

# JS Looping

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# Overview



## JS Looping Constructs

-for

-while

-do-while

-for-in

-for-of

# JS Looping Statements

JavaScript provides several looping statements that allow you to execute a block of code repeatedly. The syntax of looping statements in JavaScript includes the following:

### **for loop:**

The for loop is used to execute a block of code for a specified number of iterations.

```
for (initialization; condition; iteration) {  
    // Code to be executed in each iteration  
}
```

```
// Example of a for loop to print numbers from 1 to 5  
  
for (let i = 1; i <= 5; i++) {  
    console.log(i);  
}  
  
// Output: 1, 2, 3, 4, 5
```

- **while loop:**

The while loop is used to execute a block of code as long as a specified condition is true.

```
while (condition) {  
    // Code to be executed while the condition is true  
}
```

condition is evaluated before each iteration. If the condition is true, the loop continues; if false, the loop terminates.

```
// Example of a while loop to print numbers from 1 to 5  
  
let i = 1;  
  
while (i <= 5) {  
    console.log(i);  
    i++;  
}  
  
// Output: 1, 2, 3, 4, 5
```

- **do...while loop:**

The do...while loop is similar to the while loop, but it guarantees that the code block is executed at least once before checking the condition.

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

The code block is executed first, and then the condition is evaluated. If the condition is true, the loop continues; if false, the loop terminates.

```
// Example of a do-while loop to print numbers from 1 to 5  
  
let i = 1;  
do {  
    console.log(i);  
    i++;  
} while (i <= 5);  
  
// Output: 1, 2, 3, 4, 5
```

- **for...in loop:**

The for...in loop is used to iterate over the properties of an object.

```
for (var property in object) {  
    // Code to be executed for each property  
}
```

property represents the name of each property in the object, and the loop iterates over all enumerable properties.

```
// Example of for...in loop to iterate through object properties  
const person = { name: "John", age: 30, city: "New York" };  
for (const key in person) {  
    console.log(` ${key}: ${person[key]}`);  
}  
// Output: "name: John", "age: 30", "city: New York"
```

- **for...of loop:**

The for...of loop is introduced in ECMAScript 6 and is used to iterate over iterable objects, such as arrays or strings.

```
for (var element of iterable) {  
    // Code to be executed for each element  
}
```

element represents each value in the iterable object, and the loop iterates over all the elements.

```
// Example of for...of loop to iterate through an array  
const fruits = ["apple", "banana", "orange"];  
for (const fruit of fruits) {  
    console.log(fruit);  
}  
// Output: "apple", "banana", "orange"
```

# References

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