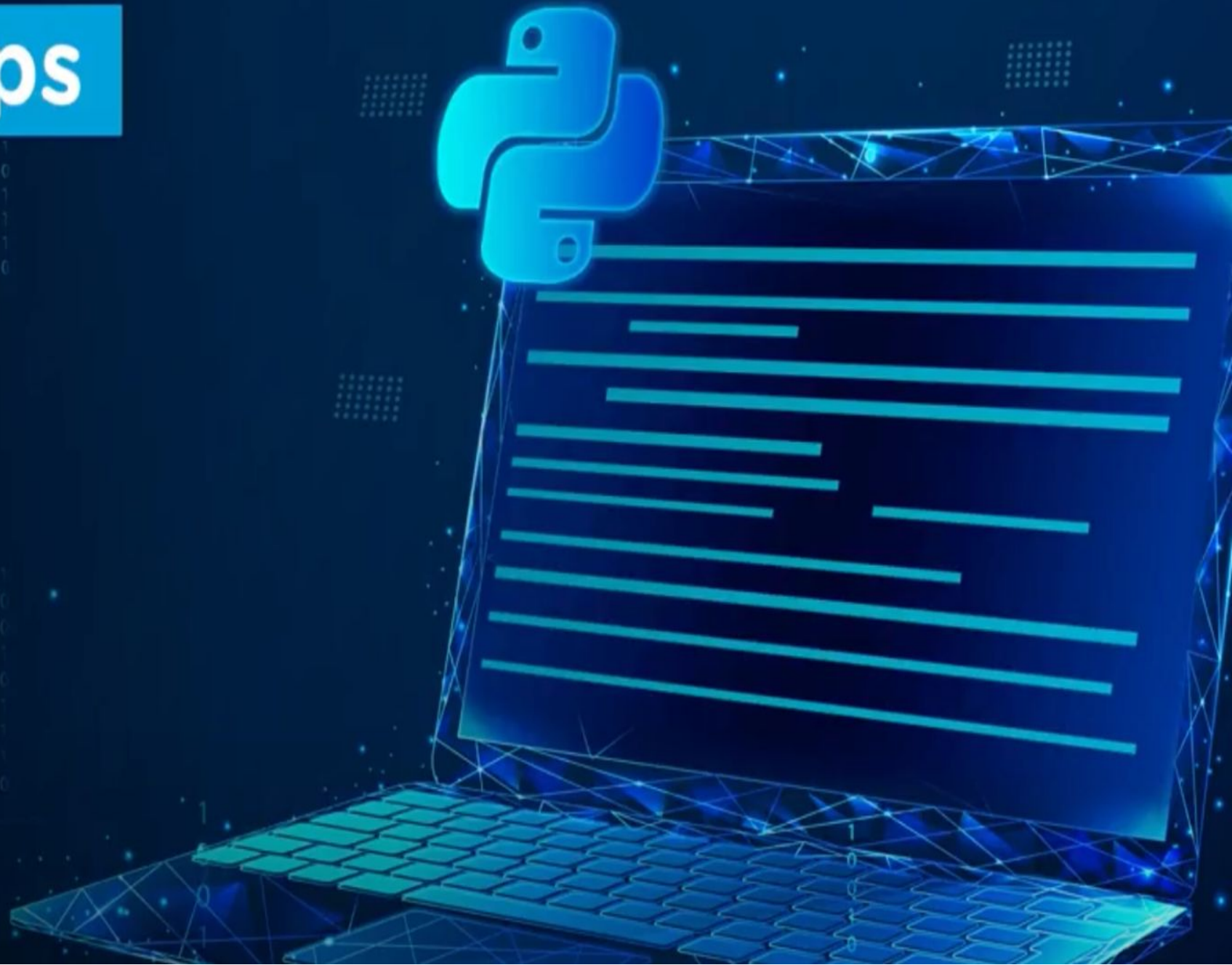


Python For Loop

Python Loops



What's in it for you?

- **For Loops in Python**
- **For Loop Examples**
- **While Loops in Python**
- **While Loop Examples**
- **Nested Loops in Python**
- **Nested Loop Examples**

What is a For Loop in Python?

For loop has the potential to iterate over the items present in a sequence, such as lists, tuples, dictionaries, or strings

A for loop uses the `range()` function to iterate for a specific amount of time

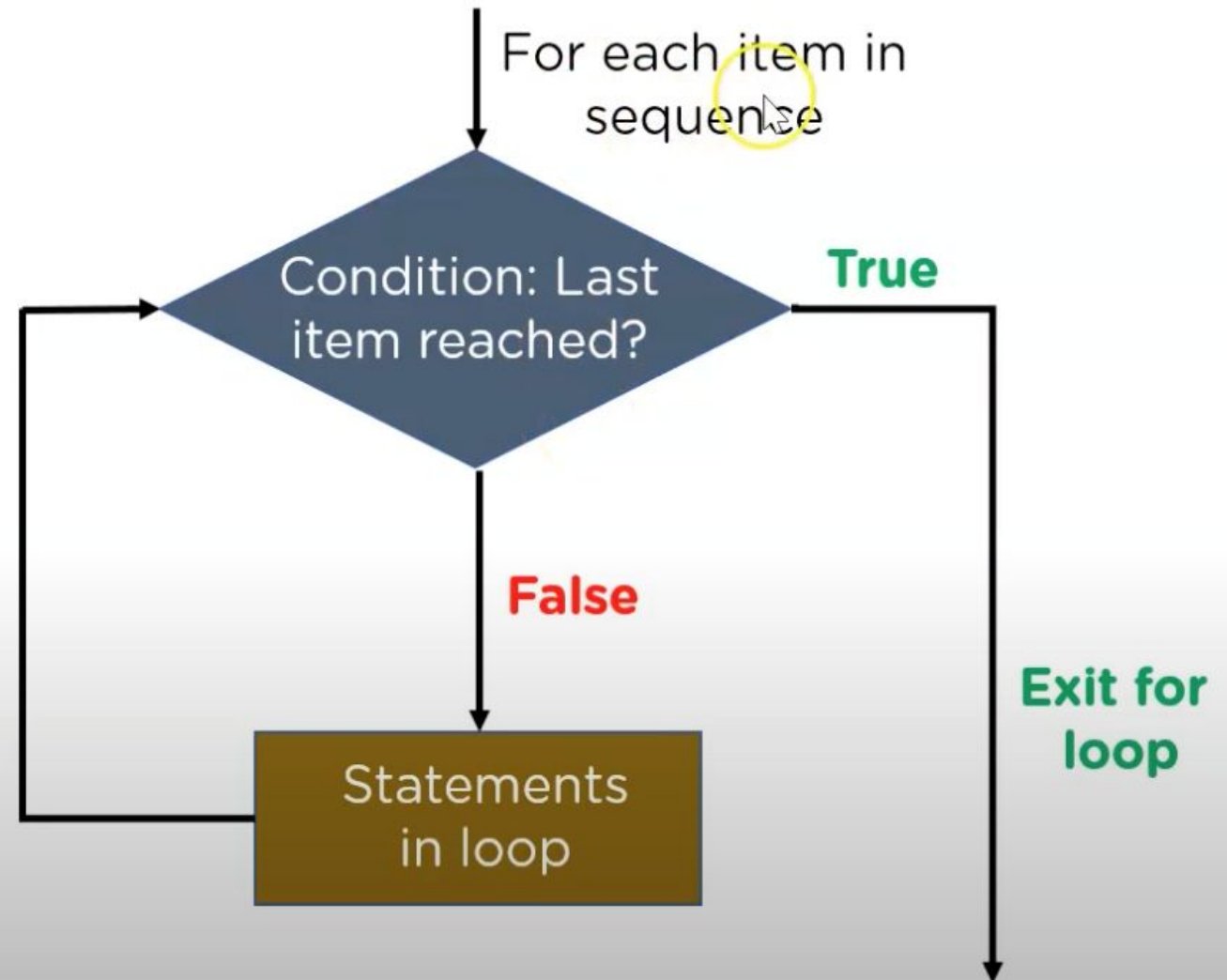


Syntax of a For Loop

Syntax:

```
for iterator_var in sequence:  
    statement(s)
```

Rest of the code



```
[1]: name = "MAC108 PYTHON COURSE"
     for x in name:
         print(x)
```

M
A
C
1
0
8

P
Y
T
H
O
N

C
O
U
R
S
E

```
• [3]: name = "MAC108 PYTHON COURSE"
      for x in name:
          print(x, end = "")
```

M A C 1 0 8 P Y T H O N C O U R S E

```
[4]: name = "MAC108 PYTHON COURSE"
     for x in name:
         print(x, end = "-")
```

M-A-C-1-0-8- -P-Y-T-H-O-N- -C-O-U-R-S-E-

```
In [3]: ▶ # Use for loop in a list
programming = ["Java", "Python", "Ruby", "HTML"]
for iter in programming:
    print(iter)
```

```
Java
Python
Ruby
HTML
```

```
In [4]: ▶ # Find the avg of a list of numbers
list_num = [20, 25, 10, 50, 45]
sum = 0
for i in list_num:
    sum = sum + i
print("Sum =", sum)
print("Average =", sum/len(list_num))
```

```
Sum = 150
Average = 30.0
```

```
In [6]: ▶ # For Loop using a tuple
num = (30, 45, 60, 50, 70)
sum = 0
for i in num:
    sum = sum + i
print(sum)
```

255

```
In [7]: ▶ # range function

for i in range(1, 10):
    print(i)
```

1
2
3
4
5
6
7
8
9


```
In [8]: ► for i in range(0, 10, 2):  
        print("Display values with a step size of 2:", i)
```

Display values with a step size of 2: 0

Display values with a step size of 2: 2

Display values with a step size of 2: 4

Display values with a step size of 2: 6

Display values with a step size of 2: 8

```
In [9]: ▶ # Program to print table of a given number
n = int(input("Enter the number "))
for i in range(1,11):
    mul = n*i
    print(n, "*", i, "=", mul)
```

Enter the number 5

5 * 1 = 5

5 * 2 = 10

5 * 3 = 15

5 * 4 = 20

5 * 5 = 25

5 * 6 = 30

5 * 7 = 35

5 * 8 = 40

5 * 9 = 45

5 * 10 = 50



