Loops(while,for)

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1- Print number from 1 to 5 using a while loop.

```
[3]: num = 1

     while num <= 5:
         print(num)
         num += 1
```

```
1
2
3
4
5
```

2- Calculate the sum of number from 1 to 10 using a while loop.

```
[6]: num = 1
     total = 0

     while num <= 10:
         total += num
         num += 1

     print("The sum of numbers from 1 to 10 is:" , total)
```

```
The sum of numbers from 1 to 10 is: 55
```

3- Calculate the factorial of a number using a for loop.

```
[13]: num = int(input("Enter a number:"))
      factorial = 1

      for i in range(1, num + 1):
          factorial *= i

      print("Factorial of", num , "is:", factorial)
```

```
Enter a number: 7
```

```
Factorial of 7 is: 5040
```

4- Count the number of vowels in a string using a for loop.

```python
s = "Hey, My name is Jatin"
s = s.lower()

v_count = 0
vowels = "aeiou"
for char in s:
    if char in vowels:
        v_count += 1

print("Number of vowels:", v_count)
```

```
Number of vowels: 6
```

5- Print a pattern using nested loop.

```python
num_row = 5

for i in range(1, num_row+1):
    for j in range(1, i+1):
        print("*", end = "")
    print()
```

```
*
**
***
****
*****
```

6- Generate a multiplication table using nested loop.

```python
num = 8

for i in range(1, 11):
    for j in range(1, 2):
        result = num * i
        print(num, "x", i, "=", result)
```

```
8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80
```