

JAVASCRIPT



INTRODUCTION TO JAVASCRIPT

- What is JavaScript?
- It is designed to add interactivity to HTML pages.
- It is a scripting language (a light weight programming language)
- It is an interpreted language (it executes without preliminary compilation)
- Usually embedded directly into HTML pages
- And , Java and Javascript are different

WHAT CAN A JAVASCRIPT DO?

- JavaScript gives HTML designers a programming tool:- simple syntax
- It can put dynamic text into an HTML page
- It can react to events
- It can read and write HTML elements.
- It can be used to validate data
- It can be used to detect the visitor's browser
- It can be used to create cookies
 - Store and retrieve information on the visitor's computer.

- JavaScript can be used for Client-side developments as well as Server-side developments.
- **Client-side:**
- It supplies objects to control a browser and its Document Object Model (DOM).
- DOM-Document Object Model – represents the structure of an HTML or XML document as tree like structure where each node represents part of the document such as elements , attributes and text
- Like if client-side extensions allow an application to place elements on an HTML form and respond to user events such as mouse clicks, form input, and page navigation.
- Useful libraries for the client side are AngularJS, ReactJS, VueJS, and so many others.



- **Server-side:**
- It supplies objects relevant to running JavaScript on a server.
- For if the server-side extensions allow an application to communicate with a database, and provide continuity of information from one invocation to another of the application, or perform file manipulations on a server.
- The useful framework which is the most famous these days is **node.js**.



HOW TO LINK JAVASCRIPT FILE IN HTML ?

- JavaScript can be added to HTML file in two ways:
- **Internal JS:** We can add JavaScript directly to our HTML file by writing the code inside the `<script>` tag.
- The `<script>` tag can either be placed inside the `<head>` or the `<body>` tag according to the requirement.
- **External JS:** We can write JavaScript code in another files having an extension.js and then link this file inside the `<head>` tag of the HTML file in which we want to add this code.


```
<!DOCTYPE html>  
<html lang="en">
```

```
<head>
```

```
  <title>
```

```
    Basic Example to Describe JavaScript
```

```
  </title>
```

```
</head>
```

```
<body>
```

```
  <!-- JavaScript code can be embedded inside  
    head section or body section -->
```

```
  <script>
```

```
    console.log("Welcome to GeeksforGeeks");
```

```
  </script>
```

```
</body>
```

```
</html>
```

JAVASCRIPT SYNTAX

- JavaScript Syntax is used to define the set of rules to construct a JavaScript program

```
console.log("Basic Print method in JavaScript");
```

```
//Variable declaration
```

```
let c, d, e;
```

```
// Assign value to the variable
```

```
c = 5;
```

```
// Computer value of variables
```

```
d = c;
```

```
e = c/d;
```


- `let num1 = 50`
- `let num2 = 50.05`

-

- `let str1 = "Geek"`
- `let str2 = 'Geeks'`
- `console.log(num1)`
- `console.log(num2)`
- `console.log(str1)`
- `console.log(str2`