BASIC WEB-DEV TUTORIAL

By Edith @CSClub IIITDM

SESSION 2

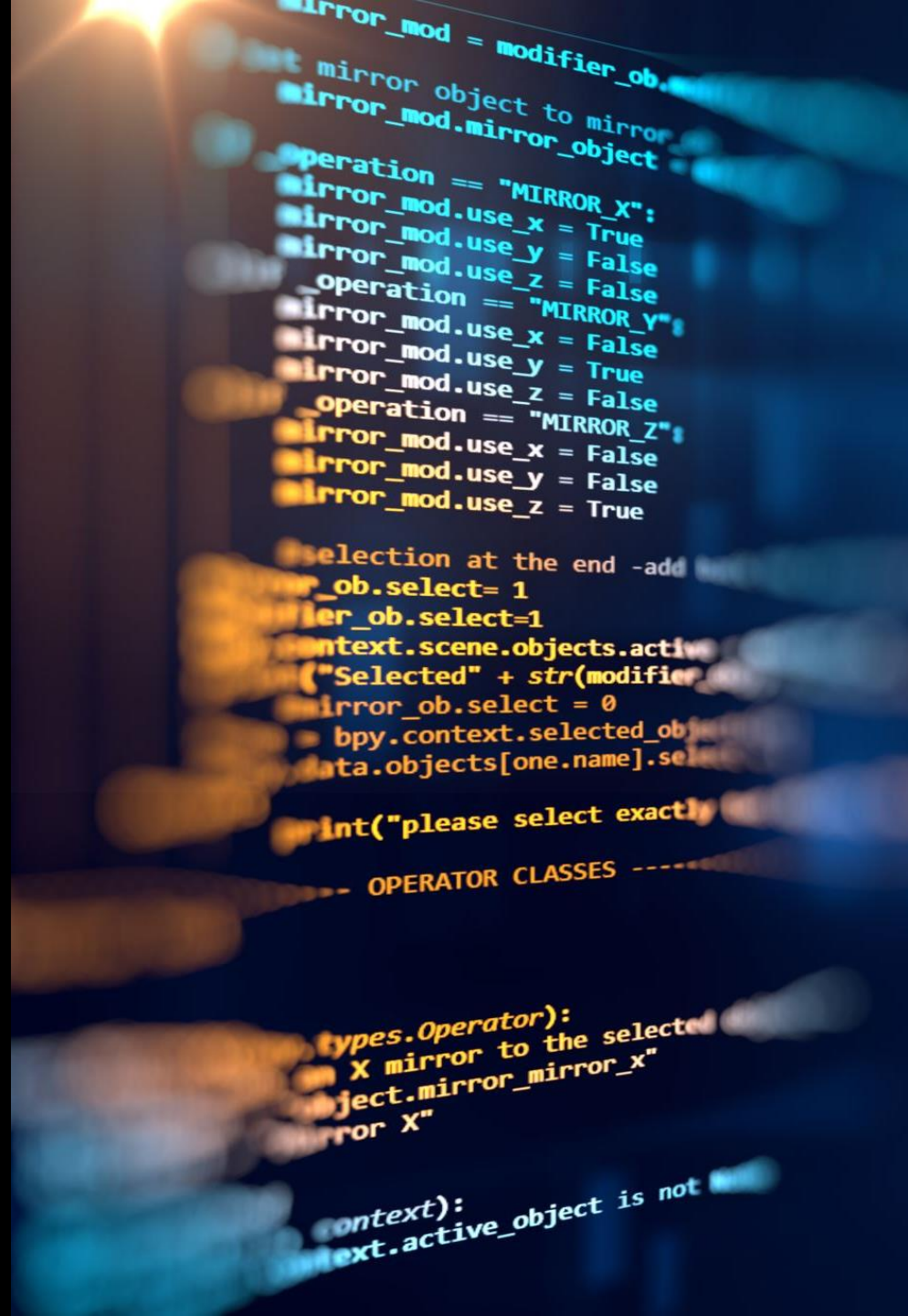
JavaScript (JS)

INTRODUCTION

- What is JavaScript?

=> JavaScript is a Scripting Language mostly used for client-side web development

=> JavaScript is an Implementation of ECMAScript Standards.
(ECMA Stands for European Computer Manufacturers Association)

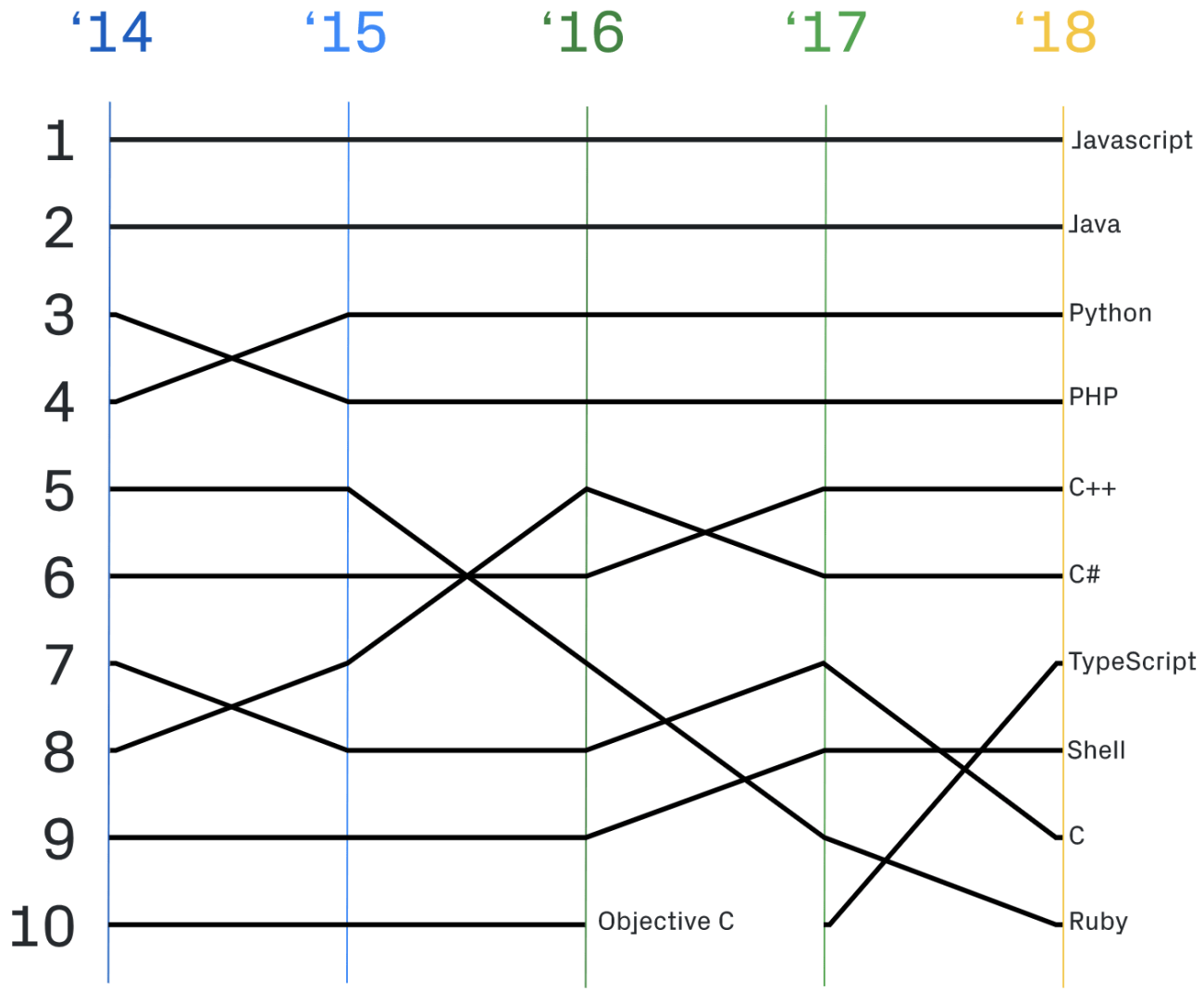


WHY TO LEARN JAVASCRIPT?

Top languages over time

You're coding on GitHub in hundreds of programming languages, but JavaScript still has the most contributors in public and private repositories, organizations of all sizes, and every region of the world.

This year, TypeScript shot up to #7 among top languages used on the platform overall, after making its way in the top 10 for the first time last year. TypeScript is now in the top 10 most used languages across all regions GitHub contributors come from—and across private, public, and open source repositories. *



GETTING STARTED

JavaScript ("JS" for short) is a full-fledged dynamic programming language that can add interactivity to a website. It was invented by Brendan Eich (co-founder of the Mozilla project, the Mozilla Foundation, and the Mozilla Corporation).

JavaScript is versatile and beginner-friendly. With more experience, you'll be able to create games, animated 2D and 3D graphics, comprehensive database-driven apps, and much more!

JavaScript itself is relatively compact, yet very flexible. Developers have written a variety of tools on top of the core JavaScript language, unlocking a vast amount of functionality with minimum effort. These include:

GETTING STARTED

- Browser Application Programming Interfaces (APIs) built into web browsers, providing functionality such as dynamically creating HTML and setting CSS styles; collecting and manipulating a video stream from a user's webcam, or generating 3D graphics and audio samples.

- Third-party APIs that allow developers to incorporate functionality in sites from other content providers, such as Twitter or Facebook.

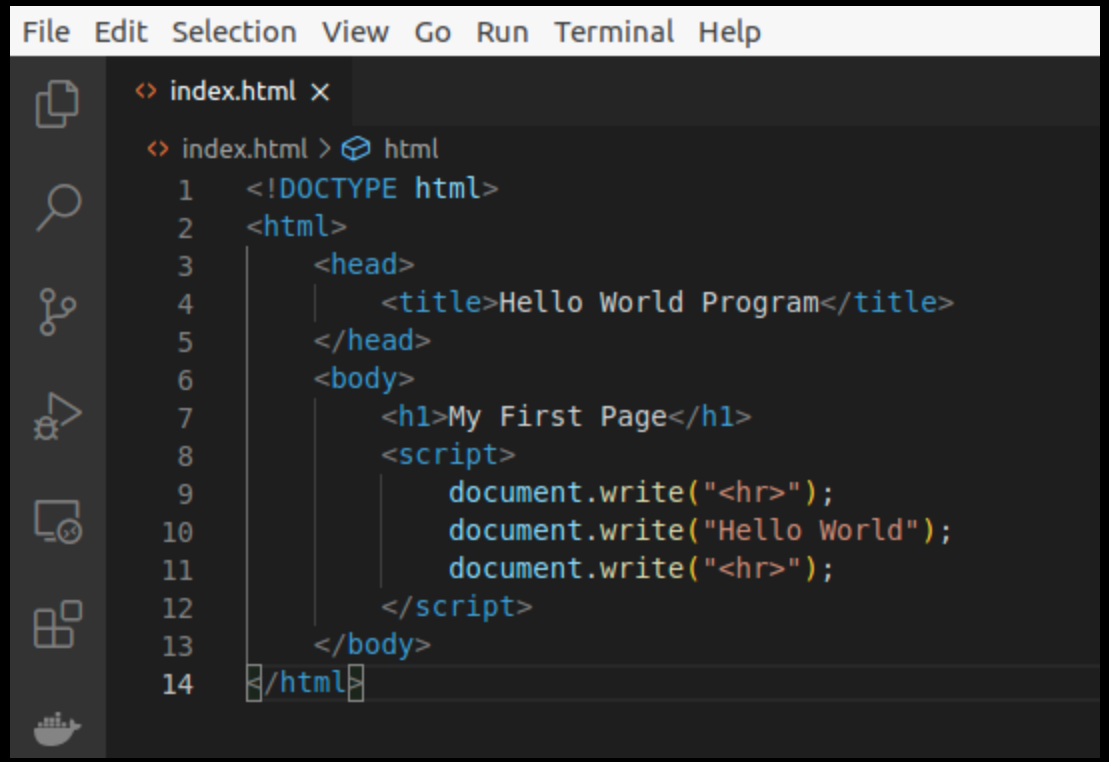
- Third-party frameworks and libraries that you can apply to HTML to accelerate the work of building sites and applications.
- And much more.

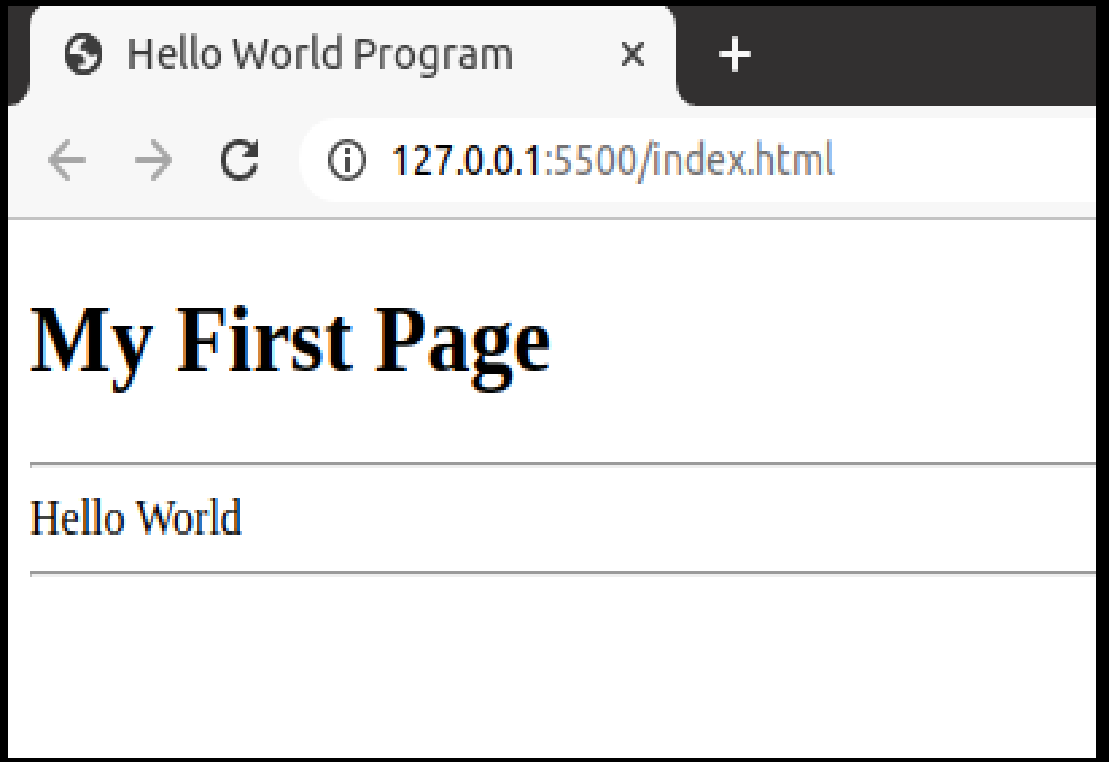
GETTING STARTED

All You need is:

- A Browser
  - Google Chrome, Mozilla Firefox, for testing
  - Mozilla Firefox for developers, Polypane, Opera, Blisk, Google chrome for developers, Safari for Developers.
- A Text Editor.
  - Sublime Test3, VS Code, Brackets, Atom, Vim, Notepad.
- References from internet.
  - W3schools , MDN Web Docs , Codeacedemy , etc
- Some Motivation.
  - IDK get it from somewhere.

HELLO WORLD USING JAVASCRIPT





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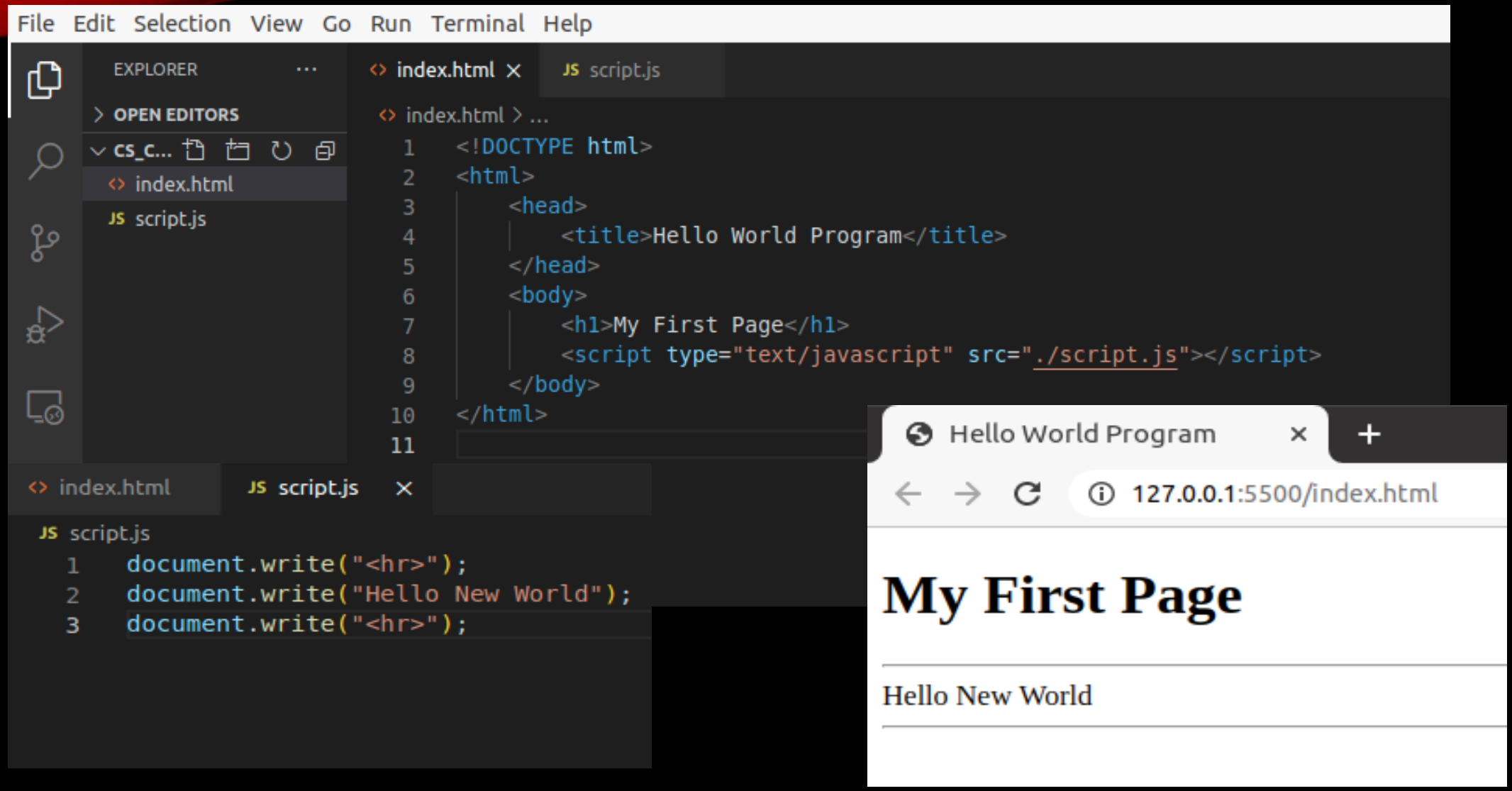
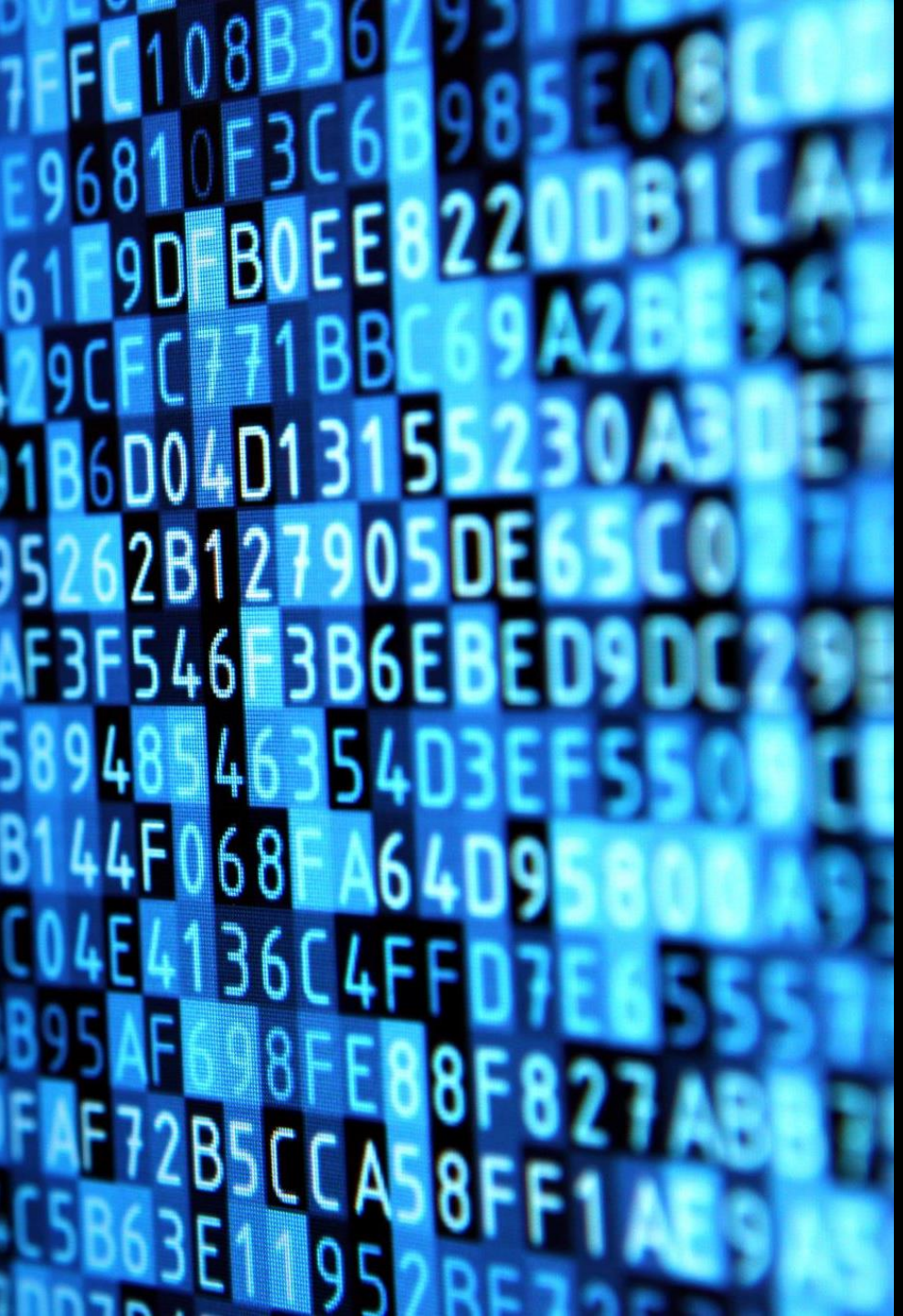




EMBEDDING JAVASCRIPT

- As Scripts are interpreted in the browser in the order it appears.

So, it does matter where you place your script tag.

- But what if the browser doesn't support JavaScript?
- => Then you can just hide it.

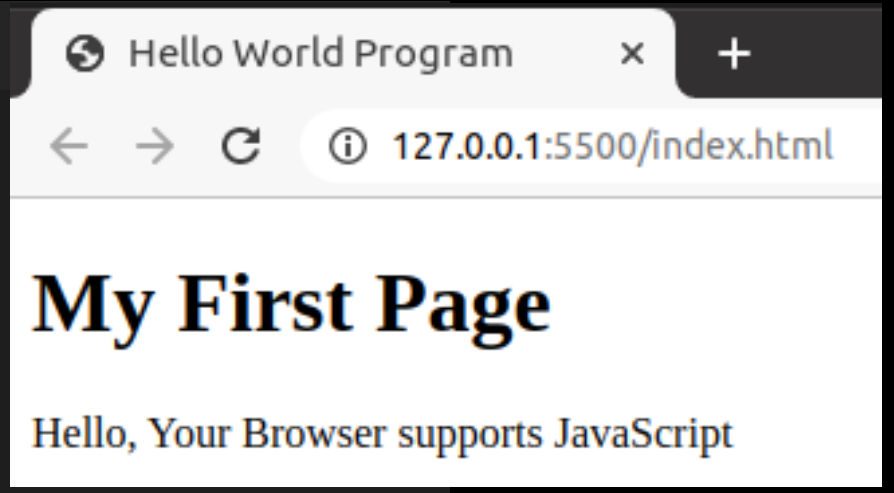
- Let's See how do we do that in the next slide.

HIDING JAVASCRIPT FROM INCOMPATIBLE BROWSERS

index.html × | script.js

index.html > ...

```
1   <!DOCTYPE html>
2   <html>
3       <head>
4           <title>Hello World Program</title>
5       </head>
6       <body>
7           <h1>My First Page</h1>
8           <script type="text/javascript">
9               document.writeln("Hello, Your Browser supports JavaScript");
10          </script>
11          <noscript>
12              Your Browser Does not support JavaScript
13          </noscript>
14      </body>
15  </html>
16
```



ALERT();, CONFIRM();, AND PROMPT();

File Edit Selection View Go Run Terminal Help

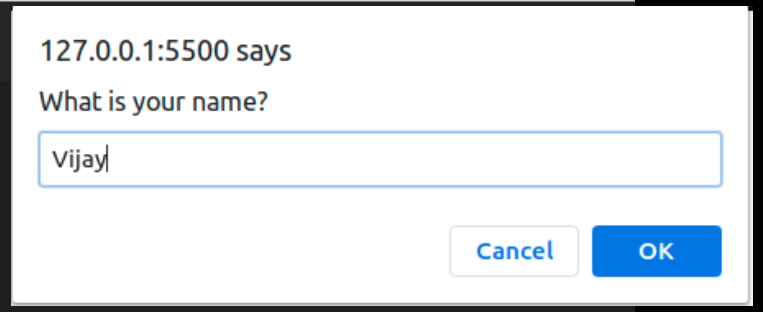
index.html

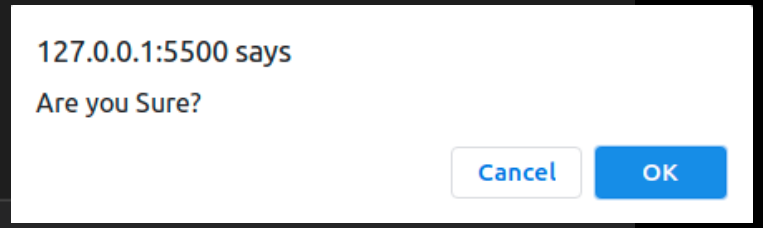
index.html > html > body > script

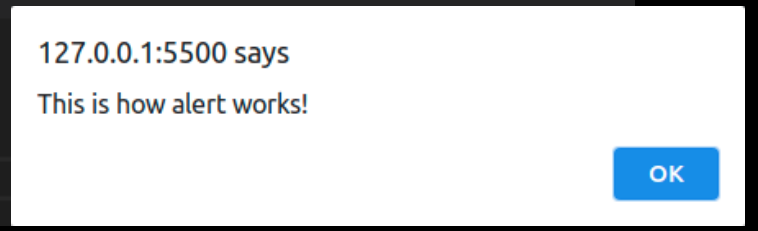
```
1   <!DOCTYPE html>
2   <html>
3       <head>
4           <title>Hello World Program</title>
5       </head>
6       <body>
7           <h1>My First Page</h1>
8           <script async type="text/javascript" src="./script.js"></script>
9           <noscript>
10              Your Browser Does not support JavaScript
11          </noscript>
12      </body>
13  </html>
14
```

script.js

```
1   alert("This is how alert works!");
2   confirm("Are you Sure?");
3   prompt("What is your name?");
```







FUNCTIONS IN JAVASCRIPT

File Edit Selection View Go Run Terminal Help

index.html

index.html > html > head > script

```
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5           <script async type="text/javascript" src="./script.js"></script>
6           <noscript>
7               Your Browser Does not support JavaScript
8           </noscript>
9       </head>
10      <body>
11          <h1>My First Page</h1>
12          <button onclick="multiply(4, 3);">click to get result</button>
13          <div class="new" id="idToRef"></div>
14      </body>
15  </html>
```
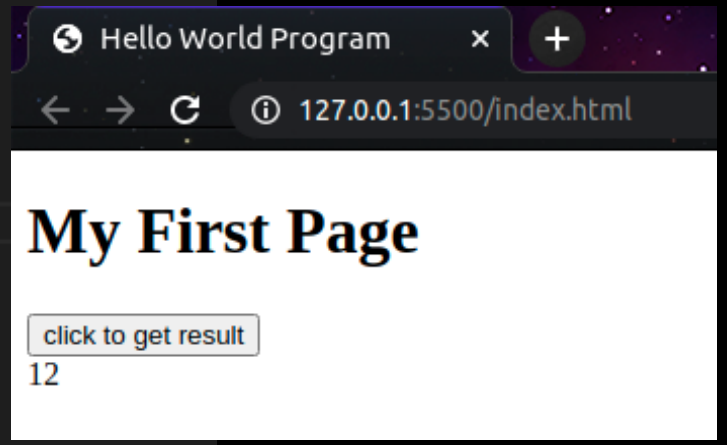

script.js

script.js > ...

```
1   function multiply(num1, num2){
2       return document.getElementById('idToRef').innerHTML = num1*num2;
3   };
```



LET'S BEGIN WITH HANDS ON PRACTICAL

- Write a Calculator Program in JavaScript.
- Download the required html files from my GitHub repository from this link if you want the code locally on your computer.
  - https://github.com/VijayMeena701/CSClub_Sessions
- Follow me along to complete the code.
- Create a Toggle button for menu bar.
- Next, we'll see how to make a slide show of images with JavaScript.