1. Write a Python Program to Find the Factorial of a Number?

2. Write a Python Program to Display the multiplication Table?

3. Write a Python Program to Print the Fibonacci sequence?

4. Write a Python Program to Check Armstrong Number?

5. Write a Python Program to Find Armstrong Number in an Interval?

6. Write a Python Program to Find the Sum of Natural Numbers?

1. Write a Python Program to Find the Factorial of a Number?

In [4]:

```python
def factorial():
    a = int(input("Enter a number: "))
    b = 1
    if a > 1:
        for i in range(1, a+1):
            b = b*i
        print("Factorial is ",b)
```

```python
    else:
        print("factorial is not possible")

factorial()
Enter a number: 5
Factorial is  120
```

2. Write a Python Program to Display the multiplication Table?

```python
def table():
    a = int(input("Enter a number you need table
for: "))
    b = int(input("Enter a number until you need
multiple: "))

    for i in range(1, b+1):
        print(a, 'x', i, '=', a*i)

table()
Enter a number you need table for: 2
Enter a number until you need multiple: 10
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
```

3. Write a Python Program to Print the Fibonacci sequence?

```python
terms = int(input("How many terms? "))

n1, n2 = 0,1
count = 0

if terms >1:
    while count < terms:
        print(n1)
        n = n1 + n2
        # update values
        n1 = n2
        n2 = n
        count += 1

elif terms == 1:
        print(n1)

else:
    Print("Please enter positive number greater
than 1")
```

```
How many terms? 5
0
1
1
2
3
```

4. Write a Python Program to Check Armstrong Number?

```python
num = int(input("Enter a number: "))
add = 0

a = num
while a > 0:
    digit = a % 10
    add += digit ** 3
```

```python
        a //= 10

    # display the result
    if num == add:
        print(num,"is an Armstrong number")
    else:
        print(num,"is not an Armstrong number")
```
Enter a number: 153
153 is an Armstrong number

5. Write a Python Program to Find Armstrong Number in an Interval?

```python
lower = 1
upper = 2000

li = [] #list

for i in range(lower, upper + 1):

    count = len(str(i)) #Length of Number
    add = 0
    a = i

    #Condition to be a Armstrong number
    while a > 0:
        digit = a % 10
        add += digit ** count
        a //= 10

    # display the result
    if i == add:
        li.append(add)

print(li)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 153, 370, 371, 407,
1634]
```

6. Write a Python Program to Find the Sum of Natural Numbers?

```python
def sum_of_natural_number():
    a = int(input("Enter a number: "))

    if a > 0:
        add = 0
        while a>0:
            add += a
            a -= 1
        print(add)

sum_of_natural_number()
Enter a number: 15
120
```