

[6] FOR LOOPS

In JavaScript, the "for" loop is used for iterating over a sequence of values, such as an array, a string, or numbers. There are several types of "for" loops in JavaScript, each with a slightly different syntax and use case.

When to use each 'for':

- If you need to iterate over a known number of iterations, use a basic "for" loop.
- If you're working with objects and need to loop through their properties, use a "for...in" loop.
- For iterating over iterable values, use a "for...of" loop.
- Additionally, there's also a "for each" loop that was used in older versions of JavaScript but is now deprecated and not recommended for use. It had some issues and didn't work consistently across all browsers.

For Loop:

The basic "for" loop is used when you know how many times you want to repeat a block of code. It consists of three parts enclosed in parentheses: initialization, condition, and iteration. The loop continues executing as long as the condition is true.

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

For...In Loop:

The "for...in" loop is used for iterating over the properties of an object. It iterates over the enumerable properties of an object, including inherited ones.

```
const person = {  
  name: "John",  
  age: 30,  
  gender: "male",  
};  
  
for (const key in person) {  
  console.log(`${key}: ${person[key]}`);  
}
```

For...Of Loop:

The "for...of" loop is used for iterating over iterable objects like arrays, strings, maps, sets, etc. It simplifies the process of iterating over the values of these objects without needing to deal with indices or keys. Example:

```
const fruits = ["apple", "banana", "cherry"];

for (const fruit of fruits) {
  console.log(fruit);
}
```