

for loop in js

A **for** loop in JavaScript is a control structure that allows you to execute a block of code repeatedly for a specific number of iterations. It consists of three main parts: initialization, condition, and iteration statement. The loop continues executing as long as the condition evaluates to **true**.

Here's the basic syntax of a **for** loop:

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

Let's break down each part of the **for** loop:

- **Initialization:** This part is where you initialize a variable (usually a counter) before the loop starts. It's executed only once before the loop begins.
- **Condition:** The condition is evaluated before each iteration. If the condition evaluates to **true**, the loop continues; if it's **false**, the loop stops.
- **Iteration:** After each iteration, the iteration statement is executed. It's typically used to modify the value of the initialized variable, moving it closer to the condition becoming **false**.

Here's an example that uses a **for** loop to print numbers from 1 to 5:

```
for (let i=1;i<=5;i++)
{
    console.log(i);
}
```

- **let i = 1;** initializes the variable **i** with the value **1**.
- **i <= 5;** is the condition that checks whether **i** is less than or equal to **5**.
- **i++** is the iteration statement, which increments the value of **i** by **1** after each iteration.

So, the loop starts with **i** being **1**, and in each iteration, it prints the value of **i** and increments **i** by **1**. The loop continues until **i** becomes **6**, at which point the condition becomes **false**, and the loop terminates.