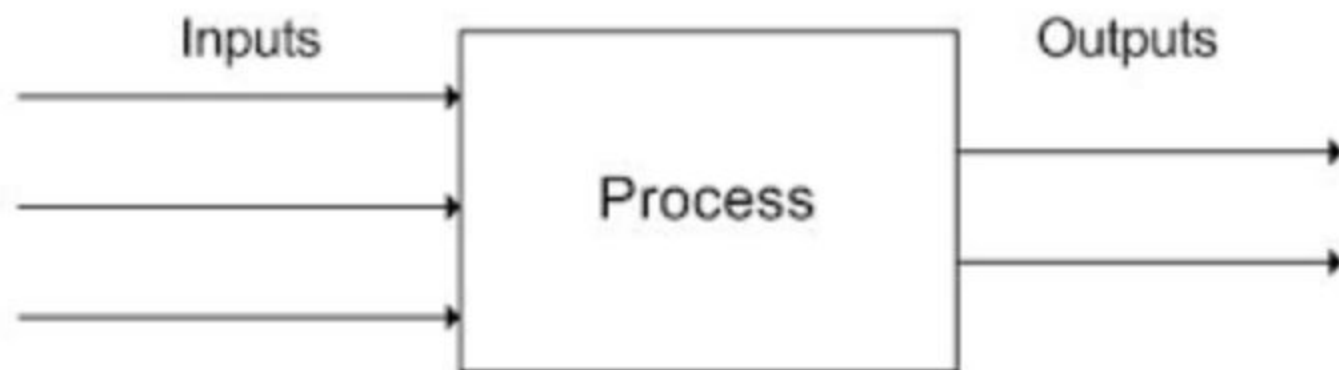


What does processing mean?

What logics do computer understand?

Some building blocks of programming languages/algorithms



■

$$1 + 2 = 3$$

$$00000001 = 1$$

$$00000010 = 2$$

$$+ \quad = ?$$

$$1 + 2$$

1 is converted to binary

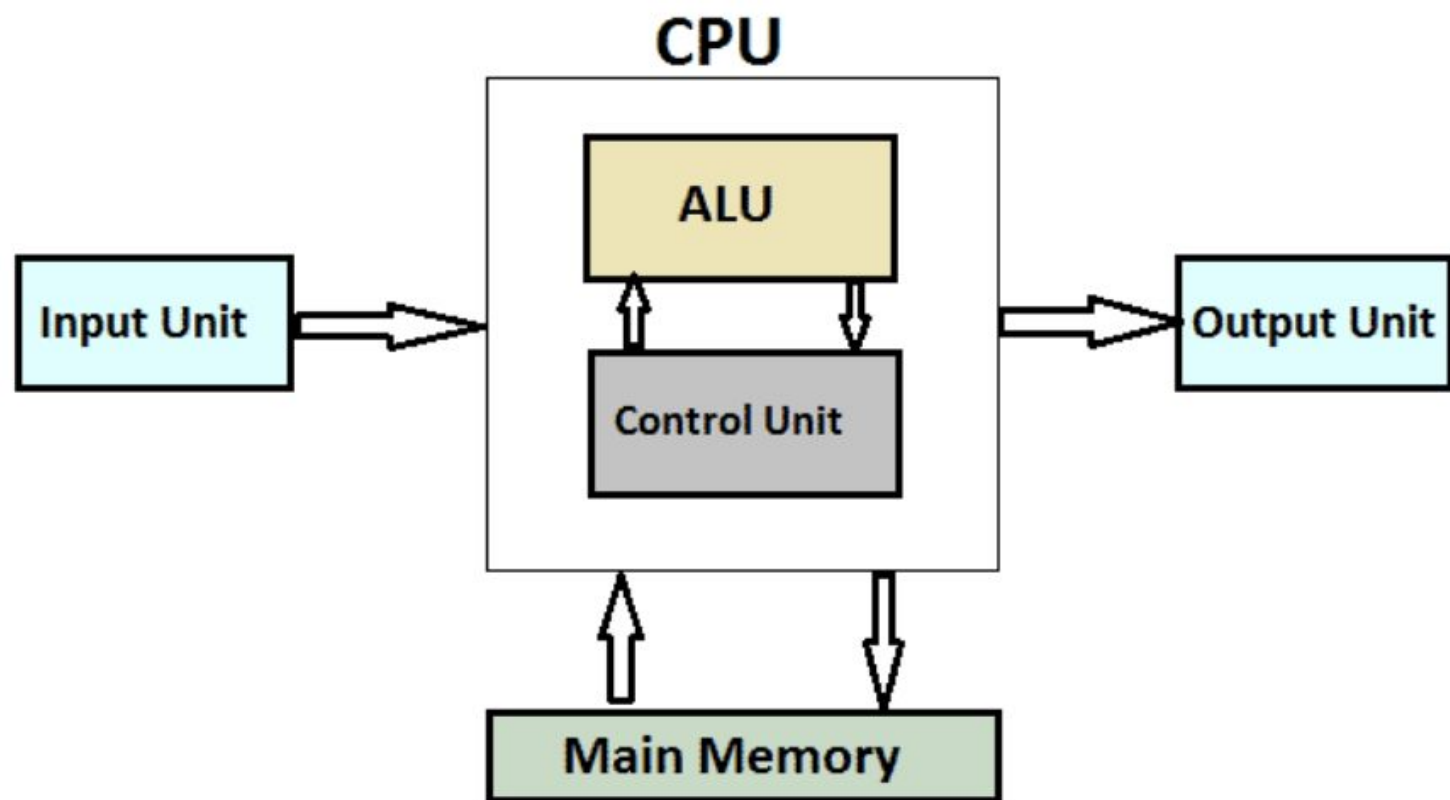
+ 2 is converted to binary

2 is converted to binary

1 + 2 in binary format is stored in the RAM

CPU fetches this information from RAM and passes it to the ALU

ALU computes the result and store the result in the RAM which is then forwarded to the output device



```
{  
go_forward (GO FORWARD)  
go_forward (GO FORWARD)  
turn_right (TURN RIGHT)  
go_forward (GO FORWARD)  
} - Algorithm
```

Algorithm = Group of instructions which tell the computer what to do.

Pseudocode

Pseudo = False/Something which is not real

{

Take 2 numbers as input

Calculate Product = input1 * input 2

Print Product

} -> Pseudocode to multiply 2 numbers

Function

Function - A group of instructions

Algorithm vs Function?

Algorithm could have multiple functions in it.

Function to Make Maggi

Function - make_maggi

```
{  
  ● Open Maggi packet  
  ● Take the noodles out from the packet  
  ● Put the noodles in the wok  
  ● Add water to it  
  ● Turn on the gas  
  ● Add masala  
  ● Wait for 5-10 minutes  
}
```

Make_maggi

Make_maggi

Make_maggi

Make_maggi

Conditionals

Conditional - Things we do conditionally based on an answer

IF <Student X studies properly>

THEN <X will get a good job>

IF <X learns how to drive a car>

THEN <X can go on long drives>

IF <something is true>

THEN <something will happen>

IF <X learns how to drive a car>
THEN <X can go on long drives>
ELSE <X can't go on long drives>

IF <something is true>
THEN <something will happen>
ELSE <something will not happen>

IF <you give me 10 Rs>

THEN <I'll give you a packet of chips>

ELSE IF <you give me 20 Rs>

THEN <I'll give you a candy>

ELSE <I won't give you anything>

Boolean Expression

Boolean Expression - Is something which has a true/false (1/0) value

IF <boolean expression is True>

THEN <do something>

X = 6

IF <X == 5>

THEN <print 5>

ELSE <print 7>

X == 5 (is X equals to 5?)

Loops

Print X 10 times

Print X

Print X

Print X

Print X

Print X

Print X

Print X

Print X

Print X

Print X

Repeat /loop 20 times {

Print X

}

X = 0

WHILE <X is not equal to 10> {

Print X

X = X + 1

}

Boolean - Statement/Instruction which can either be True/False