



Dr.SNS RAJALAKSHMI COLLEGE OF ARTS AND SCIENCE, (AUTONOMOUS)



COIMBATORE-641049

Accredited by NAAC (Cycle III) with “A+” Grade

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Affiliated to Bharathiar University, Coimbatore.

DEPARTMENT OF COMPUTER APPLICATIONS

Course Code / Course Name: **23UCU403 /Computer System Architecture**

YEAR: **2023-2024**

CLASS: **I BCA “A”**

STAFF NAME: **Dr.A.DEVI**

UNIT I – **Data Representation**



Agenda



- What is Computer?
- Major Computer Components
- Computer Components Interconnection
- Data Representation
- Bits, Bytes, and Words

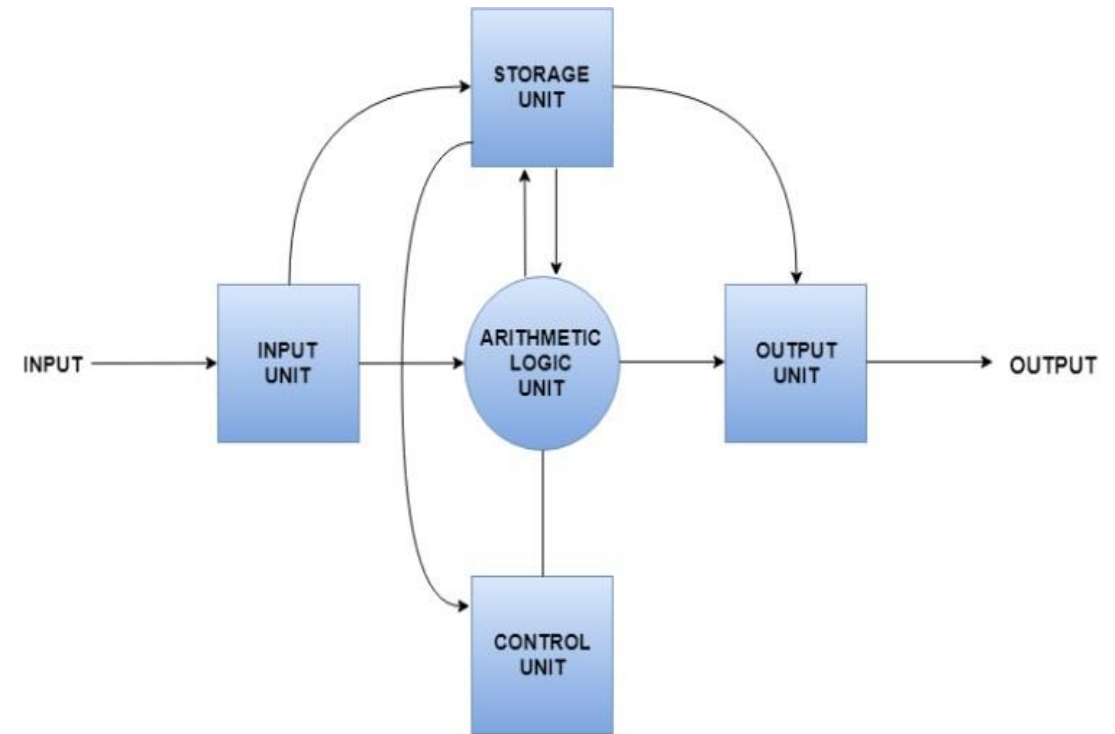


What is Computer?

A data processing machine capable of performing computations and making logical decisions very fast. Consists of hardware such as keyboard, screen, mouse, disks, memory, CD-ROM, and processing units. A program (software) is a set of instructions written in a computer language that runs on a computer.

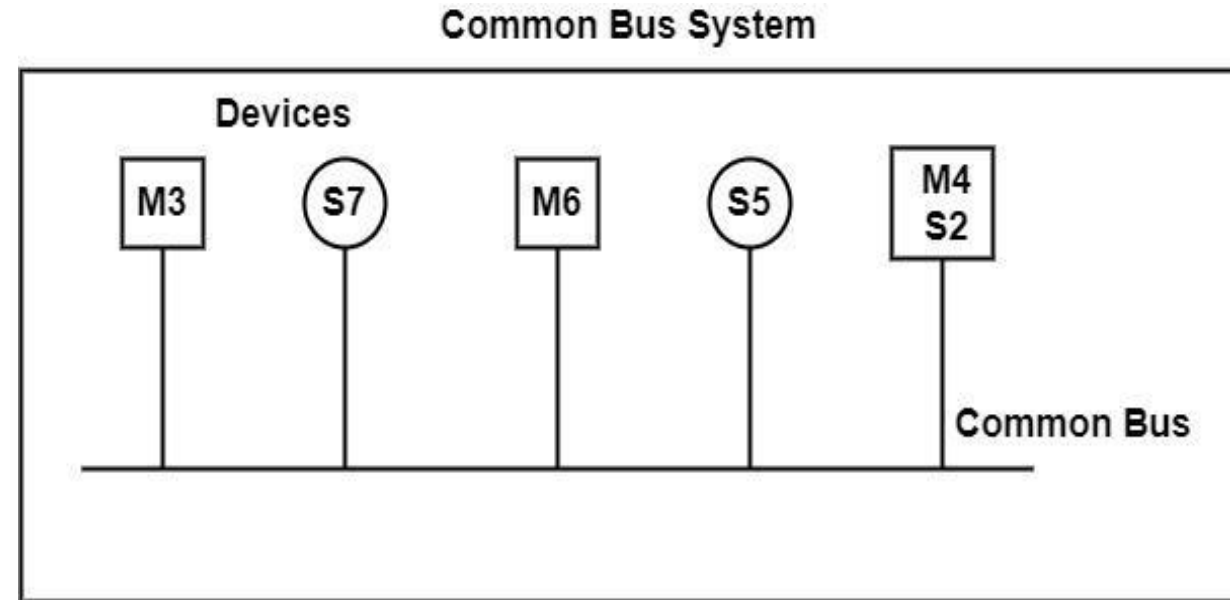
Major Computer Components

- Input / Output (I/O) Unit
- Memory Unit
- Arithmetic and Logic Unit (ALU)
- Central Processing Unit (CPU)



Major Computer Components Interaction

- Data Bus
- Address Bus
- Control Bus





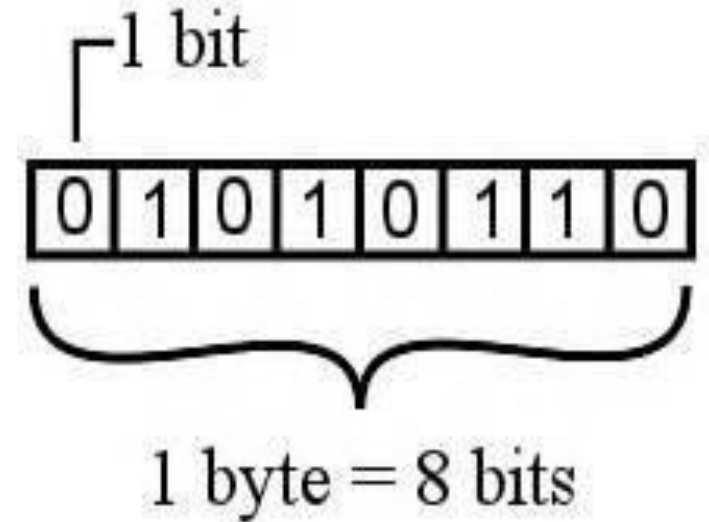
Data Representation

Data Types

- Text
- Number
- Image
- Audio
- Video

Bits, Bytes, Words

- A bit is a single binary digit (a 1 or 0).
- A byte is 8 bits
- A word is 32 bits (that is, 4 bytes)
- Long word = 8 bytes = 64 bits
- Quad word = 16 bytes = 128 bits





Number Systems

- Decimal (0-9)
- Binary (0 or 1)
- Octal (0-7)
- Hexadecimal. (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F)



Thank You