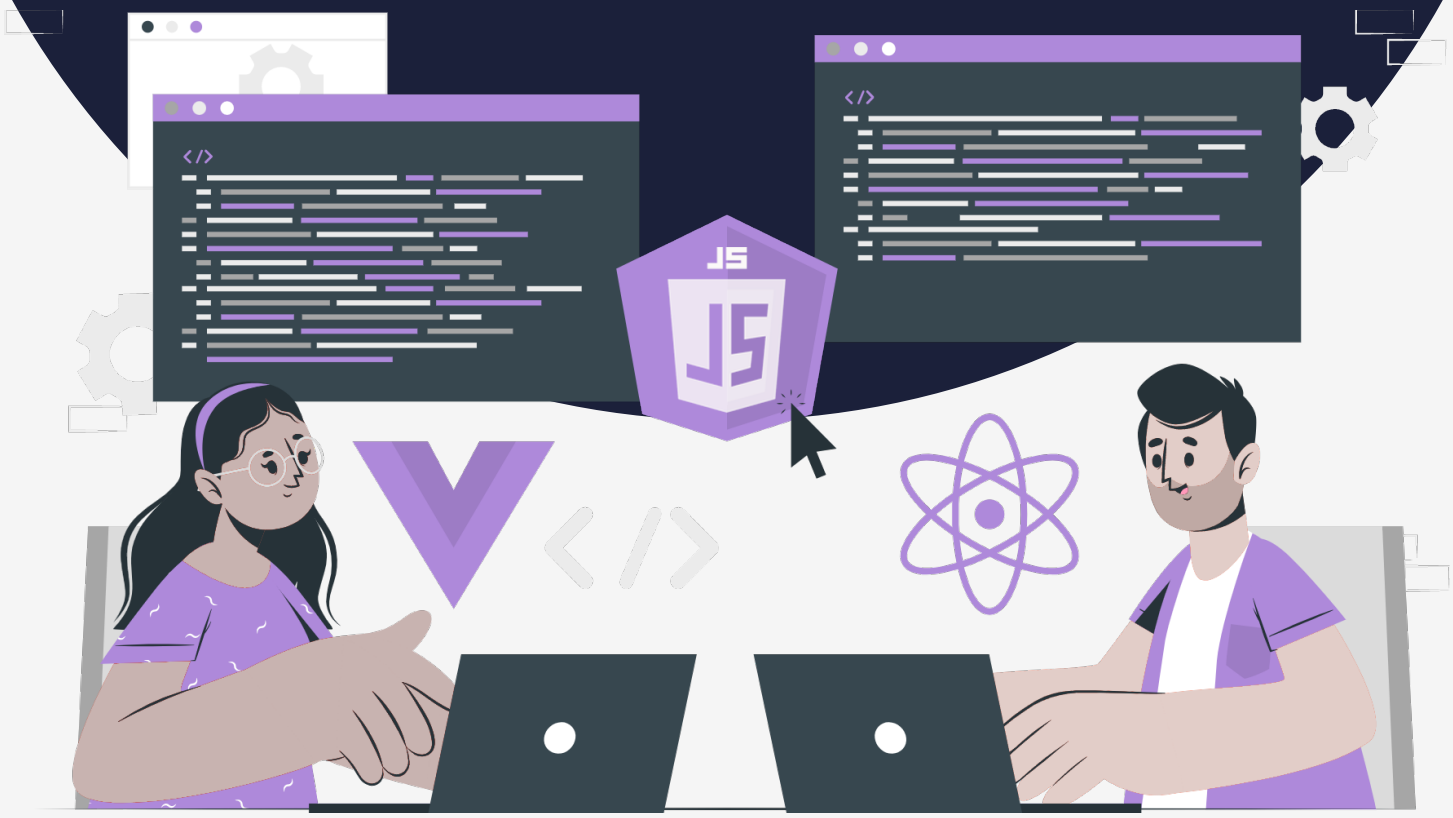
Lesson:

How to use JS in HTML File



PW SKILLS

Topics Covered :

1. Introduction to script in HTML
2. Ways to include javascript in HTML

In HTML, a script is a block of code that is used to add interactivity or other dynamic functionality to a webpage. The script is typically written in a programming language such as JavaScript, and it is executed by the browser when the webpage is loaded. As one of the core technologies of the web alongside HTML and CSS, JavaScript is used to make webpages interactive and to build web apps.

When working with files for the web, JavaScript needs to be loaded and run alongside HTML. This can be done either by writing javascript within an HTML document or in a separate file that the browser will load alongside the HTML document.

One can add javascript into HTML in the following ways:

1. Embedding the JavaScript code between a pair of <script> and </script> tags.
2. Creating an external JavaScript file with the .js extension and then loading it within the page through the src attribute of the <script> tag.
3. Placing the JavaScript code directly inside an HTML tag using special tag attributes such as onclick, onmouseover, onkeypress, onload, etc.

We will be looking at the first two methods in this lecture. The third method would be demonstrated in further lectures.

Embedding the JavaScript Code:
You can add JavaScript code in an HTML document by using the dedicated HTML tag <script> that wraps around JavaScript code.

The <script> tag can be placed in the <head> section of your HTML or in the <body> section, depending on when you want the JavaScript to load.

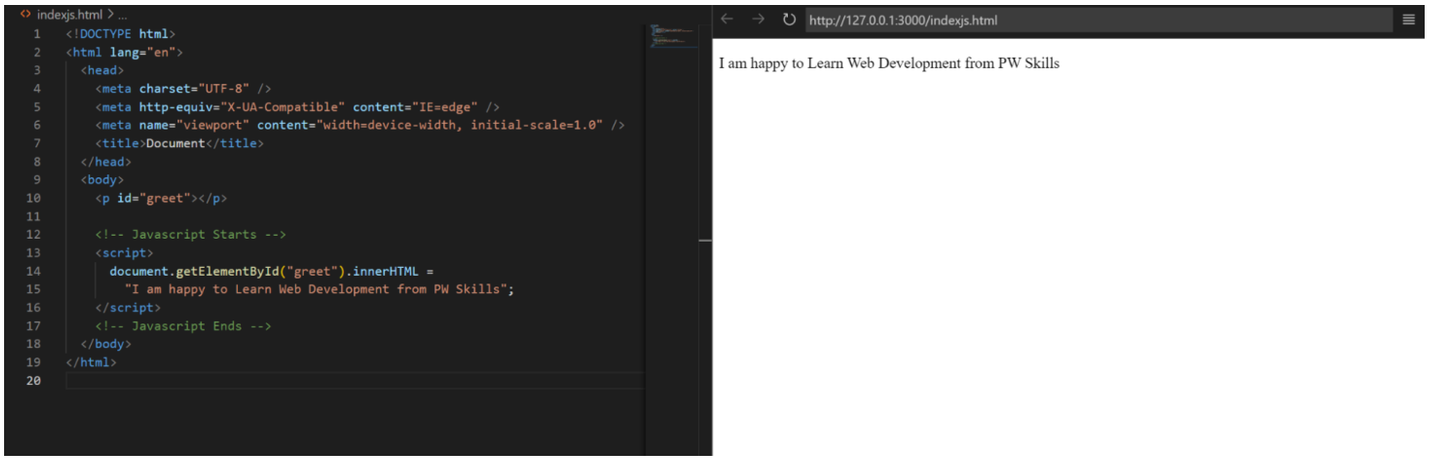
Generally, JavaScript code can go inside the document <head> section in order to load the script before your HTML document.

However, if your script needs to run at a certain point within a page's layout you should put it at the point where it should be called, usually within the <body> section.

Usually, the script tag is included just before the body closing tag.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Document</title>
  </head>
  <body>
    <p id="greet"></p>

    <!— Javascript Starts —>
    <script>      document.getElementById("greet").innerHTML =
        "I am happy to Learn Web Development from PW Skills";
    </script>    <!— Javascript Ends —>
  </body>
</html>
```



This is an HTML document that uses JavaScript to update the text of a paragraph element.

The script tag contains JavaScript code that is executed by the browser when the webpage is loaded. The script uses the document.getElementById method to access the paragraph element with the id "greet". The innerHTML property of this element is then set to a new string of text, "I am happy to Learn Web Development from PW Skills".

When the browser loads the page and runs the JavaScript, the text of the paragraph element is updated to the new string, and the user will see "I am happy to Learn Web Development from PW Skills" displayed on the page.

We will be looking at document, getElementById, and other commands in further lectures.

Working with a Separate JavaScript File
In order to accommodate larger scripts or scripts that will be reused across several pages, JavaScript code generally is written in one or more js files that are called within HTML documents, similar to how external files like CSS are called.

The benefits of using a separate JavaScript file include

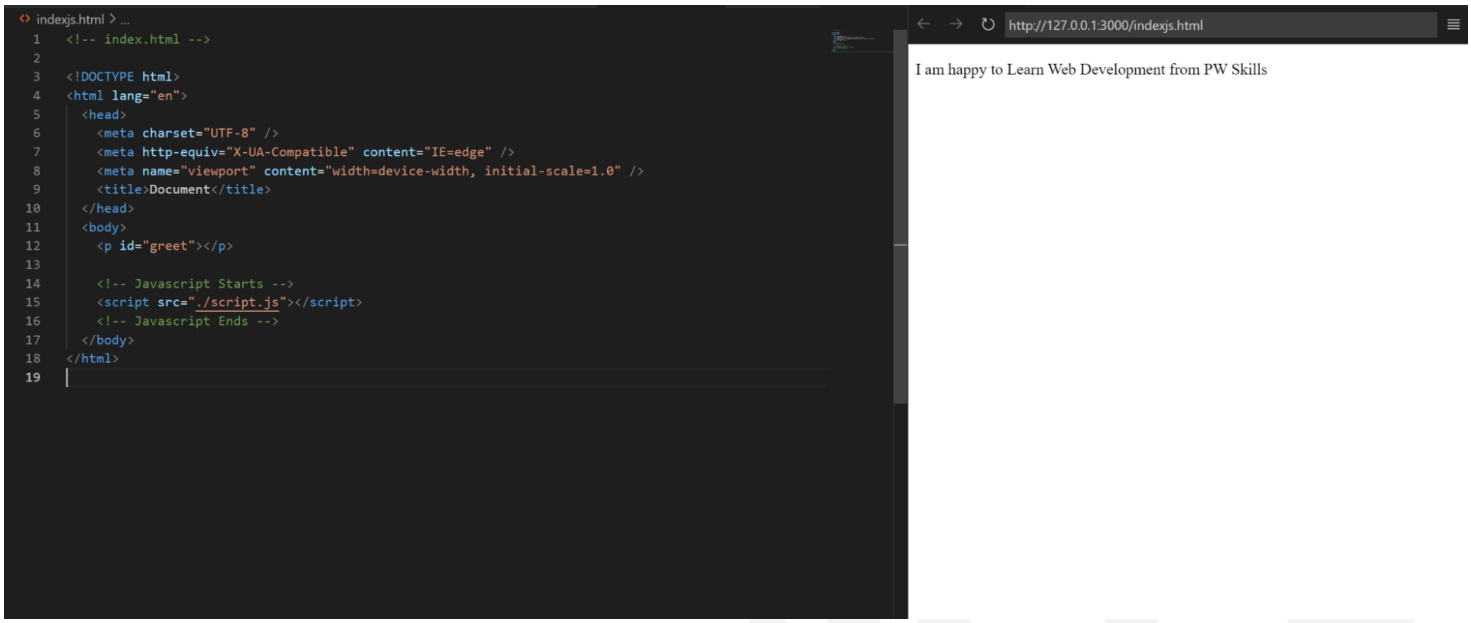
1. Separating the HTML markup and JavaScript code isolates the script from the HTML document.
2. Separate files make maintenance easier
3. Usually, when an external JavaScript file is downloaded for the first time, it is stored in the browser's cache, so it won't need to be downloaded multiple times from the web server which makes the web pages load more quickly.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Document</title>
  </head>
  <body>
    <p id="greet"></p>

    <!— Javascript Starts —>
    <script>      document.getElementById("greet").innerHTML =
        "I am happy to Learn Web Development from PW Skills";
    </script>    <!— Javascript Ends —>
  </body>
</html>
```

```
// script.js

document.getElementById("greet").innerHTML = "I am happy to Learn Web Development from
PW Skills";
```



The JavaScript code is included in the HTML document through an external file called "script.js".

The script tag with the src attribute linking to the script.js file is included in the HTML document and it is executed by the browser when the webpage is loaded. The script.js file contains the JavaScript code that uses the document.getElementById method to access the paragraph element with the id "greet". The innerHTML property of this element is then set to a new string of text, "I am happy to Learn Web Development from PW Skills".

When the browser loads the page and runs the JavaScript code, the text of the paragraph element is updated to the new string, and the user will see "I am happy to Learn Web Development from PW Skills" displayed on the page.