MATHEMATICS

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logic | Code explaination | any extra point you want to say

---

logic

input = n

res = count of digits.

```
{
  res = 0
  while (n > 0) {
    n /= 10;
    res++;
  }
```

Count of Digits

Eg input 5324 , count the digits
Output = ?

Sol=> let n = 5324
res = 0

logic

loops wogera to acche se use karo 0 to forgo

Initially → n = 532
res = 0

Iteration-1

n = 532

res = 1

Iteration-2

n = 53

res = 2

Iteration-3

n = 5

res = 3

Iteration-4

n = 0

res = 4

Iteration-5

Break loop

→ what is modulos?

is it Palidrome?

→ What is palidrome numbers?

Eg 4 4 4 = 4 4 4

Eg 4 3 4 5 4 3 4

= 4 3 4 5 4 3 4

Eg 4 4 5 4 4

= 4 4 5 4 4

→ * logical code

input = n

output = Yes/No

{ int n ;

int rev = 0 ;

→ Shut logic *

while (n > 0) {

num = 5732

reversed = 2345

num = reversed

compare

reversed = rev x 10 + n % 10;

n / 10;

}

if (n == rev) { output: yes }

else output: no;

}

Eg 43534

Initially:

n = 43534

rev = 1

Ite-01

rev = 0 + 4

n = 4353

Ite-02

rev = 40 + 3

n = 435

Ite-03

rev = 430 + 5;

n = 43;

Ite-04

rev = 4350 + 3

n = 4

Ite-05

rev = 43530 + 4

n = 0

Iter - 06

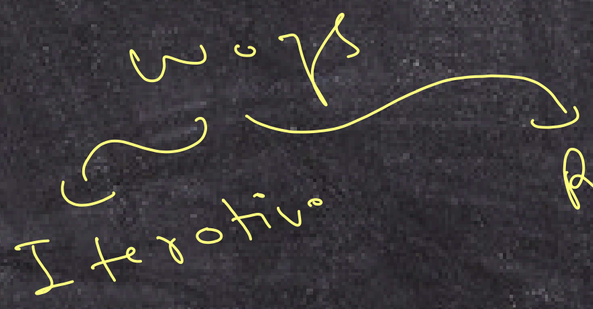
loop will Break.

factorial

* what is factorial ?

$\lfloor n = 1 \times 2 \times 3 \ldots n$.

*

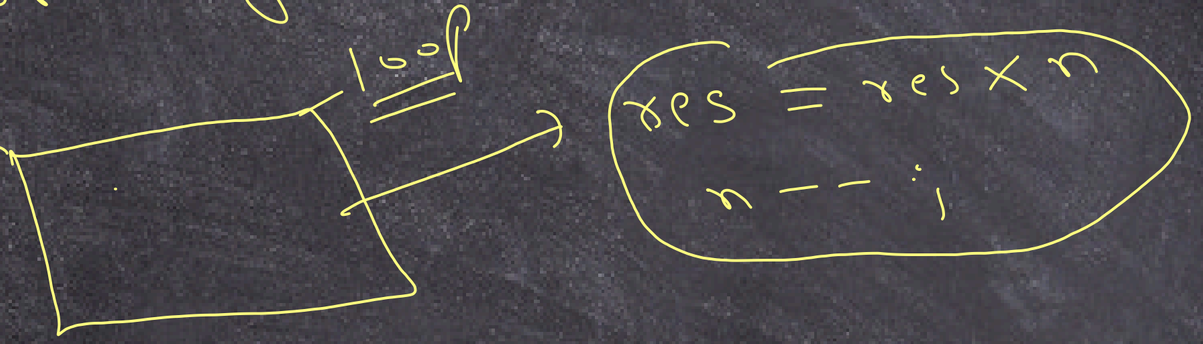


* Iterative

→ Short logic

input n :

output:- n times



Logic code

```
{
  int n;
  int res = 1;
  while(n>0){
```

res = res x n

n --;

}

Output = res ;

}

Eg n = 4

Initially

n = 4;

res = 1;

Ite - 01

res = 1 x 4

n = 3

Ite - 02

res = 4 x 3

n = 2

I - 03

res = 4 x 3 x 2

n = 1

Itc - 04

res = (4 x 3 x 2) x 1

n = 0

Itc - 05

Break;