

Module 8) JavaScript

Loops (For, While, Do-While)

Question 1: Types of Loops in JavaScript

For Loop: Used to repeat a block of code a specific number of times.

Example:

Javascript

```
document.write("<h3>For Loop:</h3>");
for (let i = 1; i <= 5; i++) {
    document.write(i + " "); // Prints numbers from 1 to 5
}
```

While Loop: Repeats a block of code as long as the condition is true, checking the condition before each iteration.

Example:

javascript

```
document.write("<h3>While Loop:</h3>");
let i = 1;
while (i <= 5) {
    document.write(i + " "); // Prints numbers from 1 to 5
    i++;
}
```

Do-While Loop: Executes a block of code at least once, checking the condition after the first iteration.

Example:

javascript

```
document.write("<h3>Do-While Loop:</h3>");
```

```
let j = 1;
do {
    document.write(j + " "); // Prints numbers from 1 to 5
    j++;
} while (j <= 5);
```

Question 2: What is the difference between a while loop and a do-while loop?

In JavaScript, a **while loop** checks the condition before executing the block of code, while a **do-while loop** executes the code at least once before checking the condition.

Here's an example of both:

javascript

```
// While loop example
let i = 0;
while (i < 5) {
    document.write(i + "<br>");
    i++;
}
```

```
// Do-while loop example
let j = 0;
do {
    document.write(j + "<br>");
    j++;
} while (j < 5);
```

In the first example, the **while loop** checks if **i** is less than 5 before running, while the **do-while loop** always runs at least once, even if the condition is false.