Evolution of Computers

- Third Generation Computers (1964-1970)- much faster & smaller than previous.
- Used Integrated Circuits as main component.
- Memory was capacity greatly enlarged.
- Used operating systems to run many programs simultaneously.
- Used Keyboard as input and Monitor to display output.
- IBM 360 & 370

Contd.

- Fourth Generation Computers (1971-Present)- Use of Microprocessors as main component.
- Improved storage with network connectivity.
- Greater computing power.
- IBM PC & Apple Macintosh.

Contd.

- Fifth generation Computers (1990-present) – they are also called Super computers.
- High speed with high storage.
- Artificial Intelligence as main component.
- CRAY CS300, PARAM 8000 etc.

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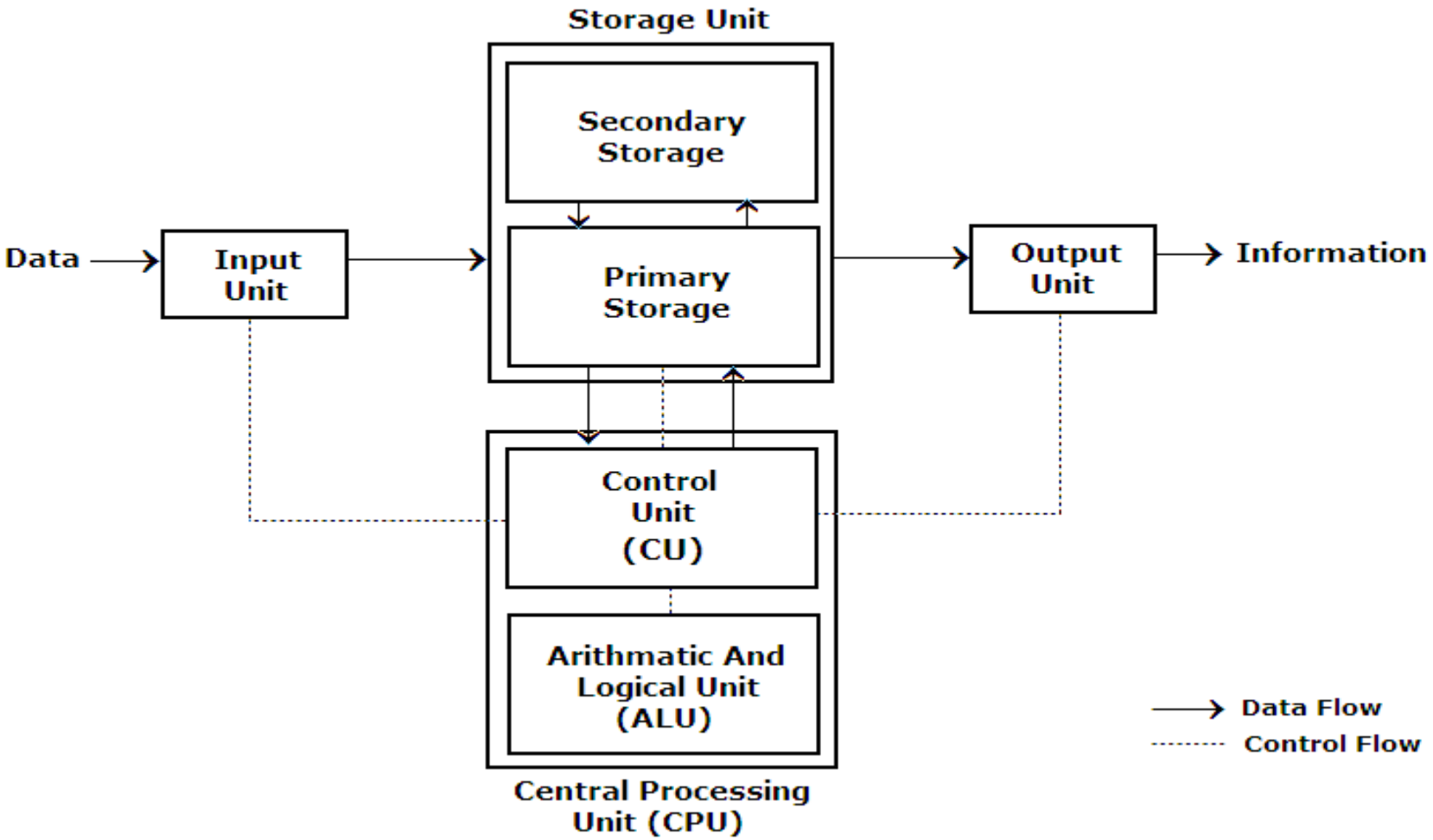
Functions & Operations of Computer

- Based on structure & tradition, Computers are divided into 3 categories.
- Analogue Computer
  - To measure temperature, Atmospheric pressure etc.
- Digital Computer
  - Modern Computers. Works on Binary number system
- Hybrid Computer
  - Combination of Analog & Digital Computer

Contd.

- In terms of efficiency, price, size there are 4 types of computers
- Main Frame Computer
  - IBM 5390, CRAY etc.
- Mini Computer
  - DEC10, VAXII
- Micro Computer
  - PCs
- Super Computer
  - PARAM 8000

Computer Working Principal



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Working Principal

- Input: A device which send instructions from the outer world to the computer.
  - Keyboard, Mouse, Scanner, OMR (Optical Mark Reader), Modem etc.
- Process: Analyse & Execution of the instructions supplied to the CPU
- Storage: Stores the programs & the output of the instructions
  - RAM -ROM
- Output: Devices that shows Outcome of the instruction given to the CPU
  - Monitor, Sound System, Printer etc.

Features of Computer

- Speed- 1 nanosecond- 10^{-9} second
- Data Storage- 4 bit – 1 nibble
  - 8 bit – 1 byte
  - 1024 byte – 1 Kb
  - 1024 Kb – 1Mb
  - 1024 Mb – 1 Gb
  - 1024 Gb – 1 Tb
  - 1024 Tb – 1 Pt
- Accuracy
- Storage