

## Loops (For, While, Do-While)

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**Question 1:** Explain the different types of loops in JavaScript (for, while, do-while). Provide a basic example of each.

**Ans.**

JavaScript provides several types of loops to execute a block of code repeatedly. The three primary types are for, while, and do-while.

### 1. For loop :

The for loop is used when the number of iterations is known or can be determined beforehand. It consists of three parts: initialization, condition, and increment/decrement.

```
var i=0;  
for(i;i<5;i++){  
    document.writeln("hii !");  
    document.writeln("<br>");  
}
```

### 2. While loop :

The while loop executes a block of code repeatedly as long as a specified condition remains true. The condition is checked before each iteration.

```
let i=0;  
while(i<10){  
    num=parseInt(prompt("enter"));  
    document.writeln(num);  
    i++;  
    document.writeln("<br>");  
}
```

### 3. do-while :

The do-while loop is similar to the while loop, but it guarantees at least one execution of the code block because the condition is checked after the first iteration.

```
let i=0;  
do{  
    num=prompt("enter");  
    document.writeln(num);  
    i++;  
    document.writeln("<br>");  
}while(i<10)
```

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

**Ans.**

While	Do-While
Condition is checked first then statement's is executed.	Statement's is executed atleast once, thereafter condition is checked.
It might occur statement(s) is executed zero times, If condition is false.	At least once the statement(s) is executed.
No semicolon at the end of while. While.	Semicolon at the end of while. while(condition);
Variable in condition is initialized before the execution of loop.	variable may be initialized before or within the loop.
while loop is entry controlled loop.	do-while loop is exit controlled loop.
while(condition) { statement(s); }	do { statement(s); } while(condition);