

# JavaScript Loops

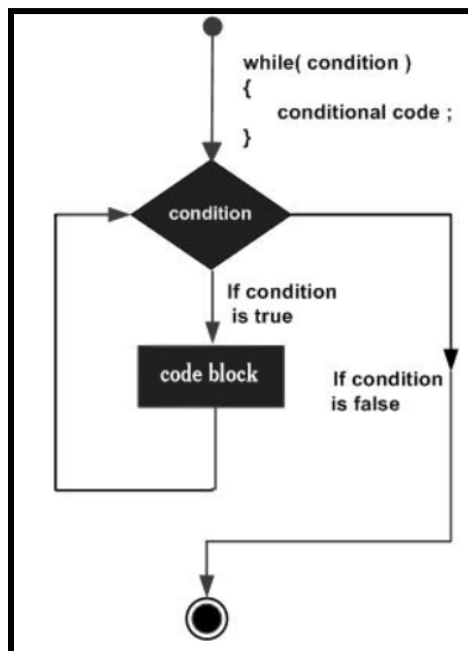
## Topics Covered

- while loop.
- do/while loop.

## Topics in Detail

### The While Loop

- The While Loop is a control flow statement used to execute the code repeatedly as long as the condition is true.
- Similar to repeated if statements.
- The while loop is an entry controlled loop, i.e. The block control condition is at the starting of the loop.
- The JavaScript while loop is used when the number of iterations are not known.



- **Syntax**

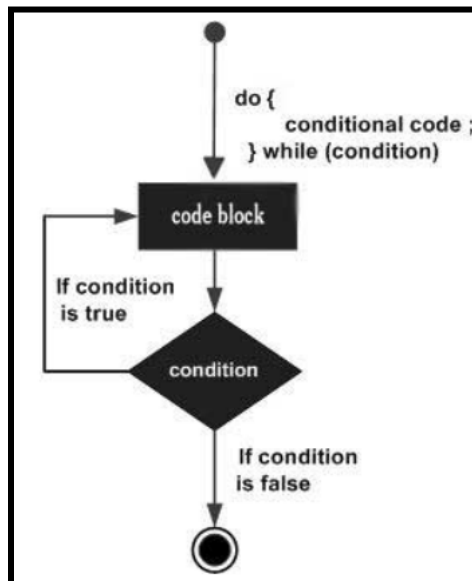
```
while (condition) {  
    // code block to be executed  
}
```

```
let text = "";
let i = 0;
while (i < 10) {
  text += "<br>The number is " + i;
  i++;
}
document.getElementById("demo").innerHTML = text;
```

- In the code above, the statement inside the loop will run until the value of **i** is **less than 5**.
- The loop **variable** should be **incremented or decremented**. If **not**, the Loop will **never end** and will **crash** the system.

## The Do While Loop

- The Do While Loop is an Exit controlled loop, i.e. the block condition is at the end of the loop.
- The Do While Loop executes the loop statement before checking the condition.
- It is similar to a while loop. The code will be executed at least once because the condition check happens at the end of the loop.
- The Do While Loop is executed an infinite number of times like While loop.



- **Syntax**

```
do {
    // code block to be executed
}
while (condition);
```

- **Example:**

```
let str = ""
let i = 0;
do {
    str += "<br>The number is " + i;
    i++;
}
while (i < 5);
```

- In the above code, the statement inside the loop will run until the value of **i** is **less than 5**.
- Since the condition **check** is at the **end point**, the loop will be executed at least **once** even if the **condition** is **false**.
- The loop **variable** should be **incremented or decremented**. If **not**, the Loop will **never end** and will **crash** the system.

## Difference Between While and Do While Loop

While Loop	Do While Loop
It is an <b>entry controlled loop</b> .	It is an <b>exit controlled loop</b> .
The <b>number of iterations</b> is based on the loop <b>condition</b> .	The loop will be executed at least <b>once</b> , even before the execution of the <b>condition</b> .
The <b>condition</b> check happens at the <b>start</b> of the loop.	The <b>condition</b> check happens at the <b>end</b> of the loop.