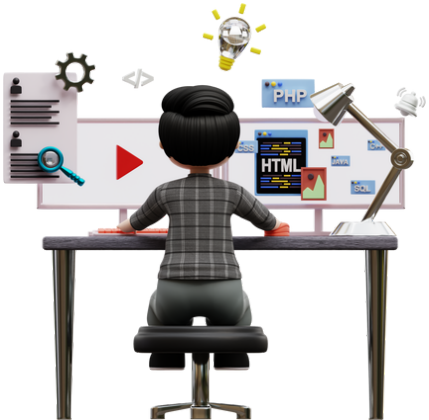
Building Trust & Careers

JAVASCRIPT



BASICS OF JAVASCRIPT WITH ES6+

JAVASCRIPT

High-level, versatile language for web development.

Uses

- DOM Manipulation → Modify HTML/CSS dynamically
- Event Handling → Respond to clicks, key presses, etc.
- Asynchronous Communication → Fetch/send data (APIs, AJAX)
- Full-Stack → Client-side & server-side (Node.js)
- Cross-Platform → Web, mobile (React Native), desktop (Electron.js).

EXAMPLE:

```
document.getElementById("btn").addEventListener("click", async () => {
  const response = await fetch("https://jsonplaceholder.typicode.com/todos/1");
  const data = await response.json();
  console.log(data);
});
```

LINKING JAVASCRIPT FILES USING <SCRIPT>

Including an External JavaScript File

- To link an external JavaScript file, use the <script> tag with the src attribute.

```
<!DOCTYPE html>
<html>
<head>
    <title>JavaScript Example</title>
</head>
<body>
    <h1>Welcome to JavaScript</h1>
    <script src="script.js"></script>
</body>
</html>
```

Benefits:

- Place <script> before </body> for better page load performance
- Use defer for scripts that depend on HTML content
- Use async for independent scripts that don't rely on DOM elements.

LOGGING WITH JAVASCRIPT

1.General Logging

- Used to display information in the console.

```
console.log("Hello, World!"); // Outputs general info
```

2.Informational Message

- Logs important information.

```
console.info("Info Message"); // Displays an informational log
```

3.Warning Message

- Displays warnings in the console.

```
console.warn("Warning Message"); // Highlights a potential issue
```

4.Error Logging

- Logs errors in the console.

```
console.error("Error Message"); // Shows an error message
```

LOGGING WITH JAVASCRIPT

5.User Input (Prompt)

- Asks for user input via a pop-up.

```
let name = prompt("Enter your name:"); // Gets input from the user
```

6.Alert Message

- Shows a message in an alert box.

```
alert("Hello!"); // Displays an alert pop-up
```

7.Confirmation Box

- Asks the user to confirm an action.

```
let response = confirm("Are you sure?"); // Returns true/false
```

VARIABLES AND KEYWORDS IN JAVASCRIPT (VAR, LET, CONST)

1.var

- Scope: Function-scoped
- Characteristics: Allows redeclaration and updating.

```
var name = "John"; // Redeclaration and updates allowed
```

2.let

- Scope: Block-scoped
- Characteristics: Allows updates, but not redeclaration in the same scope.

```
let age = 25; // Can be updated, but not redeclared in the same block
```

3.const

- Scope: Block-scoped
- Characteristics: Cannot be updated or redeclared.

```
const country = "India"; // Cannot be reassigned or redeclared
```

VARIABLE DECLARATION, INITIALIZATION, AND UPDATING

1.Declaration

- Declaring a variable without initializing it.

```
let x; // Declaration
```

2.Initialization

- Assigning a value to the variable at the time of declaration.

```
let y = 10; // Initialization
```

3.Updating

- Updating the value of a variable
- let and var allow updates, but const does not.

```
y = 20; // Updating
```

Example

```
let score;            //Declaration
score = 100;      //Initialization
score = 150;      //Updating
console.log(score);  //Output : 150
```

JAVASCRIPT STATEMENTS AND SEMICOLONS

Statements

- Statements are individual instructions in JavaScript, like variable declarations or function calls.

```
let a = 10;  // Declaration
let b = 20;  // Declaration
console.log(a + b);  // Function call
```

Semicolons

- Semicolons are optional in JavaScript, but they help prevent errors, especially when statements are on the same line.
- They are recommended to avoid potential issues with automatic semicolon insertion.

```
let a = 10;       // Declaration with semicolon
let b = 20;       // Declaration with semicolon
console.log(a + b);  // Function call with semicolon
```