## Number System

- 1) Binary number system
  - -> Munter system using base 2
  - -> It was only two digit O & 1
- 1 Decimal number system
  - -> This system uses the base 10
  - -> It was digite from 0 to 9
  - → base: It is number of symbols used en number system.

0,1,2,3,4.5,6,7,8,9

Total 10 symbols that's why base 10

## Decimal to binary conversion:

- 1) Devision Method
- -> Divide number by 2
- -> Store the remainder
- → Repeat the above steps with Quotlent until quotient is less than 2.
- -> Reverse the bits so obtained

Munices Systems 69° N → 10 Lemainder Division O Tay A Transit 10/2 -> 5 high ocul- plas cicu 5/2 -> 2 Disting secure springed 2/2 -> 1 send of the west of markeys that the 1/2 -> 1 ot 0 may elipib un of to N -> 10 -> 1010 (2) Bitusise Method: -> Objain bit with bitwise AND operation 1.6. [N & 1) - would conver man of lewise → light shift N by 1 (N = N >> 1) -> Repeat until N > 0. A stance about -> Reverse the bits so obtained or and order

Code:
11 Division method

Ent division method (Put n) {

Ent 62 nary:0;

Ent i=0;

while (n > 0) }

```
Put bit = n % 2;
      binary = bits * pow (10, i++) + binary;
    return binary;
 11 Bitwise Method
 int bitwisemethod (Put n) } .
     Put benary = 0;
    Put i=0;
     uehile (n > 0) }
       int bits = (n & 1) }
       binary = bits * paw (10, i++) + binary;
      return binary;
Bluary to Decimal Conversion :-
```

(1) Multiply each digit with its place value i) Add up all place values. is the cleanal number.

```
Code:
   Put bénarytodecémal (put n) }
       Put digits = 0;
       Put i=0;
       while (n) }
        Put bits = n % 10;
        dégite = bits * pow (2, i+t) + dégits;
                                                  n = n / 10;
     return digits;
       penulo + (++) , 0) ( wor it this . went
                             CHANGE CROWN:
                                                  9
                                                  5
                                                  5
                                                  5
```