

Loops in Python

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Sometimes a programmer wants to execute a group of statements a certain number of times. This can be done using loops. Based on this loops are further classified into following types. For loop, while loop, nested loop.

Introduction to loops

Sometimes a programmer wants to execute a group of statements a certain number of times. This can be done using loops. Based on this loops are further into following main types.

For loop

While loop

The For Loop

For loops can iterate over a sequence of iterable objects in python. Iterating over a sequence is no nothing but iterating over string, Lists, Tuples and dictionary.

Example Iterating over a string:

```
name="Munawar"
for i in name:
    print(i)
    if(i=='a'):
        print("This is a Special")
```

Example Iterating over a list:

```
colors=["Red", "Green", "Blue", "Yellow"]
for color in colors:
    print(color)
    for i in color:
        print(i)
```

range():

What if we do not want to iterate over a sequence? What if we want to use for loop for a specific number of times?

Here we use the range () function.

Example

```
for k in range(5):  
    print(k+1)  
  
for k in range(1,20001):  
    print(k)
```

Quick Quiz

Explore about third parameter if range (x, y, z)

```
for k in range(1,12,3):  
    print(k)
```

Skip every three numbers.

Source Code

```
# name="Munawar"  
# for i in name:  
#     print(i)  
#     if(i=='a'):  
#         print("This is a Special")  
# colors=["Red","Green","Blue","Yellow"]  
# for color in colors:  
#     print(color)  
#     for i in color:
```

```
#         print(i)

# for k in range(5):
#     print(k+1)

# for k in range(1,20001):
#     print(k)

for k in range(1,12,3):
    print(k)
```

Thank You