



Day 2 - Loops

Outline

What are loops?

For Loops

Statement 1

Statement 2

Statement 3

While Loops

Do While Loops

Outline

In this session, you are going to learn about these topics:

- For loops
- While loops
- Do While loops

What are loops?

In simple terms, loops are a sequence of commands or instructions that is repeatedly executed until a certain condition is met. We have 3 types of loops.

- `for` loops
- `while` loops
- `do while` loops

For Loops

A for loop consists of 3 statements in its conditions.

- The first statement is executed once before the execution of the code block
- The second statement defines the condition for executing the code block

- The third statement is executed every time after the execution of the code block

Here's an example of a for loop

```
for (let i = 0; i < 5; i++) {  
  console.log("hello!")  
}
```

Statement 1

Statement 1 is usually used to define or initialize values that are used as conditions in the loop. In the example above, it is used to define the variable `i`.

Statement 2

Statement 2 is used to define the condition that needs to be met. In the example above, it is declared that as long as `i` is less than `5` (true boolean), the loop should continue to execute. But when the condition results in a `false` value, the loops will stop.

Statement 3

Statement 3 is usually used to increment the counter of our loop — in this case, variable `i`. In the example above, statement 3 states that `i` will be incremented after the code block finishes executing.

While Loops

While loops are basically `if` conditions that are repeated. As long as the condition is `true`, the loop will continue.

```
while (true) {  
  console.log("hello")  
}
```



In the example above, the loop will result in an infinite loop. Which means the loop will never stop. Keep in mind that when using loops, we should always set a condition so that the loop will eventually break/stop.

```
let i = 0
while (i < 5) {
  console.log("hello")
  i++
}

// will execute 5 times
```

Do While Loops

Do while loops are very similar to while loops, the only difference it has is that it only starts checking the condition after the first code block execution.

```
let i = 5

// this loop will not execute at all
while (i < 5) {
  // ...
}

// this loop will execute once
do {
  // ...
} while (i < 5)
```