Loops

Loops are used when you need to execute a statement or group of statements multiple times. There are two types of loops. They are

- ➢ For loop
- ➢ While loop

For Loop :

For loop is mainly used if you know the number of iterations or number of times you need to execute the statement or group of statement.

Syntax :

for (condition):

statement

……..

……..

Statement

Example :

var = int(input('Enter how many numbers you need to print from 0'))

for i in range(0,var):

print(i)

Output:

Enter how many numbers you need to print from 0 5

0

1

2

3

4

Explanation :

While program gets executed the condition statement (i in range(0,5)) will be like the followings.

- o For first iteration the value of i will be equal to 0
- o For second iteration the value of i will be equal to 1
- o For third iteration the value of i will be equal to 2
- o For fourth iteration the value of i will be equal to 3
- o For fifth iteration the value of i will be equal to 4
- o For sixth iteration the value of i will be equal to 5

When the value of i became 5 the condition statement will become false which tells the computer to stop executing the statements inside for loop.

Example 2:

var = int(input('Enter the no of times star should print having one less than previous ones')

      for var != 0:

            print('*' * var)

            var = var − 1

Output :

Enter the no of times star should print having one less than previous ones 5

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Explanation :

Iteration	Value of var	var != 0
1	5	True
2	4	True
3	3	True
4	2	True
5	1	True
6	0	False

When the condition become false the flow comes out of loop.