# HIS3B03-INFORMATICS AND HISTORY MODULE-1 TOPIC-HARDWARE & SOFTWARE
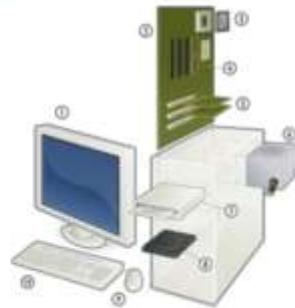
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# HARDWARE

- Physical components of computer- electrical, electronic & mechanical unit known as hardware of computer
- Equipments involved in the function of computer
- Consists of components that can be physically handled
- Functions of these components is divided in to 3 categories-**input, output & storage**
- Components of these categories connects to microprocessor, output & storage, specifically computer's CPU

- Examples –

- CPU- Hard disk- RAM- Video card

- Input devices- Keyboard- Mouse- Scanner- CD ROM- DVD- Microphone

- Output devices- Monitor- Printer- CD-DVD burner-projector-speaker

# SOFTWARE

- Instructions that make the computer work
- General term for organized collection of computer data & instructions
- Responsible for controlling, integrating, managing hardware of computer & to achieve specific tasks
- It tells the computer what to do & how to do
- Held either on your computers hard disk, CD-ROM, DVD or a floppy disk & is copied from the disk into the computers RAM, as & when required to perform tasks

- Two types: (1) System software (2)Application software
- An essential piece of system software on all computer is operating system- use a WINDOWS operating system for communication between computer & the user & a variety of specialized applications software packages for word processing, data entry, management & statistical analyses
- Instructions are given in the form of computer programs, which are written in computer programming languages

- A program controls the activity of processor
- A set of programs, which are specifically written to provide the user a precise functionality like solving a specific problem is termed as software package
- Example- word processing software package provides functionality to the computer so that it can be used to create text documents like letters & mailing lists
- Image processing software package a user in drawing & manipulating graphics

- Can equate with human body & human intelligence
- All human physical actions- walking, eating based on thoughts & feelings-raised by brain-if brain does not raise thoughts & feelings we do not perform any physical activity
- Similarly the actions & functioning of every hardware equipment is driven by software
- Combination of physical equipment(hardware) & logical instructions (software)  gives modern computing system their power & versatility

# Difference between hardware & software

| HARDWARE | SOFTWARE |
|---|---|
| 1. Physical unit of computer | 1. Collection of programs to bring hardware system into operation |
| 2. Permanent structure 7 cannot be altered | 2. No permanent structure but can be altered & reused |
| 3. Normally affected by agents like dust, heat, humidity etc | 3. Not affected by agents to some extent |
| 4. Understands only machine language, low level languages or binary languages | 4. Written by a well verse programmer & generally in higher level languages |
| 5. Works with binary code- presence or absence of pulses as 1's or 0's | 5.Represented by high level languages like BASIC, COBOL |