Que:-1 Write a Python Program to find the factorial of a number ?

In [2]:
```
#solution:-


def factorial(num):
    if (num < 1):
        return 1
    else:
        return num*factorial(num-1)
num = int(input('Enter a number:- '))
value = factorial(num)
print(f'The Factorial of {num} is {value}')

```

```
Enter a number:- 6
The Factorial of 6 is 720
```

Que:-2 Write a Python Program to display the multiplication table ?

In [3]:
```
#solution:-

def generateTable(first,entries):
    for i in range(1,entries+1):
        print(f'{first} X {i} = {first*i}')

num = int(input('Enter a number:- '))
values = int(input('Enter number of entries:- '))
generateTable(num,values)
```

```
Enter a number:- 5
Enter number of entries:- 10
5 X 1 = 5
5 X 2 = 10
5 X 3 = 15
5 X 4 = 20
5 X 5 = 25
5 X 6 = 30
5 X 7 = 35
5 X 8 = 40
5 X 9 = 45
5 X 10 = 50
```

Que:-3 Write a Python Program to print the fibonacci sequence ?

In [7]:
```
#solution:-

n_terms = int(input ("How many terms the user wants to print:-"))


first_number = 0
second_number = 1
count = 0


if n_terms <= 0:
    print ("Please enter a positive integer, the given number is not valid")

elif n_terms == 1:
    print ("The Fibonacci sequence of the numbers up to", n_terms, ": ")
    print(first_number)

else:
    print ("The fibonacci sequence of the numbers is:-",n_terms)
    while count < n_terms:
        print(first_number)
        nth = first_number + second_number

        first_number = second_number
        second_number = nth
        count += 1
```

```
How many terms the user wants to print:-12
The fibonacci sequence of the numbers is:- 12
0
1
1
2
3
5
8
13
21
34
55
89
```

Que:-4 Write a Python Program to check Armstrong number?

In [10]:
```
#solution:-


x = int(input("Enter the number : "))

power = len(str(x))

y = x
sum = 0
while y > 0:
    digit = y % 10
    sum = sum + digit ** power
    y = y//10
if x == sum :
    print(f"{x} is armstrong number")
else:
    print("Not an armstrong number")
```

```
Enter the number : 153
153 is armstrong number
```

Que:-5 Write a Python Program to Find Armstrong number in an interval?

In [11]:
```
#solution:-

x = int(input("first number:-"))
y = int(input("second number:-"))


for i in range(x,y+1):
    power = len(str(i))
    temp = i
    sum = 0
    while temp > 0:
        digit = temp % 10
        sum = sum + digit ** power
        temp = temp//10
    if i == sum :
        print(i)
```

```
first number:-100
second number:-500
153
370
371
407
```

Que:-6 Write a Python Program to Find the Sum of Natural Numbers?

In [13]:
```
#solution:-


x = int(input("enter the number : "))

sum = 0
for i in range(0,x+1):
    sum+=i
print("Sum of natural numbers upto {} is {}".format(x,sum))
```

```
enter the number : 15
Sum of natural numbers upto 15 is 120
```