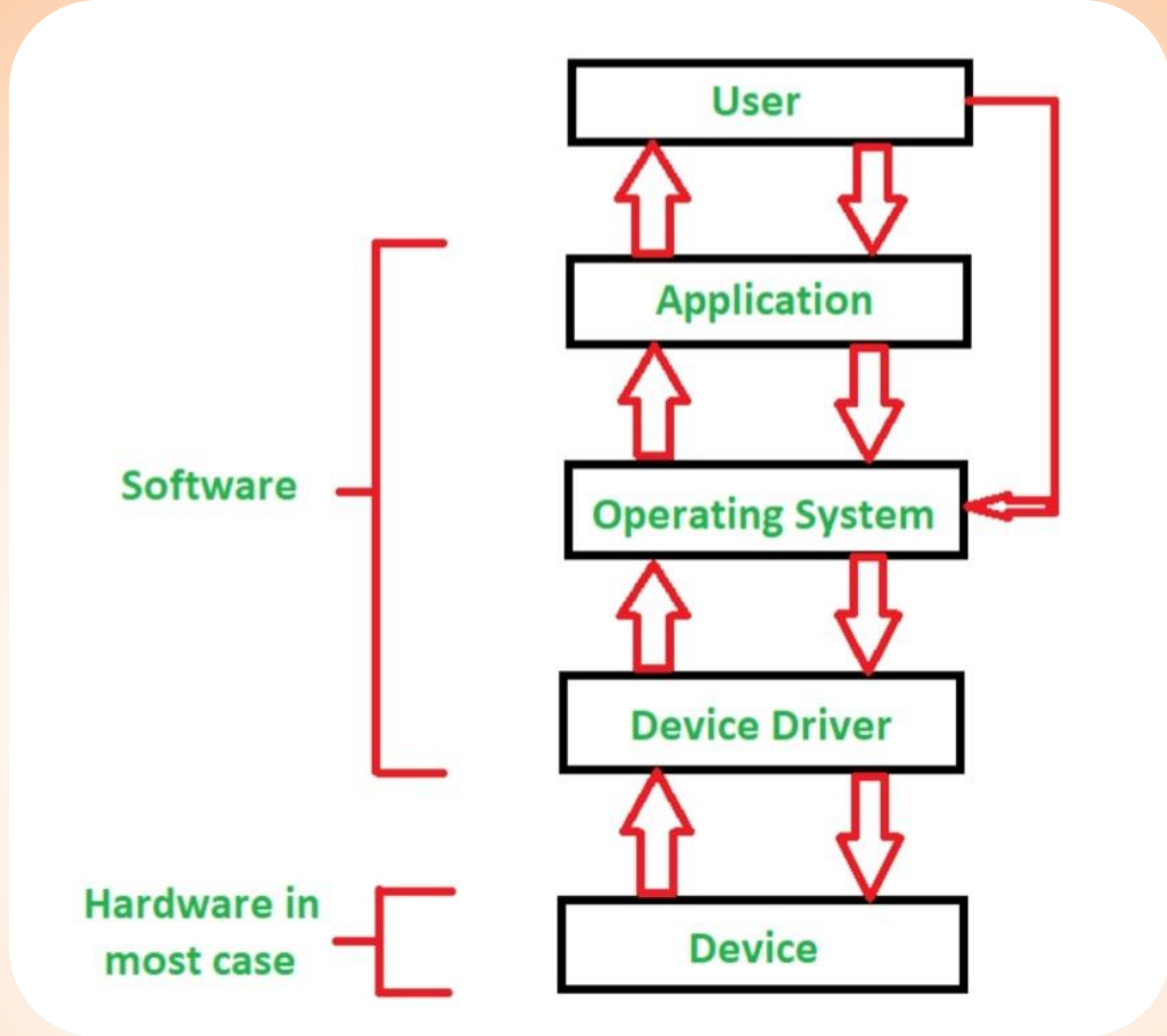
- DEVICE DRIVER

Device driver come between OS and hardware. How Os operate hardware that is known by device driver . Device driver is mediator between OS and hardware.

- APPLICATION SOFTWARE

Main software app which is based on operating system .Users directly used this software system. (eg: MS word, excel. Whatsapp, chrome)





- **UTILITY SOFTWARE**

Also called antivirus software.

One type of utility software it helps to eliminate virus by which every work can done clearly with out problem . Helps the users in system maintenance.



Freeware

Source code not available

**Adobe acrobat reader, Note pad ++
(windows) , Text edit(MAC). VLC
Media player, Avast free antivirus.**

Open source

**Open source software not
only free to use but allow
users to view , modify
And distribute the source
code.**

**Linux. Android, Mozilla
Firefox, Google Chrome**



 LINUX Operating system	 APACHE Webserver
 Thunderbird Email client	 OpenOffice.org Office productivity suite
 MySQL Relational database management system	 mozilla FOUNDATION
 Desktop environment	 Firefox the browser, reloaded.
 The GIMP Bitmap graphics editor	 Cross-platform remote control
 GNOME Desktop environment	 blender 3D graphics package
 FreeBSD Operating system	 php Programming language
 Programming language	 MediaWiki Web-based collaboration software
 HTML editor	 VIDOLAN Media player
 python Programming language	 GCC GNU compiler collection
 sendmail.org Mail server software	 eclipse Software development tool
 BitTorrent Internet file distribution	

SHAREWARE

- “TRY BEFORE YOU BUY”
- Available for free download on trial period(minimum 30 days)
- Limited in its features or functionality.
- After free trial it need payment for subscription.
- WinZip(File compression)
- Adobe acrobat (PDF software)
- Skype
- Adaware(antivirus software)



PROPRITARY/COMMERCIAL SOFTWARE

- Owned by an individual company and is typically sold and licenced.
- Users must purchase a licence or subscription to use them.
- Source code not publicly available
- Users must have agree on terms and condition of the software licence agreement.
- Netflix, Apple iOS, Zoom , Amazon prime, Disney+ Hotstar.

- Public domain software

Copyright issue not present. GNU get text (Internationalize library), MD5 encryption algorithms (security software).

- Triple ware

For availing extended version users need to paid.

Drop box(cloud storage) free up to2 GB , paid plans for more storage.

LinkedIn (Professional networking)

Spotify (add free music)

- Addware

Advertisement software. By advertisement get money.

Free games, cloud storage, email marketing tools.

- Donation ware

These software programmes are free to download and use but authors appreciated donations to support their development, maintenance, and improvement.

Ocean of PDF, Kee Pass (password manager)

- Nag ware

This is reputedly prompts or reminds users to purchase or register the software. Often with persistent notifications and alerts.

WinRAR (file archive)

- Freemium

Freemium models that aim to attract users with a free offering and then upsell them to a paid version as they need more features and functionality.

•Types of Hardware

CPU

Printer

Hard drive

Mother board

RAM

Monitor

Mouse

Computer keyboard

Scanner

Speakers

Camera.



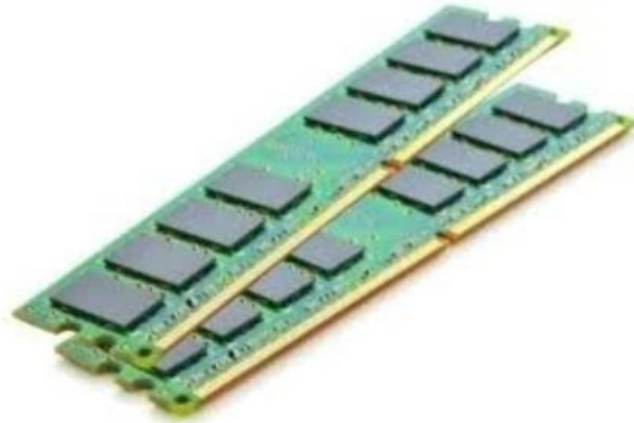
- Memory
- Memory unit is the main component of CPU.
- Computer memory is divided into mainly three important parts- Secondary memory, primary memory, cache memory.

[Flags- flags are contained in CPU. They work as registers because they indicate all currently running function and other operation.]

FUNCTION

FETCH- DECODE- EXECUTE- STORE

RANDOM ACCESS MEMORY



RAM

READ ONLY MEMORY



ROM



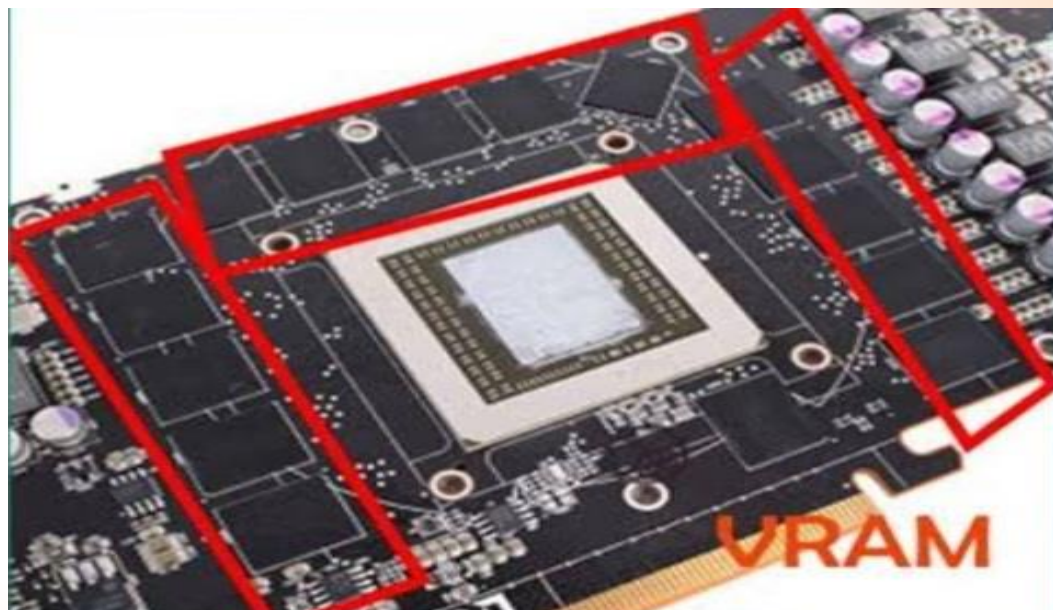
RAM

ROM

•RAM (RANDOM ACCESS MEMORY)

- RAM is made by semiconductor technology.
- RAM is an internal memory.
- It is known as dynamic in nature. It is volatile in nature.
- RAM is mainly two type- SRAM (Static random access memory), DRAM (Dynamic random access memory)
- Static RAM made by flip-flops and dynamic RAM made by transistor.
- Static RAM has more speed than dynamic RAM.
- Static RAM is known as cache memory.
- Static RAM is more costly than Dynamic RAM.

- NVRAM- Non volatile RAM eg: flash drive, pen drive(Secondary storage)
- MRAM- Magnetic RAM this is also non volatile in nature.
- VRAM- Video RAM . Volatile in nature. Situated beside mother board and graphics cards.



- ROM (READ ONLY MEMORY)
- It is a type which works as to save firmware.
- In CPU control unit work as control signal, timing signal both are actually situated on ROM chip.
- Only manufacturer made this so it only read.
- PROM- Read only memory can programmed.
- EPROM- Erasable programmable read only memory. By UV radiation it can be erasable by one time.
- EEPROM- Electrical Erasable programmable read only memory. Electrically step by step it can be erasable.

➤ **RAM**

➤ **Volatile**

➤ **Store information**

Temporary

➤ **Require flow electricity**

➤ **Retain data**

➤ **Used both read**

And write

➤ **Costly**

➤ **Very Fast and use lot power**

➤ **Use in CPU and cache memory**

ROM

non volatile

store information permanent

**does not require flow electricity
to retain data.**

only used for read

cheap

fast but use less power

firmware , microcontrollers.

Secondary memory

- Hard disk
- Optical disk
- CD ROM
- DVD ROM
- CD -R
- DVD-R
- DVD RAM
- Blue ray disk



Flash **Floppy Disk** **Zip Disk** **CD + RW**

CD + R **DVD + RW** **DVD + R** **Storage Tape**

Smart Media **Removable Hard - Drive** **Micro Drive** **Memory Stick**

Smart Cards **Online Storage Site** **PC Card**

Secondary Storage Devices



MEMORY HIERARCHY DESIGN

CPU

REGISTER

CASHE MEMORY (SRAMs)

MAIN MEMORY (DRAMs)

MAGNETIC DISK (DISK STORAGE)

OPTICAL DIASK

MAGNETIC TAPE



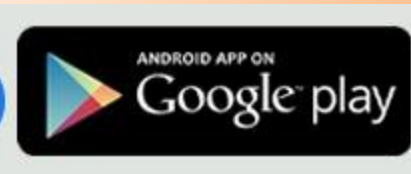
increase in capacity

and access time

increase cost per bit



For Information Call Now
8777279548 / 8240968588



Install
BSSEI APP

1. Which of the following components are part of the CPU of the Von Neumann model for a computer system?

a. ALU

b. HDD

c. Memory address register (MAR)

d. SSD

e. Control unit (CU)

1. a, e only

2. B, c, d only

3. A, c only

4. A, c, e only

2. Which of the following peripheral device are considered only input device?

- a. Microphone
- b. Projector
- c. Joy stick
- d. Scanner
- e. Track ball

- 1. a, c, d, e
- 2. A, b, d ,e
- 3. B, c , d , e
- 4. A, b, c , d



3.LIST 1

- a.System software
- b.Application software
- c.Security software
- d.Embedded software

1.a- 1 b-3 c-4 d-2

2.A-2b-4 c- 1 d-3

3.A-3 b-1 c-2 d-4

4.A-3 b-4 c-1 d-2

LIST 2

- 1. library management system
- 2. firewall
- 3. complier
- 4. automatic fridge

4. What is utility programme?

- a. It is a part of the operating system which carries out defragmentation or disk formatting.
- b. It makes copies and files on another storage device
- c. It permits sharing and exchange of data.
- d. It translates data into a format understood by the device.

5. Which of the following are broad functions of an operating system in computer?
- a. Handling the files and folders
 - b. Converting from high level language to low level language
 - c. Interfacing between user and hardware
 - d. Helping to run application software.



THANK YOU



For Information Call Now
8777279548 / 8240968588



**Install
BSSEI APP**