INTRODUCTION TO COMPUTER
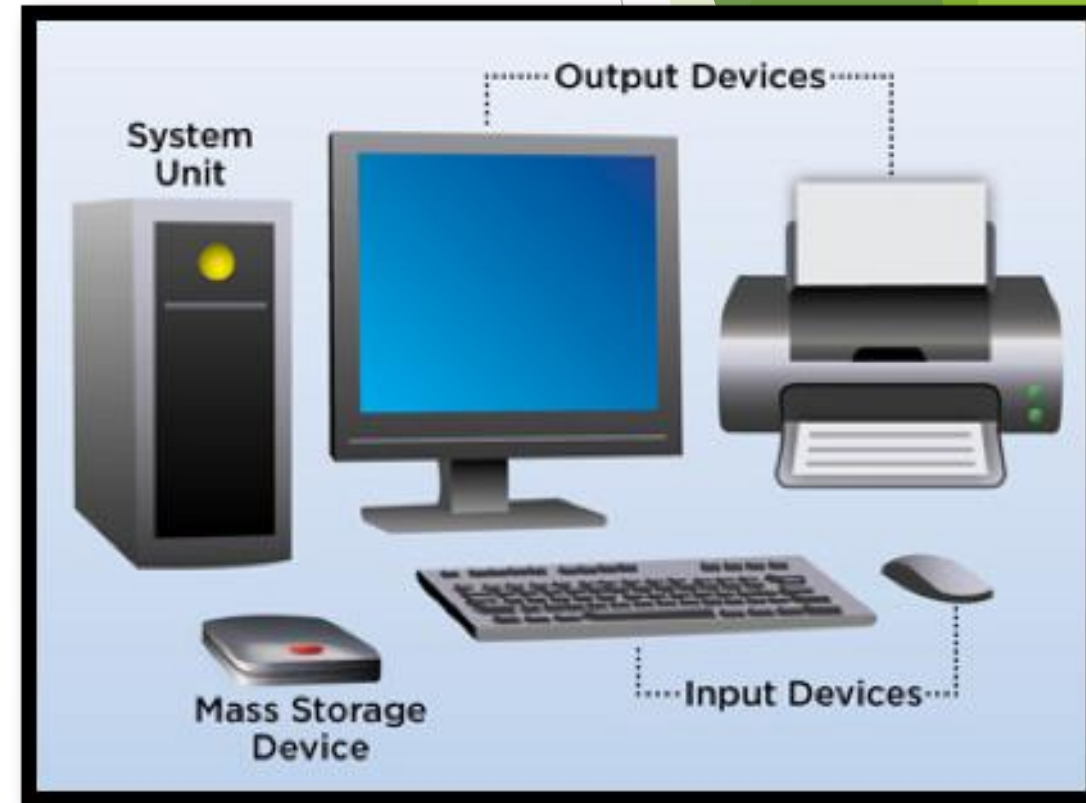
Introduction….

- *Electronic device for data storage and processing to give desired results.*
- Computare – Latin word – calculate
- Programmable machine
  - Accepts input data
  - Processes the data
  - Produces the required output
- Major component of IT
- Tremendous speed
- Reduces manual work
- Complex task easy

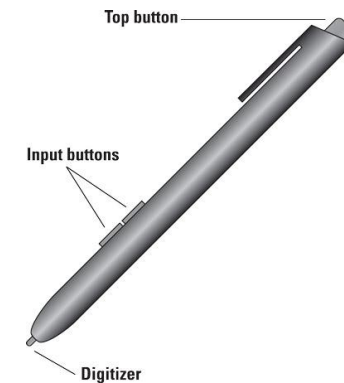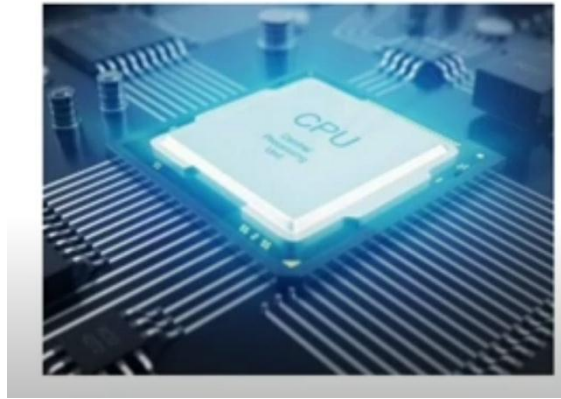# Components of a Computer

▶ Basic arrangement of hardware components of the computer to perform its desired operation.

▶ Input unit

▶ CPU

▶ Memory unit

▶ Output unit

Input unit

- Electromechanical device

- Inputting the data

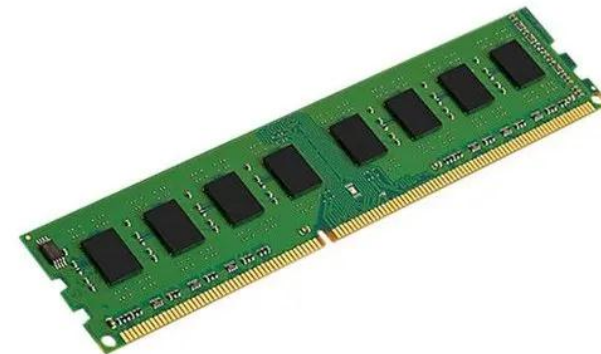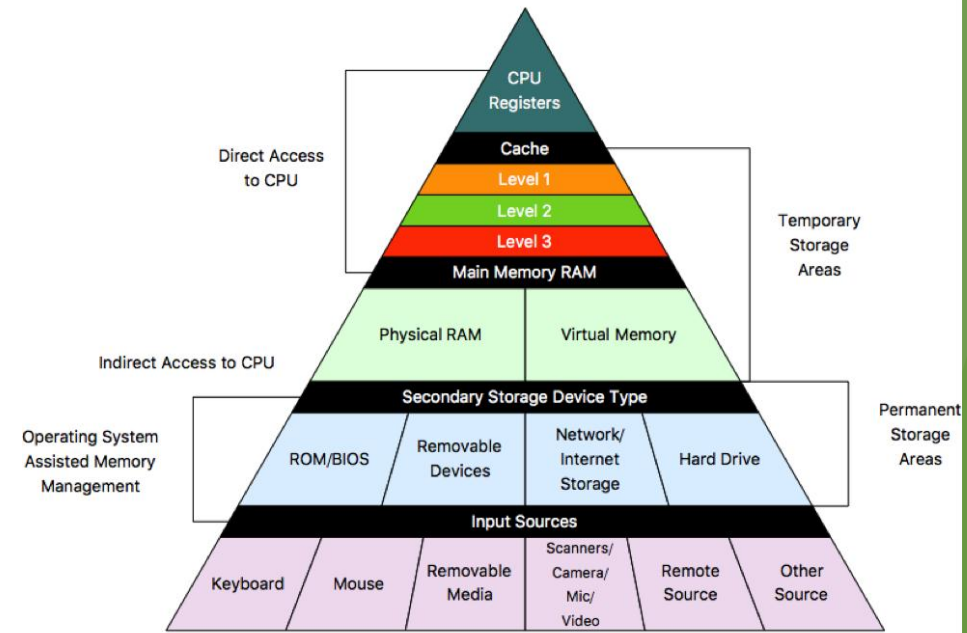- Keyboard, mouse, stylus, microphone, scanner

Central Processing unit

▶ Brain

▶ Processes the input data

▶ Single integrated chip called microprocessor

▶ Controls all the devices and inflow and outflow of data

▶ Executes stored program instruction

▶ Operations: Fetch, decode, execute and store

▶ Components: Arithmetic Logic Unit, Floating Point Unit, Interface Unit, Control Unit and Registers

Memory unit

▶ Storing data, instructions, intermediate and final result.

▶ Memory devices: RAM, ROM, Cache memory, buffers, Magnetic tape, hard disk, floppy disk, Compact disk, flash drive etc.

▶ Types : Primary and Secondary

Output unit

- ▶ Electromechanical device
- ▶ Display the processed data to the user
- ▶ Monitor, Printer, plotter, speaker

Applications of Computer

- Education
- Medicine and Health care
- Business
- Banking
- Manufacturing
- Communication
- Scientific Research
- Entertainment
- Military
- Home
- Engineering

Education

- E-book for learning
- Online exams
- Get instant results
- Teach – powerpoint
- Student details – store
- School, college, universities – admission and appointment

Medicine and Health care

▶ Diagnose the disease

▶ Monitor surgical machines

▶ Small and special purpose computers operate within the human body

▶ Store patients data, medical history, previous treatments, tests, diagnosis, symptoms

▶ Bill

▶ Online appointments

Business

- Clever accountant
- Record entries and plan finances
- Marketing the products
- Taxes can be calculated and paid online
- Predict future trends of business – AI software
- Online shopping
- Store all business related files and records

Banking

- Store details of customers and employees

- Daily transactions

- Bank transactions online without stepping into the bank

- ATM machine's to debit money

- See account balance

Manufacturing

- Monitor the pressures and temperatures of the power plant
- Design the product
- Prepare the label

Communication

▶ Through email we can communicate

▶ Chat software and video conferencing tools – real time communication

▶ Communicates with the classmates – homework assignments, group projects

Scientific Research

▶ Develop theories

▶ Collect and test data

▶ Exchange information

▶ Analyse percentage of materials present in the chemicals, soil samples and even the air we breathe.

Entertainment

- Games

- Download movies and music

Military

- Weapon research and development
- Launch rocketing to the correct destination
- Defense purposes

Home

- Record personal items
- Keep records, write letters, draw pictures, play games
- Washing machines and microwave oven are operated
- Answer telephone calls
- Safeguard the house during vocations