

**Lesson:**

# **While and Do-while loop**

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Loops are used in programming to repeatedly run a block of code. A loop can be used, for instance, to repeat a message hundred times. It's only a simple illustration; loops may be used to accomplish much more.

## While loop

Syntax :

```
while (condition) {  
    // body of loop  
}
```

- The parentheses has the condition that is to be evaluated by a while loop ().
- The while loop's code is run if the condition evaluates to true.
- The condition is assessed again.
- until the condition is false, this process keeps going.
- The loop ends when the condition is evaluated as false.

### Example 1: To print numbers from 1 to 10 using while loop

```
let i = 1, n = 10;  
while (i ≤ n)  
{  
    console.log(i);  
    i=i+1;  
}
```

**Output:**

**Example 2 : To print numbers from 10 to 1 in decreasing order.**

```
let i = 1, n = 10;
while (n ≥ i){
    console.log(n);
    n=n-1;
}
```

**Output:**

**Do while loop**

Syntax :

```
do {
    // body of loop
} while(condition)
```

- The loop's body is first executed. The condition is analyzed afterwards.
- The body of the loop within the do statement is repeated if the condition evaluates to true.
- A second assessment of the condition is made.
- The body of the loop within the do statement is repeated again if the condition evaluates to true.
- Up until the condition is evaluated as false, this process keeps going. The loop then ends.

**Example 1 : Write a program to print numbers from 1 to 7 in a line using do-while loop**

```
let result = '';
let i = 0;
do {
  i = i + 1;
  result = result + i;
} while (i < 7);
console.log(result);
```

**Output:**