CS & IT ENGINEERING

Basics of Computer System

How Computer Works

Lecture No.- 02

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Recap of Previous Lecture

Topic Computer Architecture

Topic Computer Organization

Topic Components of Computer

Topic CPU, Memory & IO Devices

Topics to be Covered

- Topic: Digital Computer
- Topic: Compiler
- Topic: Instructions
- Topic: How Computer Works

bit (b) ⇒ 1 digit
0 or 1

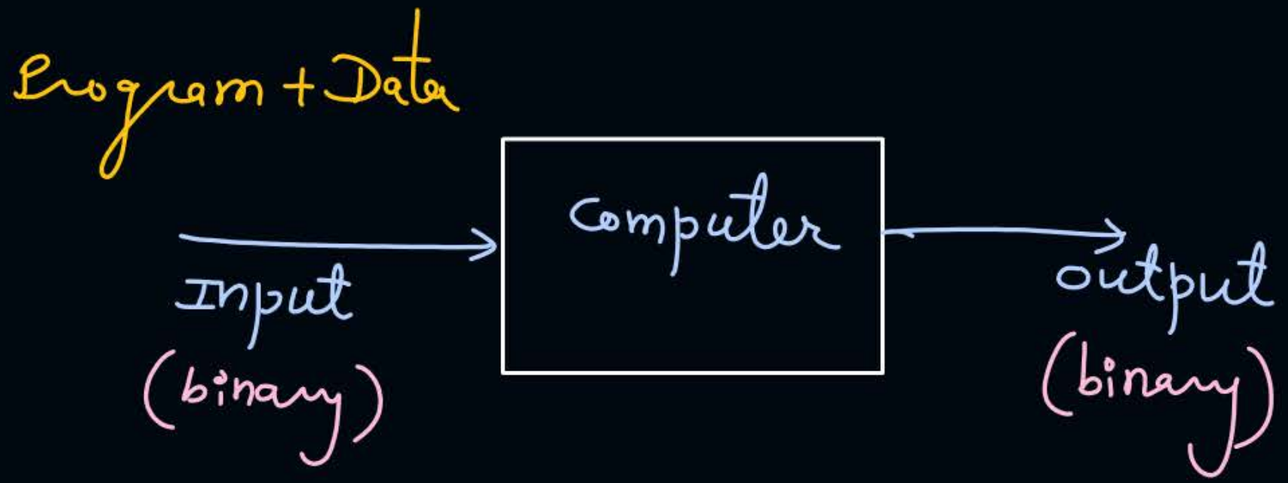
byte (B) ⇒ 8-bits Combination

Topic : Digital Computer

computer which takes input in form of binary and gives output — 11 —.

Binary Number System :-

where all the numbers are created with only 2 digits ⇒ 0 and 1.



Input ⇒ (62.5) ⇒ convert into binary ⇒ given to computer

Topic : Instruction

```
#include<stdio.h>
void main()
{
int a, b, c;
printf("Enter 2 values: ");
scanf("%d %d", &a, &b);
c = a + b;
printf("Sum = %d", c);
}
```

Topic : Instruction

High-level language program

```
#include<stdio.h>
void main()
{
int a, b, c;
printf("Enter 2 values: ");
scanf("%d %d", &a, &b);
c = a + b;
printf("Sum = %d", c);
}
```

programming statements

Compiler

Language Translation

Low-Level language program or machine code or binary code or byte code

Instructions

```
10111000
10000001
11110010
01010101
11110110
01010101
10001111
10100011
00111101
```

Topic : Instruction

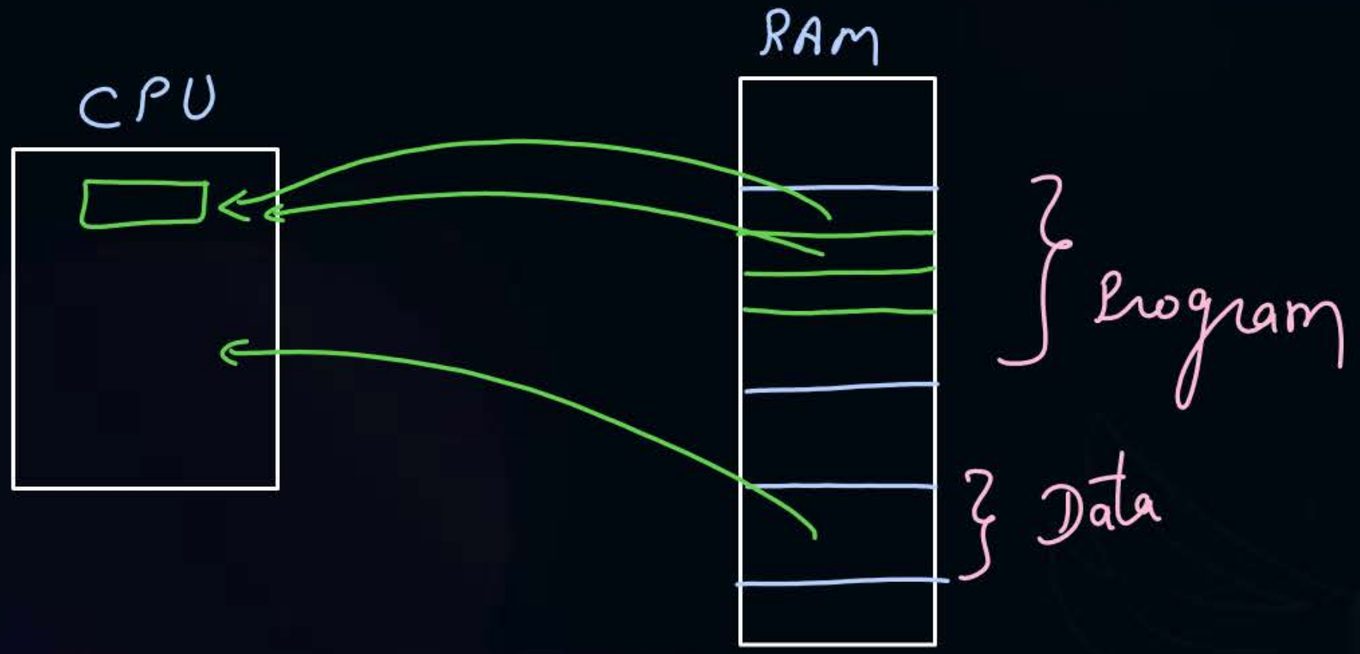
A group of bits which instructs computer to perform some operation

Topic : Main Memory (RAM)

→ used to store current running programs & their data

Topic : How Computer Works

How program is executed



CPU is very-very fast that it can execute Millions of instructions in one seconds.

Topic : How Instructions Executed

↓

Instruction cycle

2 mins Summary

Topic Digital Computer

Topic Compiler

Topic Instructions

Topic How Computer Works

Happy Learning

THANK - YOU