

Adding Script To HTML

Overview

To use JavaScript in your web page, you need to insert it into your HTML page.

JavaScript code is written using the **<script>** tag. JavaScript code is written in between **<script>** tags. This will also help in using the same script in other web pages as well.

```
Example : <script type="text/javascript">
          document.getElementById("demo").innerHTML = "My First JavaScript" ;
        </script>
```

You can add a **type** attribute to mention the type of script you are using. But since **default scripts are written in JavaScript**, you may not need to write it.

Adding External Scripts

<script> tag can be used in another manner as well. It can **add external JavaScript files** to the web page.

Writing JavaScript code in **external files separates it from HTML code**. It makes HTML and JavaScript easier to read and maintain.

NOTE: The external JavaScript files should have the extension - **.js**

You can add a JavaScript file like this -

```
< script type = "text/javascript" src = "myScript.js" ></script>
```

❖ **myscript.js** is the name of the external JavaScript file

The JavaScript file name with the extension is mentioned inside the **src** attribute. External scripts can be referenced with a full **absolute URL** or with a **path relative** to the current web page.

<head> tag

The **<head>** element is a container for metadata (data about data) and is placed between the <html> tag and the <body> tag.

Metadata is data about the HTML document. Metadata is not displayed.

Metadata typically define the document **title, character set, styles, scripts, and other meta information.**

The following elements can go inside the **<head>** element:

- <title> (required in every HTML document)
- <style>
- <link>
- <meta>
- <script>

<body> tag

The **<body>** tag defines the document's body.

The <body> element contains all the contents of an HTML document, such as **headings, paragraphs, images, hyperlinks, tables, lists, etc.**

NOTE: There can only be one <body> element in an HTML document.

JavaScript in <head> and <body> tag

You place scripts inside the **<head> tag**, just like the <title> tag. You can use both of the mentioned ways

Inside <head> tag

Add the script to the web page by writing them inside the **<head>** tag like -

```
<head>
  <!-- Other Header Tags -->
  < script type = "text/javascript" src = "myScript.js" ></script>
</head>
```

Inside <body> tag

Add the script to the web page by writing them inside the **<body>** tag like -

```
<body>
  < script type = "text/javascript" src = "myScript.js" ></script>
  ...
  <!-- HTML CODE -- >
  ...
</body>
```

But when you use the above two methods, the **JavaScript compilation is done first**, even before the HTML code is rendered on the web page. **This slows down the loading time of the web page**, and also, some things might not be as expected as elements are not rendered at that time.

To improve the web page's loading time, we can also load and compile the JavaScript after the page is loaded. To achieve this, **add the script at the bottom of the <body> tag after the HTML code** like -

```
<body>
  ...
  <!-- HTML CODE -- >
  ...
  < script type = "text/javascript" src = "myScript.js" ></script>
</body>
```

Now, the **HTML code is rendered first**, and then after that, the JavaScript is loaded.