

Loops

Loops in python are used to execute a block of code repeatedly a certain condition is met.

python mainly provides two loops

- ① For loops
- ② while Loop
- ③ Nested Loops

- * for loop inside for loops
- * for loop inside while loops
- * while loop inside while loops
- * while loop inside for loops

① For loop —

Two types

① For loop with sequence

Syntax:

```
for variable in sequence: variable;  
statements
```

② For loop with range() function

Syntax:

```
for variable in range():  
statements
```

Sequence data-types

① String, list, set, dict, tuple.

```
sub = "python"  
print(sub)  
① for i in sub:  
    print(i)
```

i → iterative variable

O/p

p

y

List

→ list

```

② colors = ['black', 'white', 'red', 'yellow', 'orange']
print(colors)
for i in colors:
    print(i)
  
```

sub = 'python'

sub[0]

→ printing manually

write a program to print both for loop position and value

```

→ for i in enumerate(sub):
    print(i)
  
```

Function → we will print both

* For C initialization, Condition inc/dec

* Range (start value, stop value, step value)
 we have default start value 0
 default step size → 1

Range (1, 11, 1)

(i=1; i<11; i+1)

i = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

or

range (1, 10, 1)

(i=1; i<10; i+1)

i = 1, 2, 3, 4, 5, 6, 7, 8, 9

```

for i in range(5):
  
```

i = 0, 1, 2, 3, 4

print(i)

print(" q m")