

# JavaScript Loops & Syntax

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## JavaScript Loops

Not in only research but I learned a ton trying out different loops in open class. There are lots of different loops but the ones I learned about and researched during week 02 where as follows:

- The for loop: Is used to define a block of code if the condition that is made true if its false it will not run.
- The while loop: quite a simple loop that within open class I found to be useful if mixed into if/else statements, the while loop takes an already declared variable from our code (not in the while loop) and uses it to compare to another value. Must be sure to break the loop by incrementing or decrementing if not this will result in an infinite loop. While an infinite loop didn't sound bad, I've seen firsthand how important it is to not forget this step.
- And lastly the do/while loop: another simple yet complex loop, this loop first has the statement then afterwards checks the condition if true it runs again if false the statement only runs once since it's the first part of the loop. This again the same as the while loop needs an increment or decrement to avoid an infinite loop.

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## Loops Syntax

- The for loop syntax is three statements followed by the code block to be executed.  
Example: 

```
for(let i = 0; i < 10; i++) {  
    console.log(i);  
}
```
- The while loop syntax is the condition followed by the code block to be executed, if the condition returns true it will run again if not it ends the loop.  
Example: 

```
while (a < 10) {  
    console.log(a);  
    a++; (stops infinite loop)}
```
- The do/while loop syntax is kind of the opposite of the while loop syntax as where the code block is executed first, and the condition is checked afterwards if the condition is true it continues to run if its false it ends the loop.  
Example: 

```
do {  
    console.log(a);  
} while (a < 10);
```

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**Sources:** [https://www.w3schools.com/jsref/jsref\\_statements.asp](https://www.w3schools.com/jsref/jsref_statements.asp)