

01



LOOPS IN PYTHON





WHAT IS LOOP

- All programming languages need ways of doing **similar things** many times, this is called **iteration**.
- Examples of iteration in Python are **Loops**. Python uses the **For** Loop, **While** Loop and **Nested** Loops.





TYPES OF LOOP

- There are two types of loop in python.

1. While loop

2. For loop

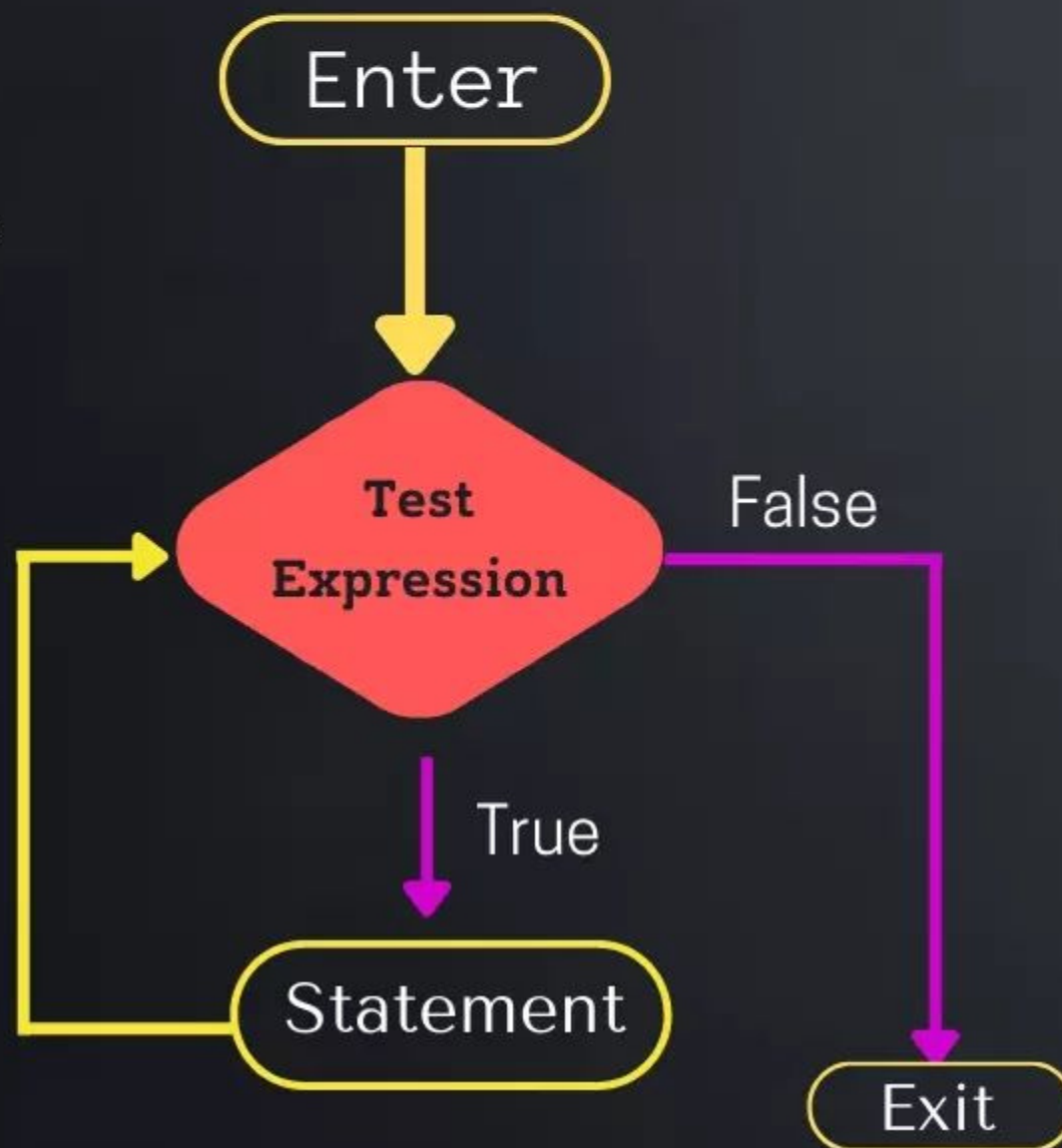




while-Loop

- **While** loops execute a set of lines of code iteratively till a condition is satisfied.
- Once the condition results in False, it stops execution, and the part of the program after the loop starts executing.

while - loop
Flowchart





WHILE LOOP EXAMPLE

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

1
2
3
4

```
i = 1  
while(i<5):  
    print(i)  
    i=i+1  
  
else:  
    print("End of the loop")
```

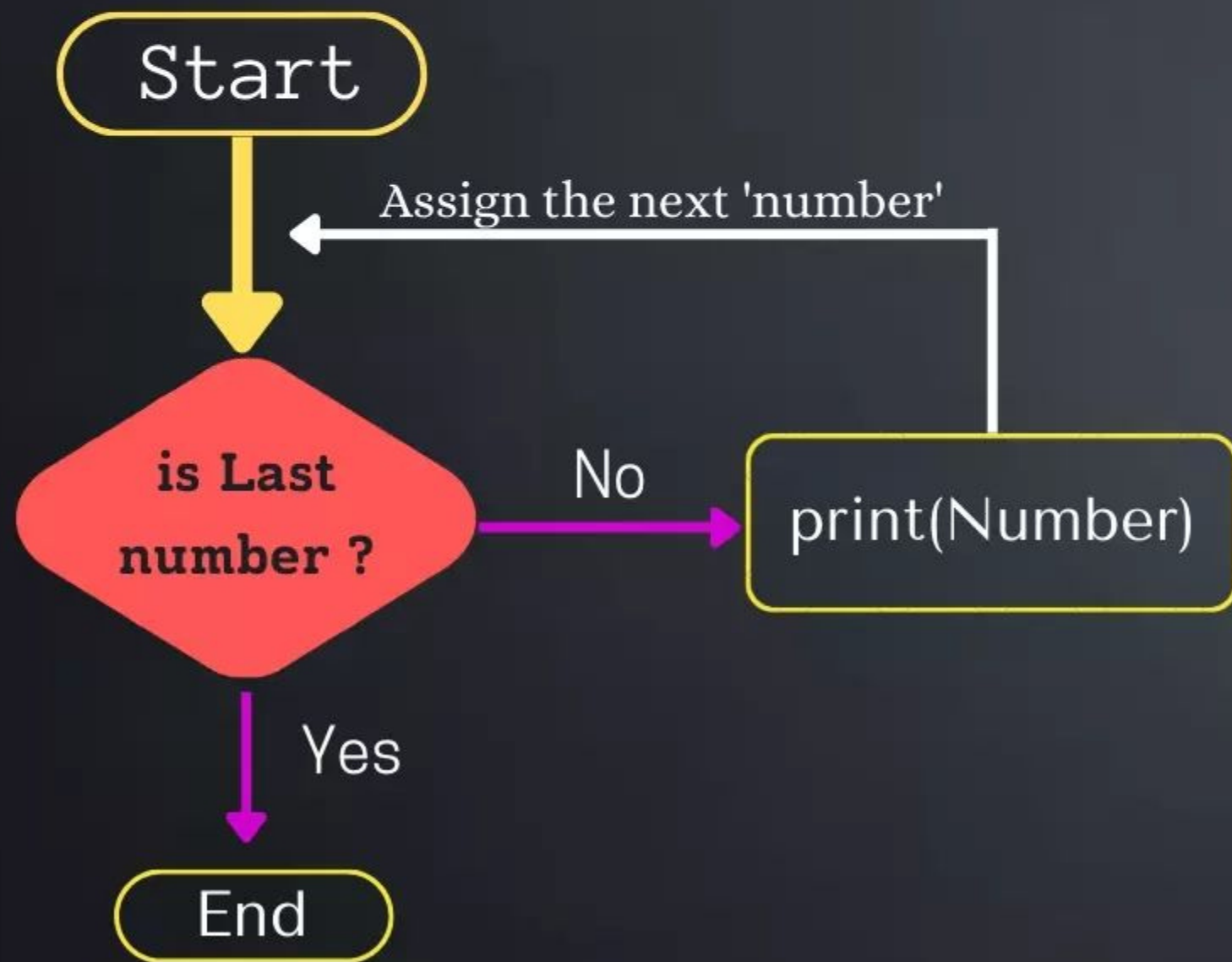
1
2
3
4
End of the loop



For – Loop

- **For** loop in Python works on a sequence of values.
- To loop through a set of code a specified number of times, we can use the **range()** function,

For - loop
Flowchart





FOR LOOP EXAMPLE

```
fruits = ['2', '4', '6', '8']  
  
for x in fruits:  
    print(x)
```

2
4
6
8

```
for x in range(4):  
    print(x)
```

0
1
2
3