



**Cyber Security
Bootcamp**

Hyperiondev

While Loops

Welcome

Your Lecturer for this session



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Objectives

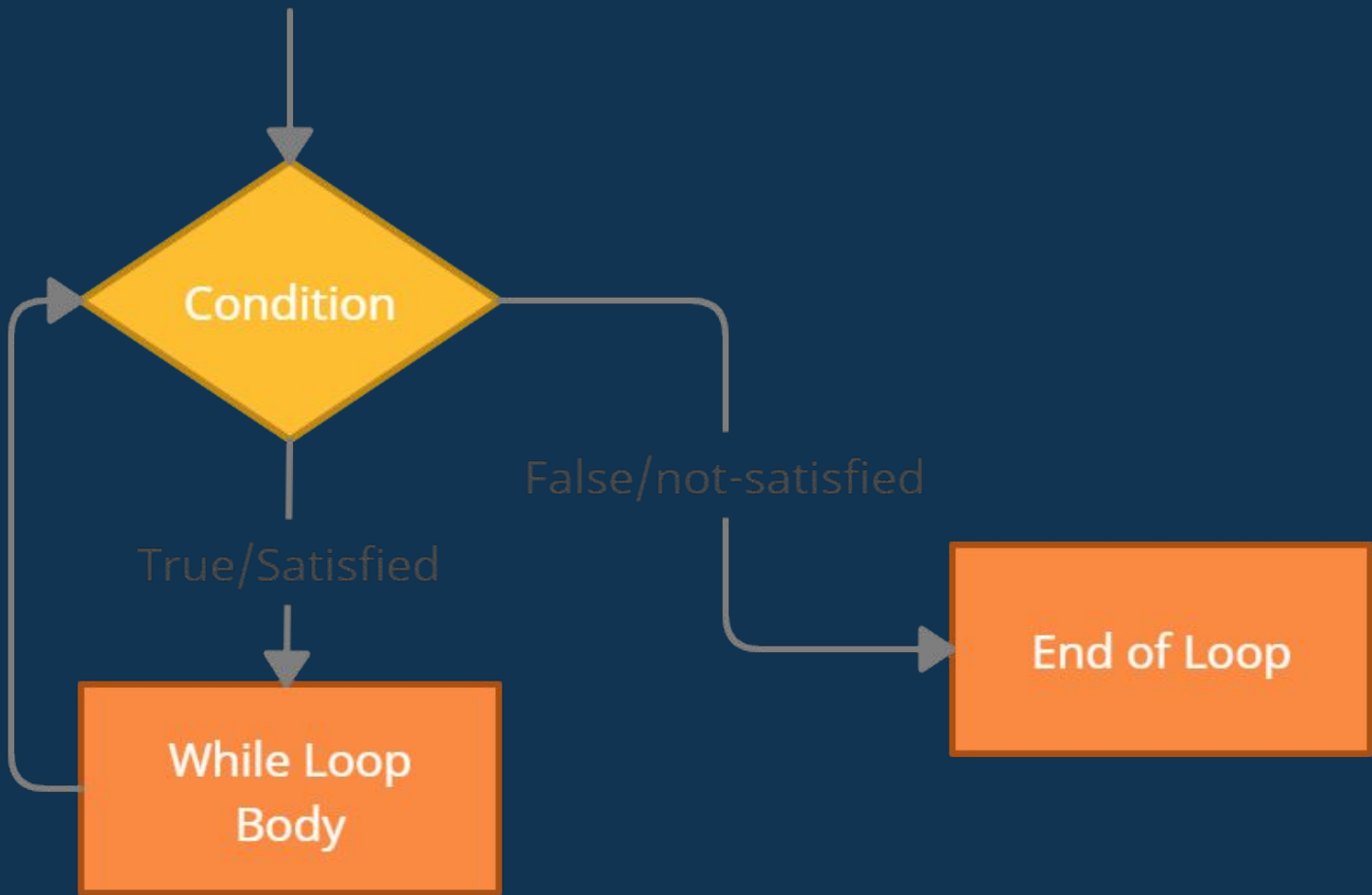
- Learn how to execute a block of code repeatedly with While Loops.

Loops

- ★ **Loops** are used when we need to **repeat** a **certain block** of code **multiple times**.
- ★ There are **two types** of **loops** that will be introduced:
 - **while** loops
 - **for** loops (Next Lecture)

while Loops

- ★ While loops are used in cases when we are not sure how many times we need to repeat the code block.
- ★ Therefore, we can use a while loop to execute a certain condition. While our condition is True, the code within the loop will execute, however, the loop will terminate the moment our condition becomes False.



while Loop Example and Syntax

```
password = input("Please enter your password:\t")
correct = "h@ck_M3"

while password != correct:
    password = input("Incorrect password, please try again:\t")

print("Authentication successful. Welcome back.")
```

Infinite Loops

- ★ There may be some cases where we would need the loop to keep looping for as long as the program is running.
- ★ This would be referred to as an infinite loop.
- ★ Example:

```
# Infinite Loop
while True:
    print("I'm an infinite loop!")
    print("I am eternal! (evil laugh)")
```


Breaking the Loop

- ★ At some point, we would like to **break** out of our infinite loop. In order to achieve that, we can use the break statement to exit the loop.
- ★ Example:

```
while True:
    user_input = input("Would you like to end the loop?").lower()

    if user_input == "yes":
        print("Breaking out of the loop.")
```

Continuing the Loop

- ★ The continue statement is used to skip the current iteration of the loop and allows the control flow of the program goes to the next iteration.

NOTE:

- ★ The loop will not terminate, but will continue with the next iteration.
- ★ The loop will not break.

Continue Example

```
while True:
    user_input = input("Would you like to continue?").lower()

    if user_input == "yes":
        print("Here we go again.")
        continue
    else:
        print("Exiting the loop.")
        break
```

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Q & A Section

Please use this time to ask any questions relating to the topic, should you have any.



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Thank You for Joining Us