JavaScript

Introduction:-

JavaScript is a lightweight object based programming language which is widely used by several websites for scripting webpages.

*JavaScript was developed by **Brendan Eich** in 1995 while he was engineer at **Netscape Communication Corporation**. Its initial name was LiveScript* but later it is renamed to JavaScript due to the popularity of Java.

Features of JavaScript:-

- Object oriented programming language
- Client-side as well as sever side language
- Scripting language
- Multi paradigm
- Single threaded language
- Prototype based programming language
- Dynamically typed language
- High level language
- Static as well as dynamic language
- Interpreted programming language
- Lightweight programming language for web
- Open-source
- Easy to learn and understand

Note-: Today JavaScript not only execute/run in the browser but also on the server, or on any device that has a special program called **JavaScript Engine.**

The standard of javascript is ECMAScript(European Computer Manufacturers Association Script)

JavaScript program is executed by a program called '**JavaScript Engine'** which is enabled in all the browsers by default.

Some JavaScript Engines:-

v8 JavaScript Engine : Chrome & opera(recent versions) browsers
Spider Monkey JavaScript Engine : Firefox browsers
Chakra JavaScript Engine : IE(internet explorer) and Microsoft Edge.
JavaSriptCore,Nitro,Squirellfish JavaScript Engine : Safari browsers

How to implement JavaScript to the HTML:-

<script> </script> tag is used to add javasript code to a webpage.

```
<script>

// JavaScript code

</script>
```

Script Block

Example:-

```
<script>
    console.log("Hello, This is my first program of javascript");
</script>
```

Output:-

Hello, This is my first program of javascript

Implementation of JavaScript code into a webpage:-

There are mainly three ways to implement your javascript code in a webpage.

1. Between the body tag of html (internal javaScript code)
2. Between the head tag of html (internal javaScript code)
3. In .js file (external javaScript file)

1. Between the body tag of html (internal javaScript code)

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Introduction to javascript</title>
</head>
<body>

  <h2>Introduction to javascript</h2>
  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Dignissimos incidunt harum
    illum hic minima a excepturi nulla? Quidem,
    sit ipsam perferendis doloribus hic omnis vitae est, amet deserunt fuga facere!
  </p>


<script>
    console.log("This is my first javascript program!");
</script>
</body>
</html>
```
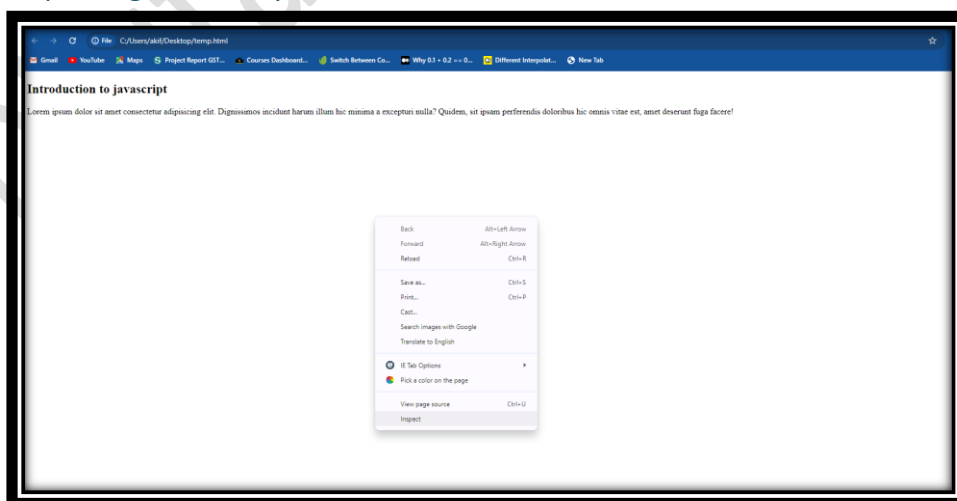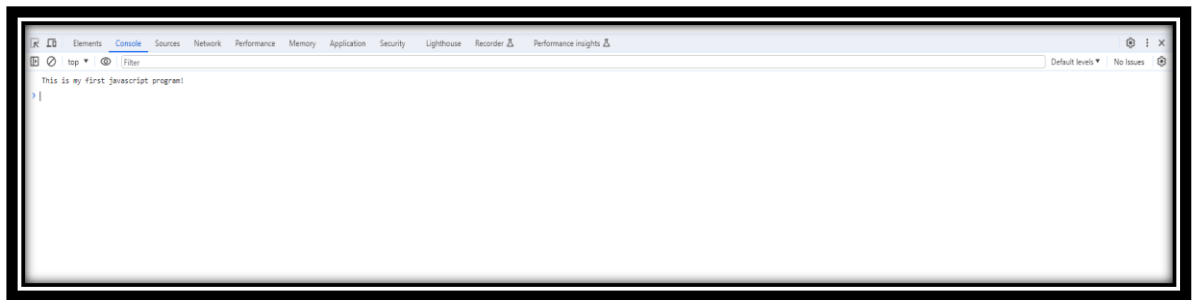
➪ **How to view the output of above code:-**
step-1: Run your .html file in your browser
step-2: Right click in your browser's screen

Step-3: click on *inspect* menu or you can press F12 to open **developers tool**

When you click on inspect menu, Developers tool will be appeared.

Then click on **console** option your output will be displayed.

2. Between head tag of html (internal javaScript code):-

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Introduction to javascript</title>
    <script>
        console.log("This is my first javascript program!");
    </script>
</head>
<body>

  <h2>Introduction to javascript</h2>
  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Dignissimos incidunt harum
    illum hic minima a excepturi nulla? Quidem,
    sit ipsam perferendis doloribus hic omnis vitae est, amet deserunt fuga facere!</p>


</body>
</html>
```

3. In .js file (external javaScript code)

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Introduction to javascript</title>
    <script scr="myfile.js"></script>
</head>
<body>

  <h2>Introduction to javascript</h2>
  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Dignissimos incidunt harum
    illum hic minima a excepturi nulla? Quidem,
    sit ipsam perferendis doloribus hic omnis vitae est, amet deserunt fuga facere!</p>

</body>
</html>
```

Index.html file

```
console.log("This is my first javascript program!");
```

myfile.js file

In case of external javaScript, we create an external file with the file extension(**.js**) and put all our javascript code in that file and include that path in the src attribute of script tag of **.html** file.