

## Loops

### (Assignment Questions)

**Question 1** : WAP to find the **Factorial** of a number entered by the user.

**Hint** : factorial of a number  $(n) = n * (n-1) * (n-2) * (n-3) * \dots * 1$

and exists for positive numbers only. We write factorial as  $n!$

So, factorial of  $0! = 1$ ,  $1! = 1$ ,  $2! = 2$ ,  $3! = 6$ ,  $4! = 24$  and so on.

Note - Please do not confuse factorial with NOT EQUAL TO operator, they are not the same.

**Question 2** : WAP to print the multiplication table of a number, entered by the user.

**Question 3** : WAP to input a number and check whether the number is an **Armstrong** number or not.

An **Armstrong** number is a number that is equal to the sum of cubes of its digits.

**Question 4** : For a positive N , WAP that prints all the prime numbers from 2 to N.  
(Assume  $N \geq 2$ )

**Question 5** : For a positive N , WAP that prints the first N **Fibonacci** numbers.  
(Assume  $N \geq 2$ )

**Fibonacci** series : 0, 1, 1, 2, 3, 5, 8, 13, 21, 34 ....

This is a series where each number is a sum of previous 2 numbers in the series.

Eg :  $1 = 0 + 1$ ,

$2 = 1 + 1$ ,

$3 = 1 + 2$ ,

$5 = 2 + 3$ ,

$8 = 3 + 5$  & so on.