



Javascript

Introduction of Javascript

JavaScript is a programming language used to create dynamic content for websites.

HTML adds Structure to a web page, CSS styles it and JavaScript brings it to life by allowing users to interact with elements on the page, such as actions on clicking buttons, filling out forms, and showing animations.

Variables

A variable is like a container that holds data that can be reused or updated later in the program.

In JavaScript, variables are declared using the keywords `var`, `let`, or `const`.

var

Old way of declaring variables.
Can be changed later.
It works inside a function or globally.

let

Newer way to declare variables.
Can be changed later.
Only works in the block (like inside a loop or if statement).

const

For values that can't be changed.
Works in a block like let.
You can't change the value after setting it.

Data Types

JavaScript supports various data types, which can be broadly categorized into primitive and non-primitive types.

Primitive Data Types

Primitive data types represent single values and are immutable.

Example: Number, String, Boolean

Non-Primitive Data Types

Non-primitive types are objects and can store collections of data or more complex entities.

Example : Function, Array, and object

JavaScript Statements

JavaScript statements are programming instructions that a computer executes.



JavaScript if-statement

It is a conditional statement used to decide whether a certain statement or block of statements will be executed or not

Example:

```
// Program to check if the number is positive
const number = prompt("Enter a number: ");
// check if number is greater than 0
if (number > 0) {
    // the body of the if statement
    console.log("positive number");
}
console.log("nice number");
```





JavaScript Loops

Loops in JavaScript are used to reduce repetitive tasks by repeatedly executing a block of code as long as a specified condition is true.





1. JavaScript for Loop

The for loop repeats a block of code a specific number of times. It contains initialization, condition, and increment/decrement in one line.

Example:

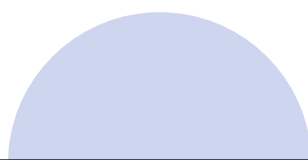
```
for (let i = 1; i <= 3; i++) {  
    console.log("Count:", i);  
}
```

Output:

Count: 1

Count: 2

Count: 3



2. JavaScript while Loop



The while loop executes as long as the condition is true. It can be thought of as a repeating if statement.

Example:

```
let i = 0;

while (i < 3) {
    console.log("Number:", i);
    i++;
}
```

Output:

```
Number: 0
Number: 1
Number: 2
```



Functions in JavaScript



Functions in JavaScript are reusable blocks of code designed to perform specific tasks. They allow you to organize, reuse, and modularize code. It can take inputs, perform actions, and return outputs.

Example:

```
function sum(x, y) {  
    return x + y;  
}  
  
console.log(sum(6, 9));
```

Output:

15



The background features a minimalist design with several geometric elements. A large, light orange circle is positioned in the upper right quadrant. A smaller, light blue circle is located in the lower left quadrant. A light gray rectangle is situated in the upper left, and another is in the lower right. Thin, orange lines form rectangular frames around the central text and other elements. On the far left, three horizontal orange lines are stacked vertically. At the top center, three vertical orange lines are stacked. At the bottom center, three vertical orange lines are stacked.

Thank You For Your Time

TEAM B