Introduction To Web Development

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Indian Institute of Information Technology, Lucknow

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Some Goodies await you..

Different Platforms

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Web Desktop

- Desktop or Laptop

- Run in a Web Browser.
  Chrome, firefox, safari, Microsoft Edge

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Web Mobile

- Smartphones and tablets

- Run in a Web Browser.
  Chrome, firefox, safari, opera.

Some Concepts to know

Frontend & Backend

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Client-Side

Server-Side

Frontend

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- What is frontend Web development?

Frontend

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- What is frontend Web development?

Front-end web development is the practice of converting data to a graphical interface.

Responsive

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Responsive

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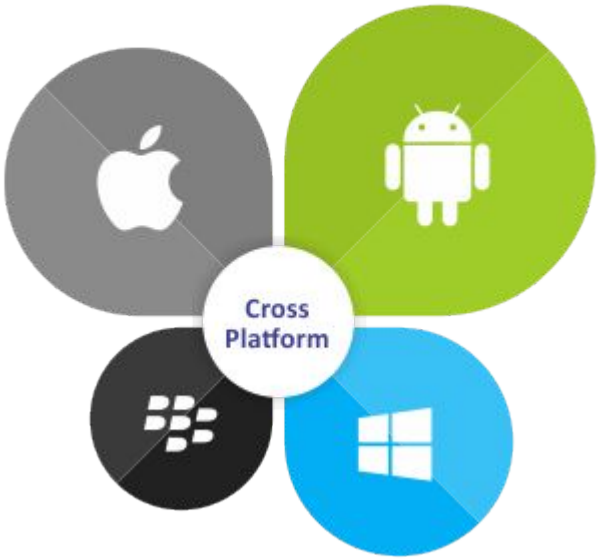
Cross Platform Mobile



HTML

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HTML

- Hyper Text Markup Language

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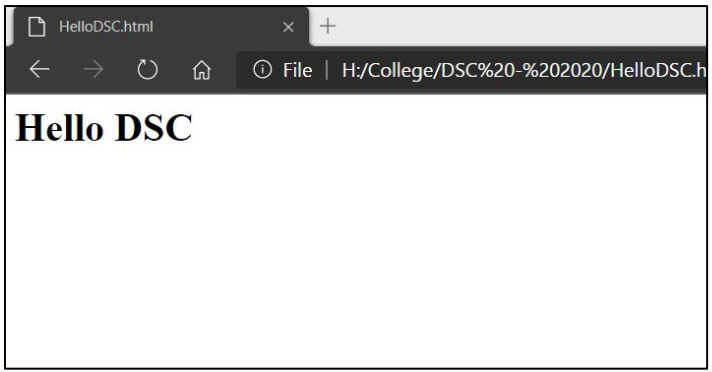
HTML

- Hyper Text Markup Language

What we write:

<h1> Hello DSC </h1> ← an html element

What we see on web:



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HTML

- Hyper Text Markup Language
- Standard Markup Language
- Describes the structure of a Web page

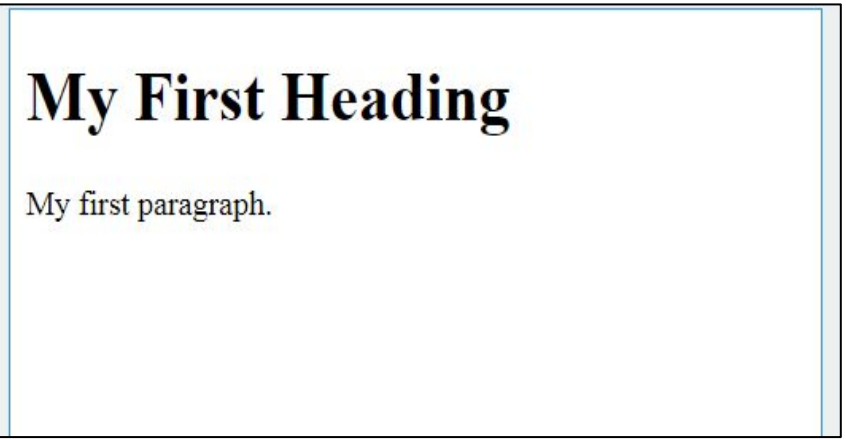
HTML

Basic Code

```
<html>
   <head>
     <title>Page Title</title>
   </head>
   <body>

      <h1>My First Heading</h1>
      <p>My first paragraph.</p>

   </body>
</html>
```



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HTML

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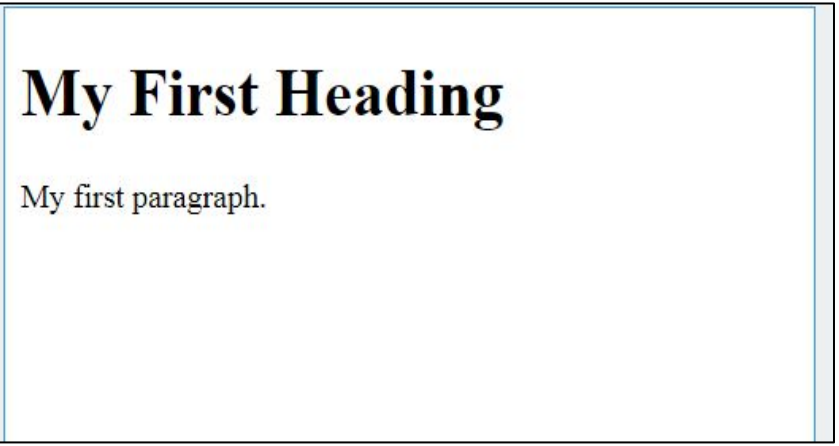

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HTML

Basic Code

```
<!DOCTYPE html>  ← defines HTML5 document
<html>
   <head>
     <title>Page Title</title>
   </head>
   <body>

      <h1>My First Heading</h1>
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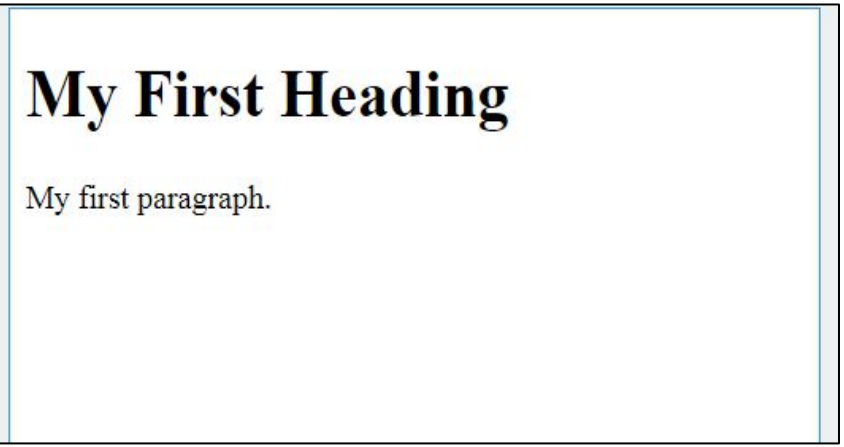
   </body>
</html>
```



HTML5

Why HTML5?

- Built-in Audio/Video
- Better Interactions
- Cross Browser Support
- Mobile Optimization

HTML5

Html5 is often a generic term of the package HTML5/CSS3/JavaScript

- HTML5 - Structure
- CSS3 - Style
- Javascript - Behavior

CSS3

- Without CSS

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

</style>
<body>
    <div>
        Hello DSC
    </div>
    <div>
        Hello Moin
    </div>
</body>
</html>
```

Hello DSC
Hello Moin

CSS3

- With CSS

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Document</title>
</head>
<style>
   .tagname{
       color: green
   }
</style>
<body>
    <div style="color:red">
        Hello DSC
    </div>
    <div class="tagname">
        Hello Moin
    </div>
</body>
</html>
```

Hello DSC
Hello Moin

CSS3

- With CSS

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</body>
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```

← Internal CSS

← Inline CSS

Hello DSC
Hello Moin

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What is JS?

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What is JS?

JavaScript is the programming language for the web.

- It is one of the most popular programming language in the world
- It is used to make web pages interactive.
- Help in building the animations.
- Rendering the content
- Styling our web pages and many more.

Evolution of JS

- **JavaScript is a language based on ECMAScript** - This programming language is evolving
- ECMAScript 5 - Today all the majors browsers have total support for ECMAScript 5
- ECMAScript 6 - Goal is to improve speed and performance in coding larger and more complex web applications, through the implementation of a redefined language syntax featuring module and class support extensions. All the major browsers are still not fully supporting ECMAScript 6 but are evolving in this way
- We usually code in ES6
- The future versions of ECMAScript are already scheduled.

JS Frameworks

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Frameworks

There are many JS Frameworks, five of them stand out:

ReactJs , AngularJs , VueJs , BackboneJs and Ember

ReactJs and AngularJs are arguably the most popular frontend frameworks.

ReactJs	→	Facebook
AngularJs	→	Google

JavaScript
Libraries

JS Libraries

- There are many JavaScript libraries to simplify the use of JavaScript like.,
  jQuery , Prototype ,etc..,
- Function of jquery is to simplify the bulkier code which a developer has to write while dealing with the Vanilla Javascript.

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JS Libraries

- BootStrap
  There are many libraries for UI Components and styling like Bootstrap, etc.

- Makes front-end web development faster and easier.

- https://getbootstrap.com/

Why JS?

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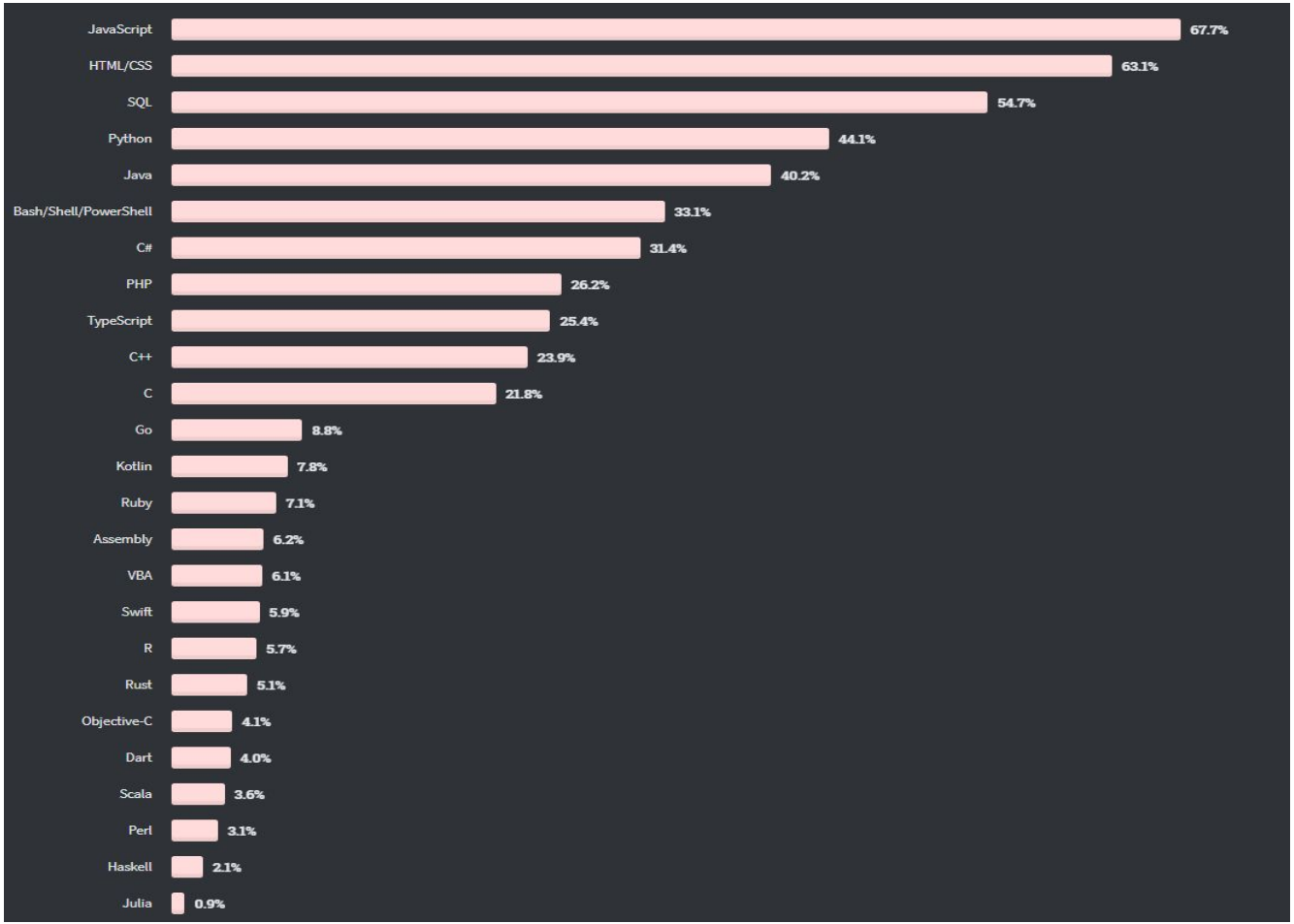

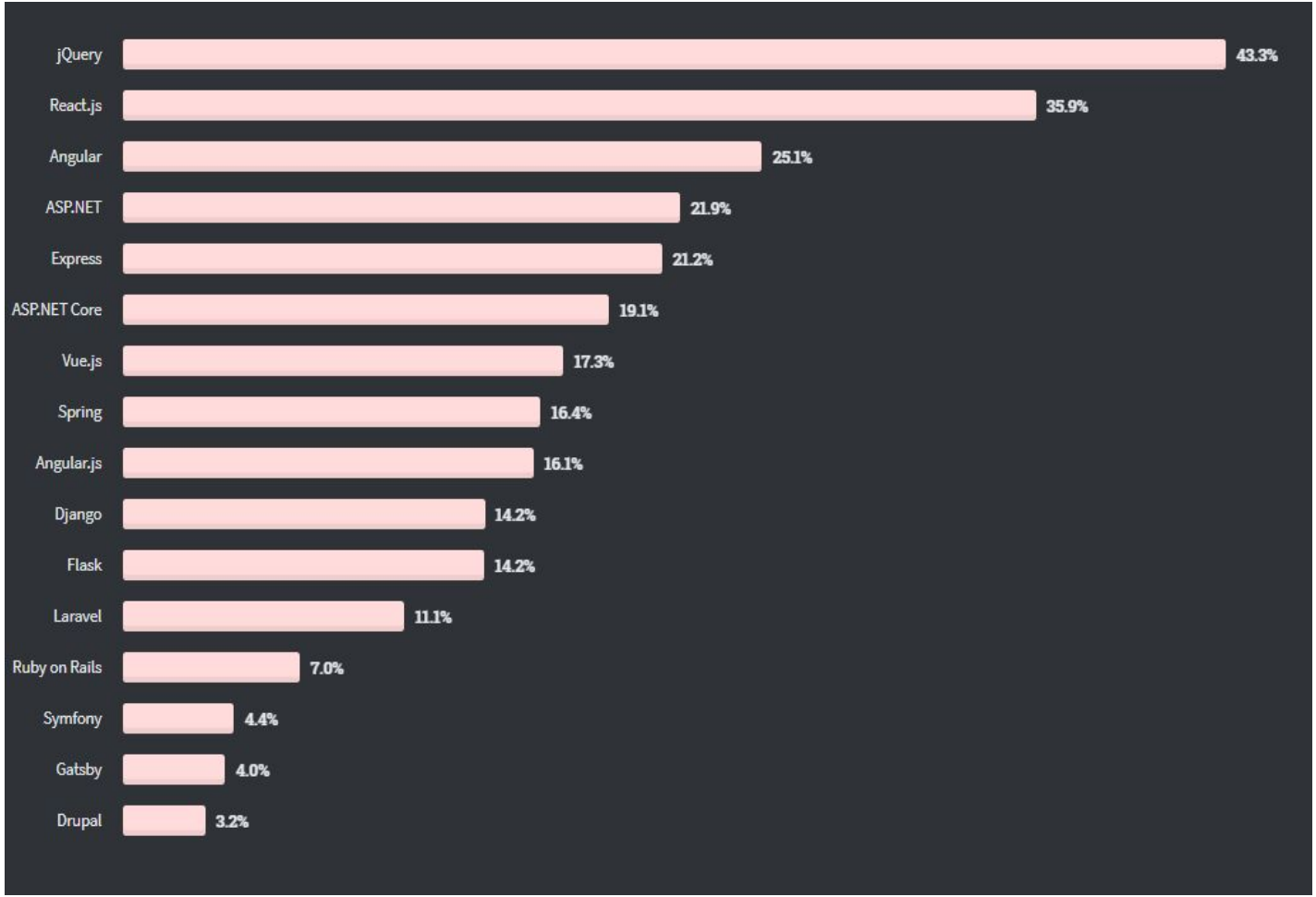
jQuery 43.3%
React.js 35.9%
Angular 25.1%
ASP.NET 21.9%
Express 21.2%
ASP.NET Core 19.1%
Vue.js 17.3%
Spring 16.4%
Angular.js 16.1%
Django 14.2%
Flask 14.2%
Laravel 11.1%
Ruby on Rails 7.0%
Symfony 4.4%
Gatsby 4.0%
Drupal 3.2%

Few Companies Using JS

Development

IDEs

- Integrated Development Environments

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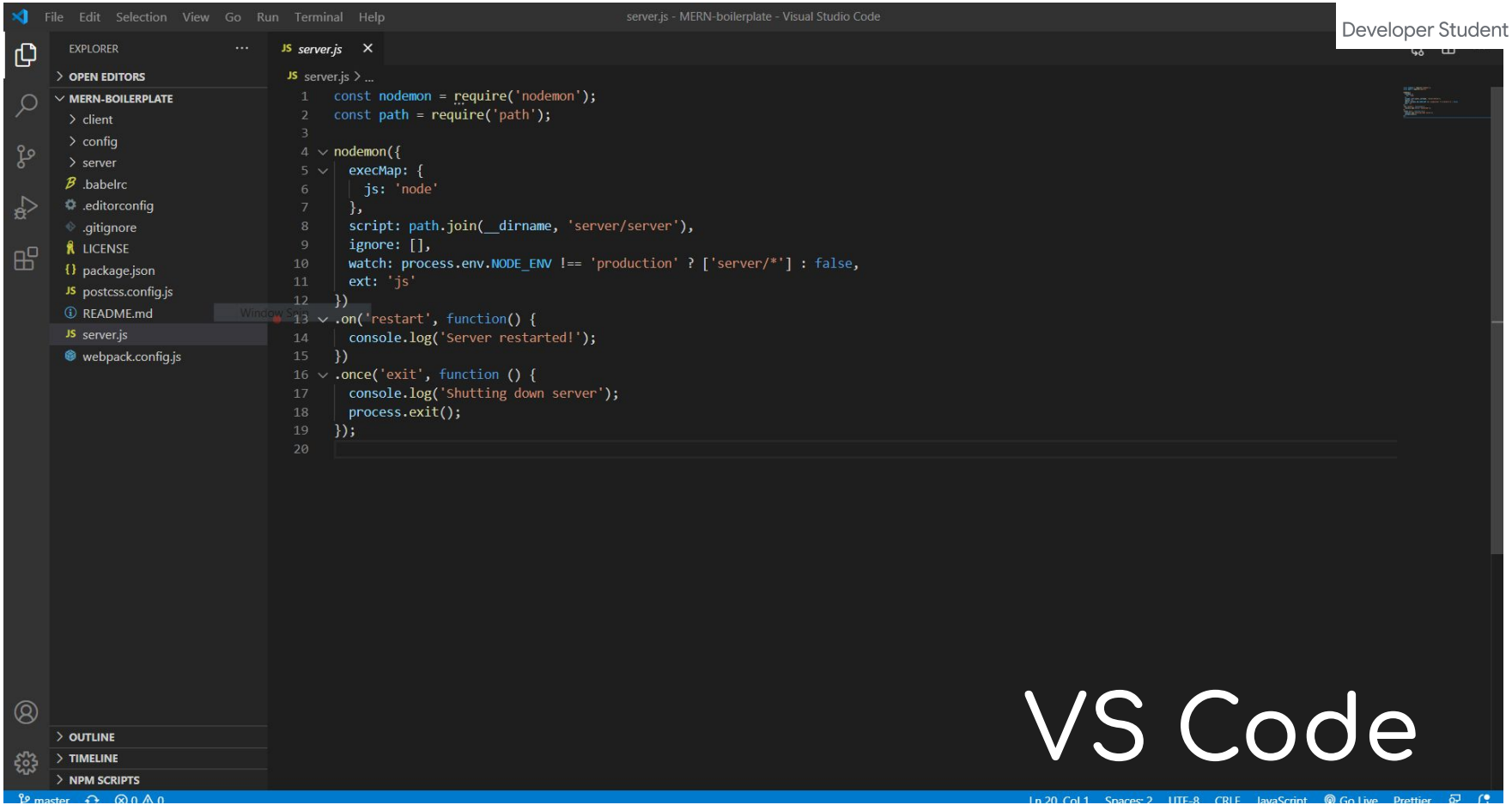

VS Code

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Some Best Practices

- File Naming System
  - lowercase
  - Dashes or underscores between words
- Variable Names
  - camelCase
  - Self explanatory
- Class Names
  - PascalCase
- Avoiding repeated use of console.log()
- Folder Structure

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Resources

- https://www.w3schools.com
- https://developer.mozilla.org/en-US/docs/Web/HTML
- https://developer.mozilla.org/en-US/docs/Web/CSS
- https://developer.mozilla.org/en-US/docs/Web/JavaScript

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Questionnaire