

Implementing Loops



Mateo Prigl
Software Developer

Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    print("It is really true!")

print("Moving on!")
```

> python3 script.py



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    print("It is really true!")

print("Moving on!")
```

```
> python3 script.py
It is true!
It is really true!
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    print("It is really true!")

print("Moving on!")
```

```
> python3 script.py
It is true!
It is really true!
It is true!
It is really true!
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    print("It is really true!")

print("Moving on!")
```

```
> python3 script.py
It is true!
It is really true!
It is true!
It is really true!
It is true!
It is really true!
...
...
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    user_input = input("Still true? (y/n): ")
    if user_input == "n":
        bool_var = False

print("Moving on!")
```

```
> python3 script.py
It is true!
Still true? (y/n):
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    user_input = input("Still true? (y/n): ")
    if user_input == "n":
        bool_var = False

print("Moving on!")
```

```
> python3 script.py
It is true!
Still true? (y/n): y
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    user_input = input("Still true? (y/n): ")
    if user_input == "n":
        bool_var = False

print("Moving on!")
```

```
> python3 script.py
It is true!
Still true? (y/n): y
It is true!
Still true? (y/n):
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    user_input = input("Still true? (y/n): ")
    if user_input == "n":
        bool_var = False

print("Moving on!")
```

```
> python3 script.py
It is true!
Still true? (y/n): y
It is true!
Still true? (y/n): y
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    user_input = input("Still true? (y/n): ")
    if user_input == "n":
        bool_var = False

print("Moving on!")
```

```
> python3 script.py
It is true!
Still true? (y/n): y
It is true!
Still true? (y/n): y
It is true!
Still true? (y/n):
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
bool_var = True

while bool_var:
    print("It is true!")
    user_input = input("Still true? (y/n): ")
    if user_input == "n":
        bool_var = False

print("Moving on!")
```

```
> python3 script.py
It is true!
Still true? (y/n): y
It is true!
Still true? (y/n): y
It is true!
Still true? (y/n): n
Moving on!
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
user_input = "y"  
  
while user_input == "y":  
    print("It is true!")  
    user_input = input("Still true? (y/n): ")  
  
print("Moving on!")
```

```
> python3 script.py  
It is true!  
Still true? (y/n): y  
It is true!  
Still true? (y/n): y  
It is true!  
Still true? (y/n): n  
Moving on!
```



Iterables

List

Tuple

Dictionary

Set

String



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
lst = [23, 45, 67]
i = 0

while i < len(lst):
    print(f"{i} element is {lst[i]}")
    i = i + 1

print("Moving on!")
```

```
> python3 script.py
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
lst = [23, 45, 67]
i = 0
    o      3
while i < len(lst):
    print(f"{o} element is {lst[o]}")
    i = o + 1
    1
print("Moving on!")
```

```
> python3 script.py
0 element is 23
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
lst = [23, 45, 67]
i = 0

    1      3
while i < len(lst):
    print(f"{1} element is {lst[1]}")
    i = 1 + 1
    2

print("Moving on!")
```

```
> python3 script.py
0 element is 23
1 element is 45
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
lst = [23, 45, 67]
i = 0
    2      3
while i < len(lst):
    print(f"{2} element is {lst[2]}")
    i = 2 + 1
    3
print("Moving on!")
```

```
> python3 script.py
0 element is 23
1 element is 45
2 element is 67
```



Controlling the Program's Flow with a while Loop

The code block that belongs to the while loop is indented

script.py

```
lst = [23, 45, 67]
i = 0
    3      3
while i < len(lst):
    print(f"{i} element is {lst[i]}")
    i = i + 1

print("Moving on!")
```

```
> python3 script.py
0 element is 23
1 element is 45
2 element is 67
Moving on!
```



Controlling the Program's Flow with a for Loop

The code block that belongs to the for loop is indented

script.py

```
lst = [23, 45, 67]

for num in lst:
    print(num)

print("Moving on!")
```

```
> python3 script.py
23
45
67
```



Controlling the Program's Flow with a for Loop

The code block that belongs to the for loop is indented

script.py

```
for lc in range(5):
    print(lc)

print("Moving on!")
```

```
> python3 script.py
0
1
2
3
4
Moving on!
```





Breaking out of the Loop



Loops with the else Clause

for/else

while/else



Up Next:

Reusing Code with Functions

