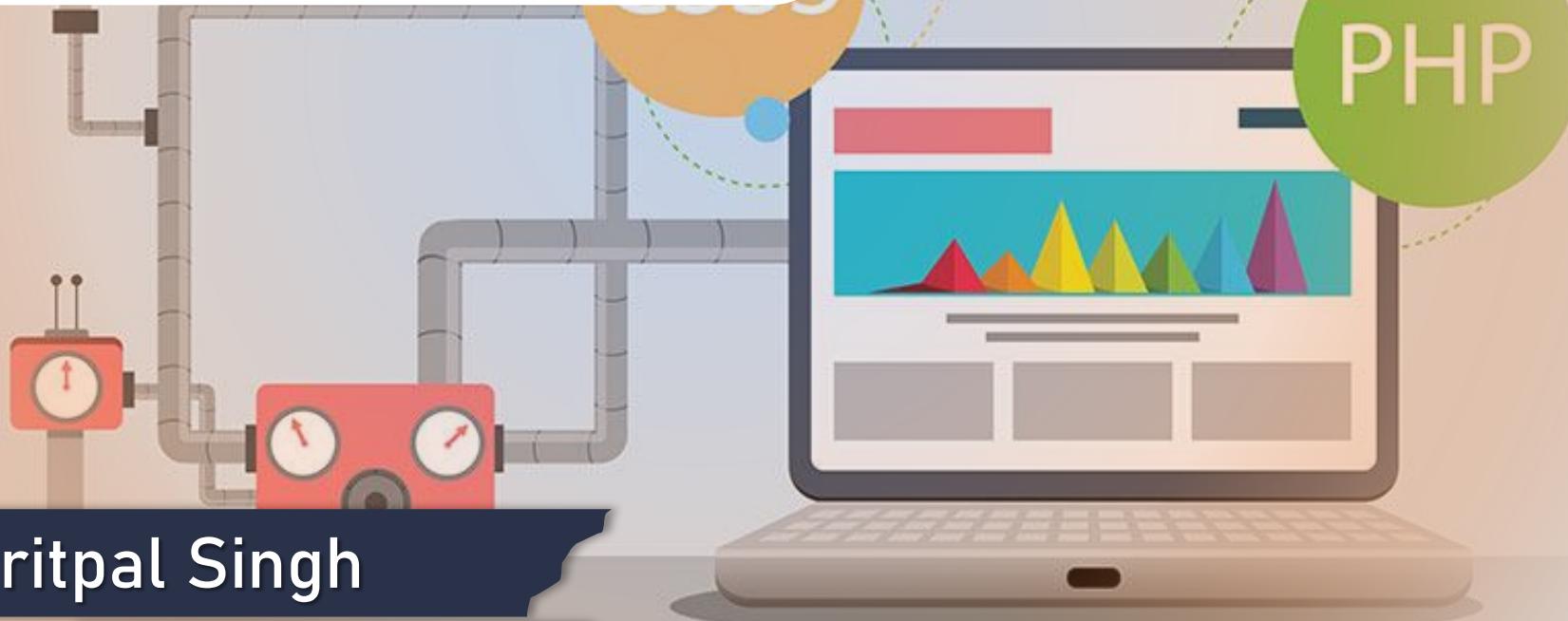


ECAP472

WEB TECHNOLOGIES



Dr. Pritpal Singh

Associate Professor

Learning Outcomes



After this lecture, you will be able to

- set up your development environment setup .
- go over HTML5 basic .

Do you realize ?

- Do you realize that the only functionality of a web application is that the user directly interacts with is through the web page? If Implement it poorly and, to the user, the server-side becomes irrelevant!
- Today's user expects a lot out of the web page: it has to load fast, expose the desired service, and be comfortable to view on all devices: from a desktop computers to tablets and mobile phones

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- Today's user expects a lot out of the web page: it has to load fast, expose the desired service, and be comfortable to view on all devices: from a desktop computers to tablets and mobile phones.

Why to learn html?

```
| <html>  
|   <head>  
|     <title>...</title>  
  
| </html>
```

Create Web site - You can create a website or customize an existing web .

Become a web designer - If you want to start a carrier as a professional web designer.

Understand web - If you want to optimize your website, to boost its speed and performance.

Learn other languages - other related technologies like javascript , php, or angular are become easier to understand.



What is HTML5 ?

```
| <html>  
|   <head>  
|     <title>...</title>  
|  
|   </html>
```

- HTML5 is a markup language used for structuring and presenting content on the World Wide Web.
- It is the fifth and last major HTML version that is a World Wide Web Consortium (W3C) recommendation.



How do I setup my HTML/CSS environment?

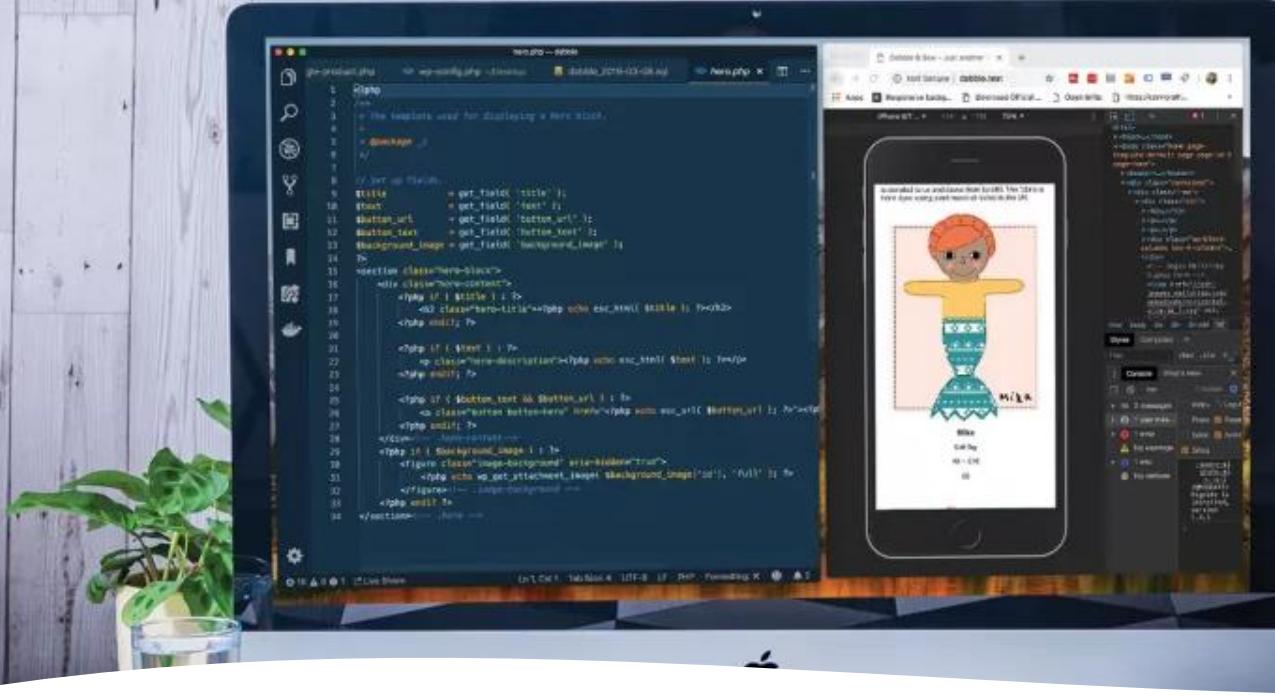
- HTML coding can be written in basic text editor and that are just viewed by any web browser. They don't act like other conventional programming languages which are compiled into machine code.

How do I setup my HTML/CSS environment?

- HTML and CSS can be written in anything - even as basic as notepad. These are grouped as "text editors" and can be powerful and help your workflow if you master one. The most important thing is to find an environment which is comfortable for you.

How do I setup my HTML/CSS environment ?

- The main ones in order to benefit workflow are Sublime Text and Notepad++. Both have great plugins and themes available to it, but Notepad++ is only available on Windows, whereas Sublime Text is cross platform.



HTML & CSS Local Environment Setup

- The Text Editor.
- Browser Setup.
- Your Working Folder.
- Creating an HTML File.

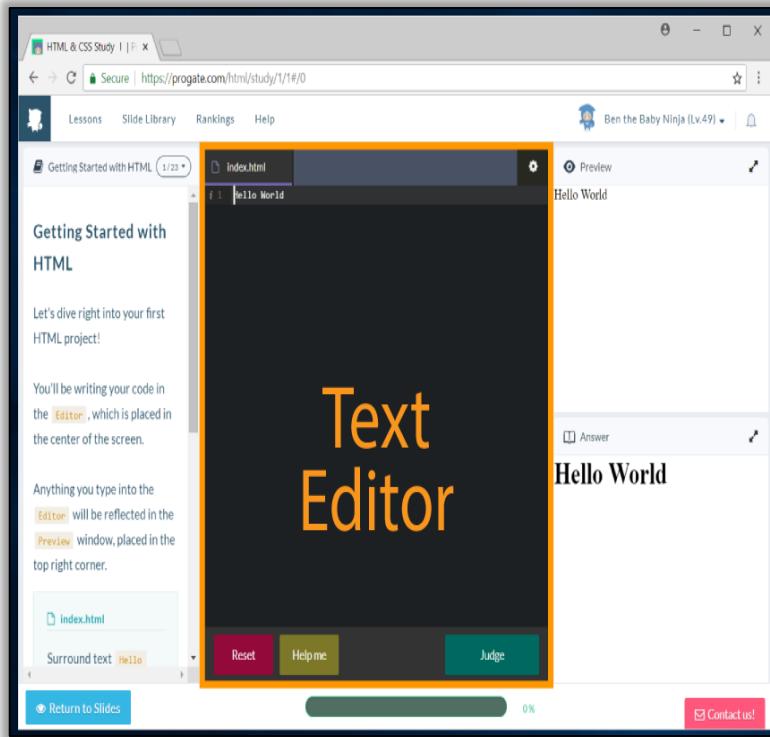
HTML & CSS Local Environment Setup (Windows)

- Generally, it's called **local development** when you create and test a website using only your own computer. The setup required is called **local environment setup**. After you have set up your local development environment, you can work on creating your own website with HTML & CSS anytime and anywhere (even without an internet connection).
- What you need:
 - **A computer**
 - **Basic HTML & CSS skills**

1. The Text Editor

- The two most essential tools for developing a website are a **text editor** and a **browser**. We'll start by choosing and setting up a text editor. A text editor (or just "editor") is like the window in the center of every lesson where you write your code.

Text Editor



A screenshot of a Windows Notepad window titled "Untitled - Notepad". The window contains the following HTML code:

```
<!DOCTYPE html>
<html>
<head>
<title>webpage</title>
</head>
<body>
<h1>Create your First Web page</h1>
<p>Hello World!!</p>
</body>
</html>
```

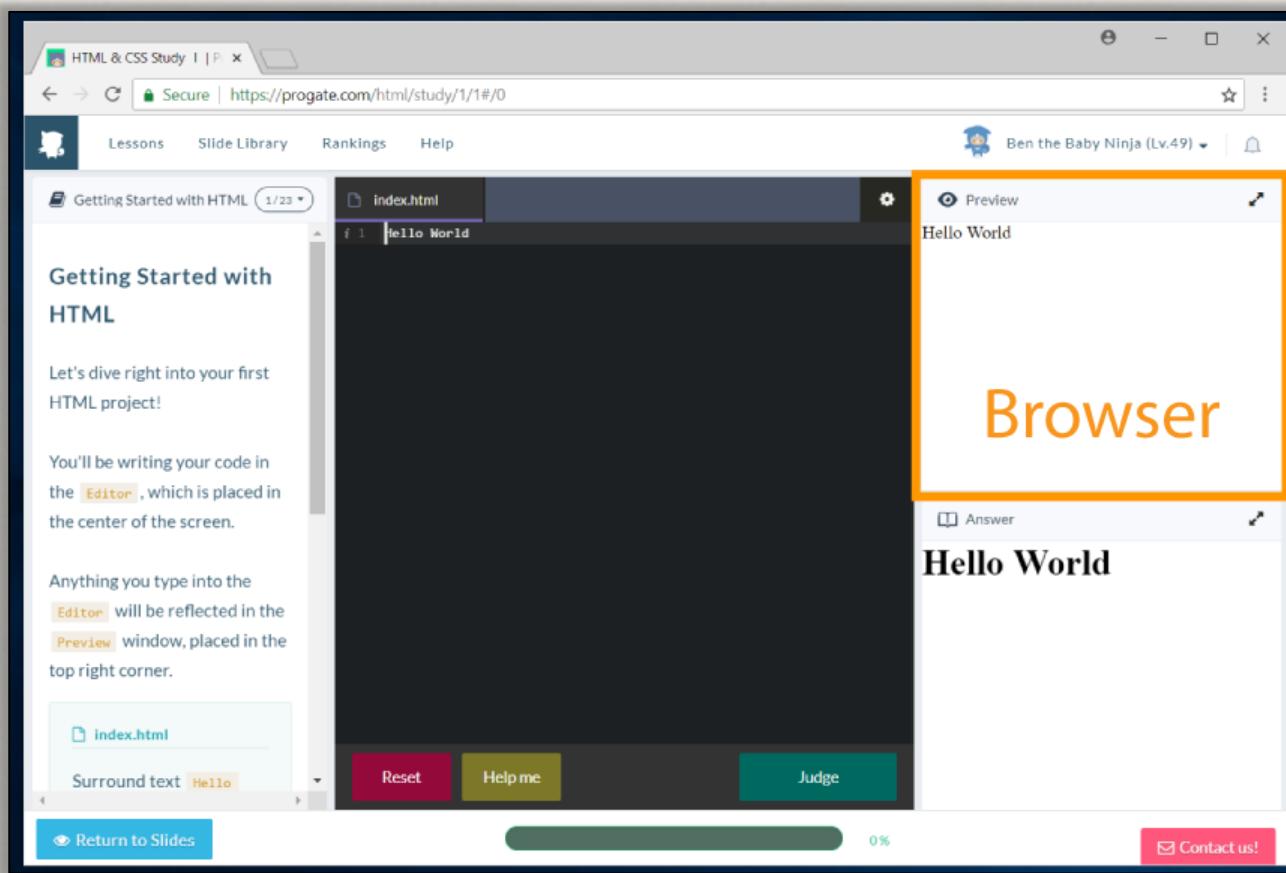
HTML Text editor

- An HTML editor is a program for editing HTML, the markup of a web page. Although the HTML markup in a web page can be controlled with any text editor, specialized HTML editors can offer convenience and added functionality.

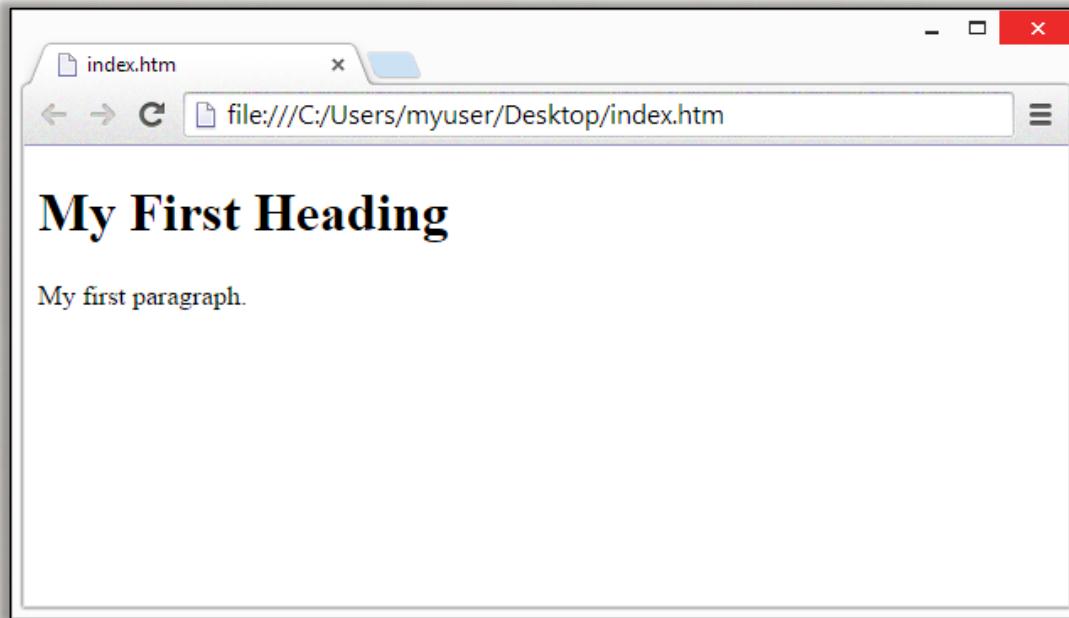
Browser Setup

- Browsers are for viewing and displaying websites
 - .There is a window on the right where the result of your HTML & CSS code is displayed so you can see if it's correct.

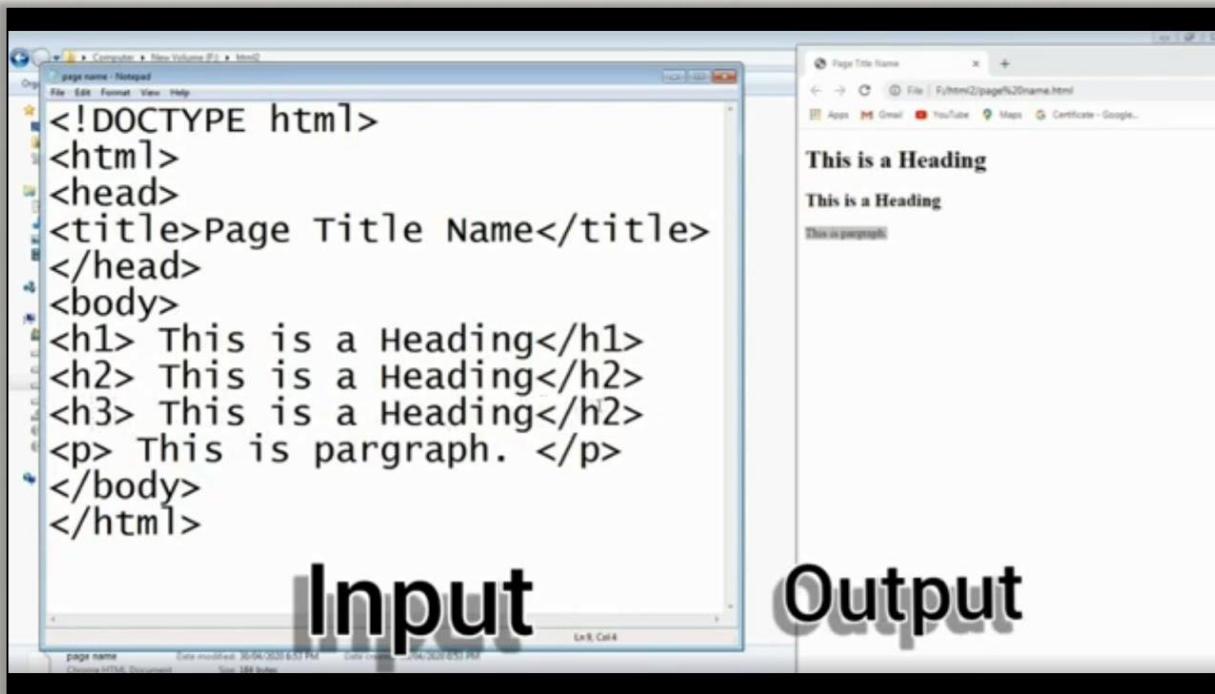
2. Browser Setup



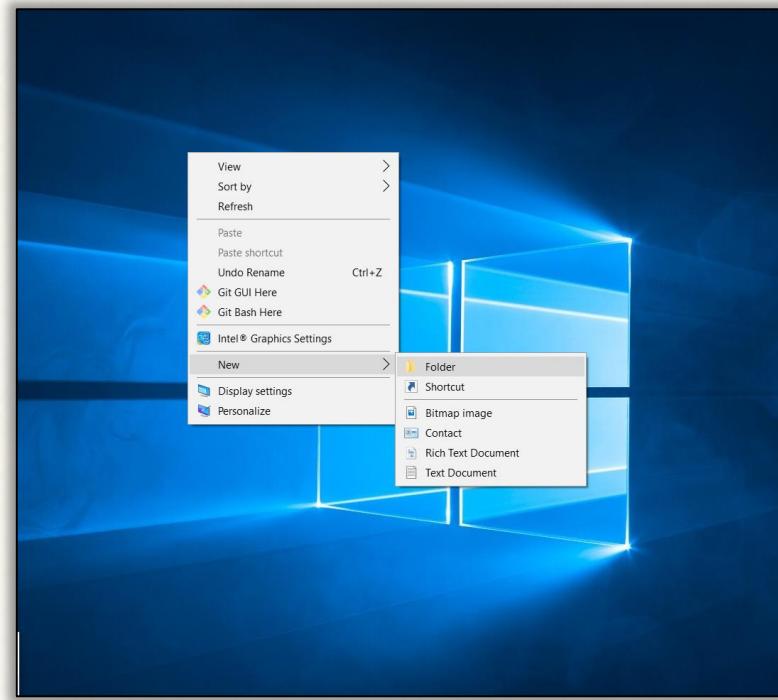
Browser Display



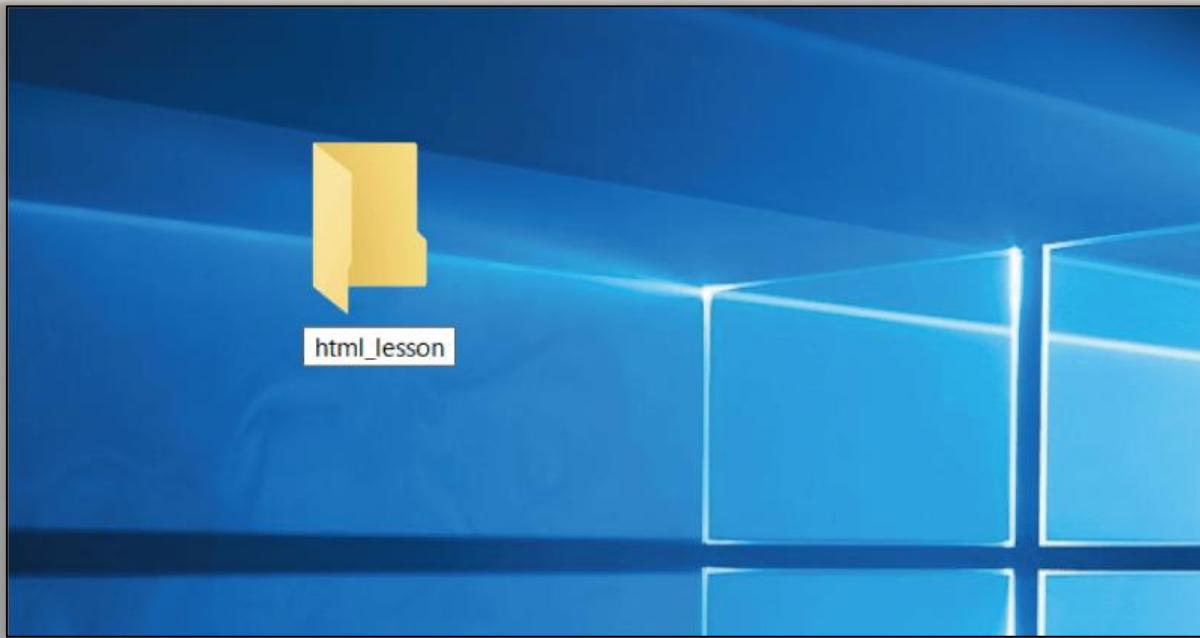
Input/Output



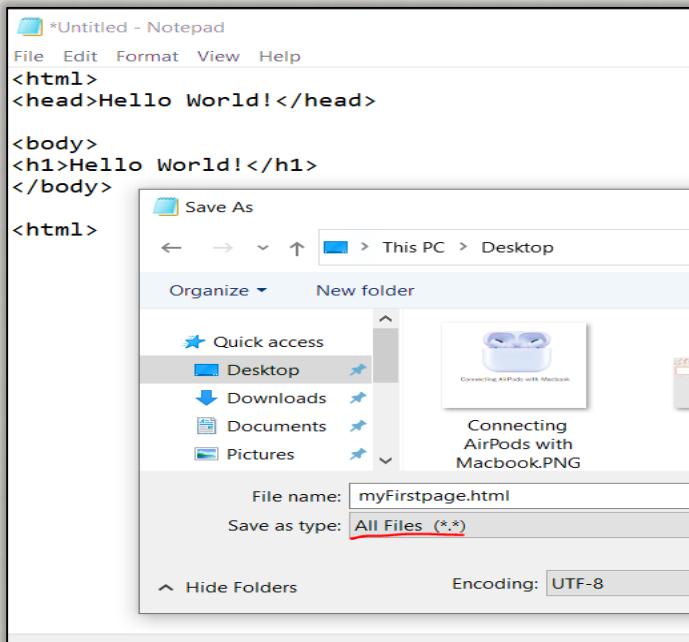
3. Your Working Folder

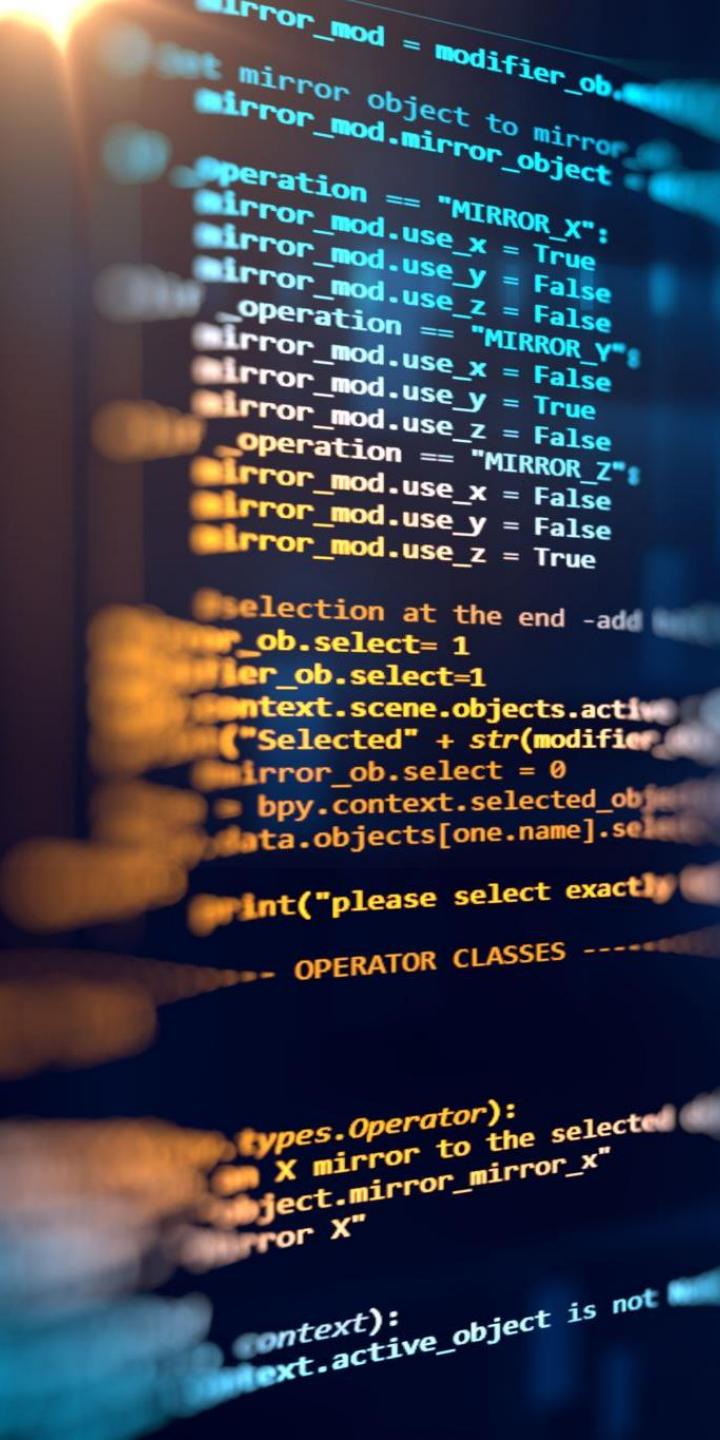


Let's name the folder `html_lesson`.



4. Creating an HTML File





Tags

- “Normal text” surrounded by bracketed *tags* that tell browsers how to display web pages.
- Pages end with “.htm” or “.html”
- HTML Editor - A word processor that has been specialized to make the writing of HTML documents more effortless.

Choosing Text Editor

- There are many different programs that you can use to create web documents.
- HTML Editors enable users to create documents quickly and easily by pushing a few buttons. Instead of entering all of the HTML codes by hand.
- These programs will generate the HTML Source Code for you.

Choosing Text Editor

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Choosing Text Editor

- HTML Editors are excellent tools for experienced web developers; however; it is important that you learn and understand the HTML language so that you can edit code and fix “bugs” in your pages.
- For this Course, we will focus on using the standard Microsoft Windows text editors, NotePad.

Choosing Text Editor

- HTML Editors are excellent tools for experienced web developers; however; it is important that you learn and understand the HTML language so that you can edit code and fix “bugs” in your pages.
- For this Course, we will focus on using the standard Microsoft Windows text editors, NotePad.

Starting note pad

- NotePad is the standard text editor that comes with the microsoft windows operating system. To start NotePad in windows follow the steps bellow:
- Click on the “Start” button located on your Windows task bar.
- Click on “Programs” and then click on the directory menu labeled “Accessories”.
- Locate the shortcut “NotePad” and click the shortcut once.

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Creating a Basic Starting Document

```
<HTML>
<HEAD>
<TITLE>Latest news </TITLE>
</HEAD>
<BODY>
    This is what is displayed.
</BODY>
</HTML>
```

Creating a Basic Starting Document

- The HEAD of your document point to above window part. The TITLE of your document appears in the very top line of the user's browser. If the user chooses to “Bookmark” your page or save as a “Favorite”; it is the TITLE that is added to the list.
- The text in your TITLE should be as descriptive as possible because this is what many search engines, on the internet, use for indexing your site.

Setting Document Properties

- Document properties are controlled by attributes of the **BODY** element. For example, there are color settings for the background color of the page, the document's text and different states of links.

Color Codes

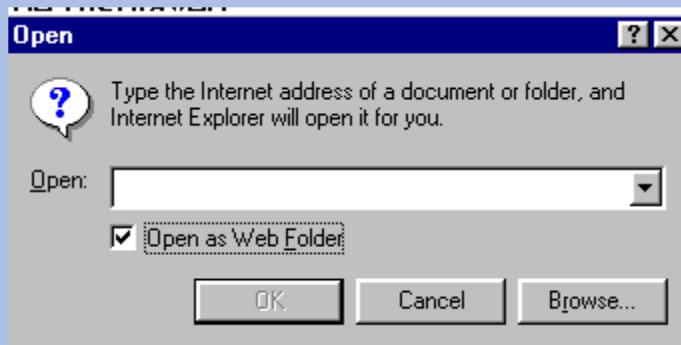
- Colors are set using “**RGB**” color codes, which are, represented as hexadecimal values. Each 2-digit section of the code represents the amount, in sequence, of **red**, **green** or **blue** that forms the color. For example, a **RGB** value with 00 as the first two digits has no red in the color.

Previewing Your Work

- Once you have created your basic starting document and set your document properties it is a good idea to save your file.
- To save a file, in NotePad, follow these steps:
 - Locate and click on the menu called “File”.
 - Select the option under File Menu labeled “Save As”.
 - In the “File Name” text box, type in the entire name of your file (including the extension name .html).

Edit, Save and View Cycle

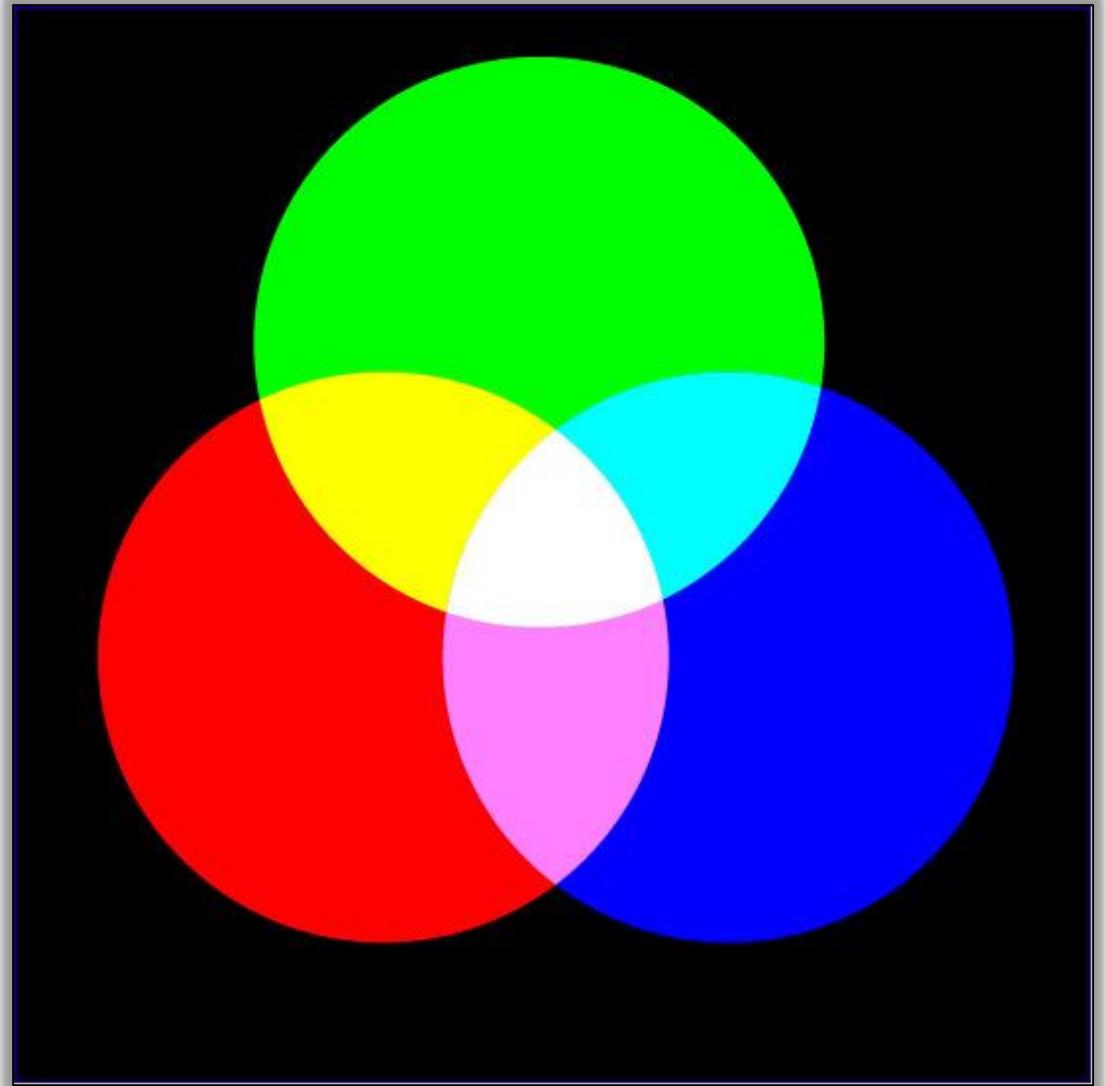
- To preview Your Work, open a web browser and do the following:
 1. Click on the menu labeled “File”.
 2. Locate the menu option, “Open”.



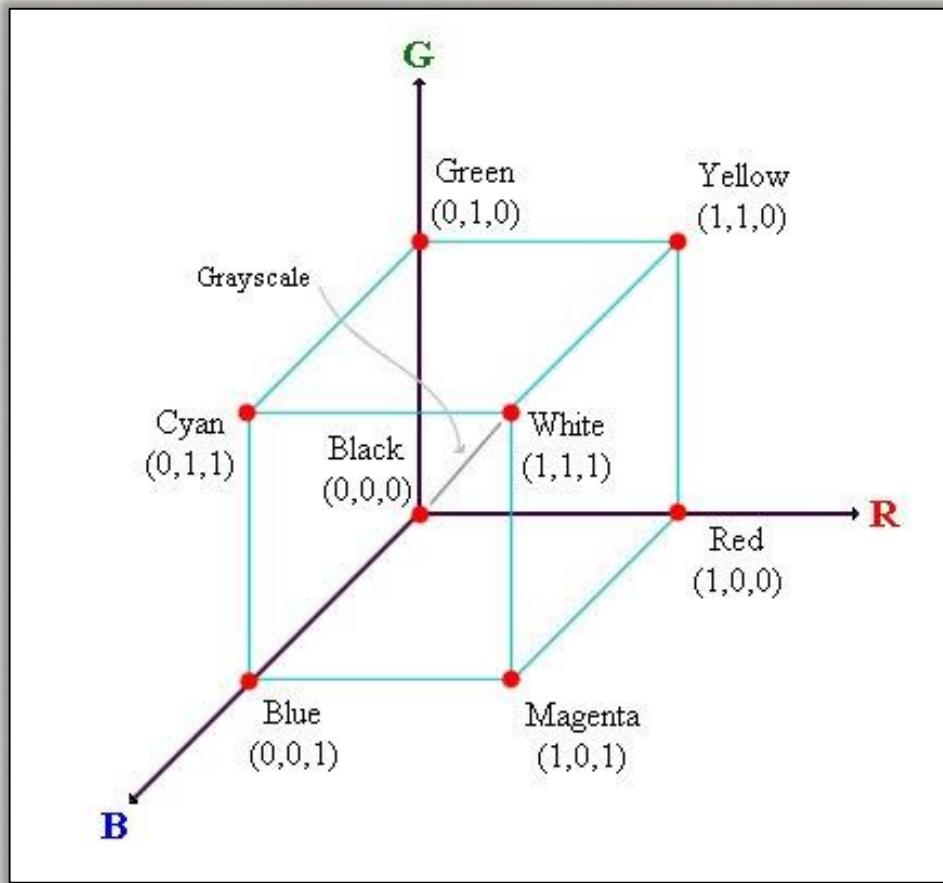
Edit, Save and View Cycle

- In the “Open” dialog box, click on the “Browse” button and locate your web document.
- Click “OK” once you have selected your file.
- The web browser will load the same document but with the new revisions. This process is the Edit, Save and View Cycle.

Main colours



RGB Colour Model



Basic Colours

Color Name	RGB Triplet	Hexadecimal	Color Name	RGB Triplet	Hexadecimal
Aqua	(0,255,255)	00FFFF	Navy	(0,0,128)	000080
Black	(0,0,0)	000000	Olive	(128,128,0)	808000
Blue	(0,0,255)	0000FF	Purple	(128,0,128)	800080
Fuchsia	(255,0,255)	FF00FF	Red	(255,0,0)	FF0000
Gray	(128,128,128)	808080	Silver	(192,192,192)	C0C0C0
Green	(0,128,0)	008000	Teal	(0,128,128)	008080
Lime	(0,255,0)	00FF00	White	(255,255,255)	FFFFFF
Maroon	(128,0,0)	800000	Yellow	(255,255,0)	FFFF00

Work with HTML documents inTextEdit on Mac

- In the TextEdit app on your Mac, choose File > New, then choose Format > Make Plain Text.
- Enter the HTML code.
- Choose File > Save, type a name followed by the extension .html (for example, enter index.html), then click Save.
- When prompted about the extension to use, click “Use .html”.

View an HTML document

- In theTextEdit app on your Mac, chooseTextEdit > Preferences, then click Open and Save.
- Select “Display HTML files as HTML code instead of formatted text”.

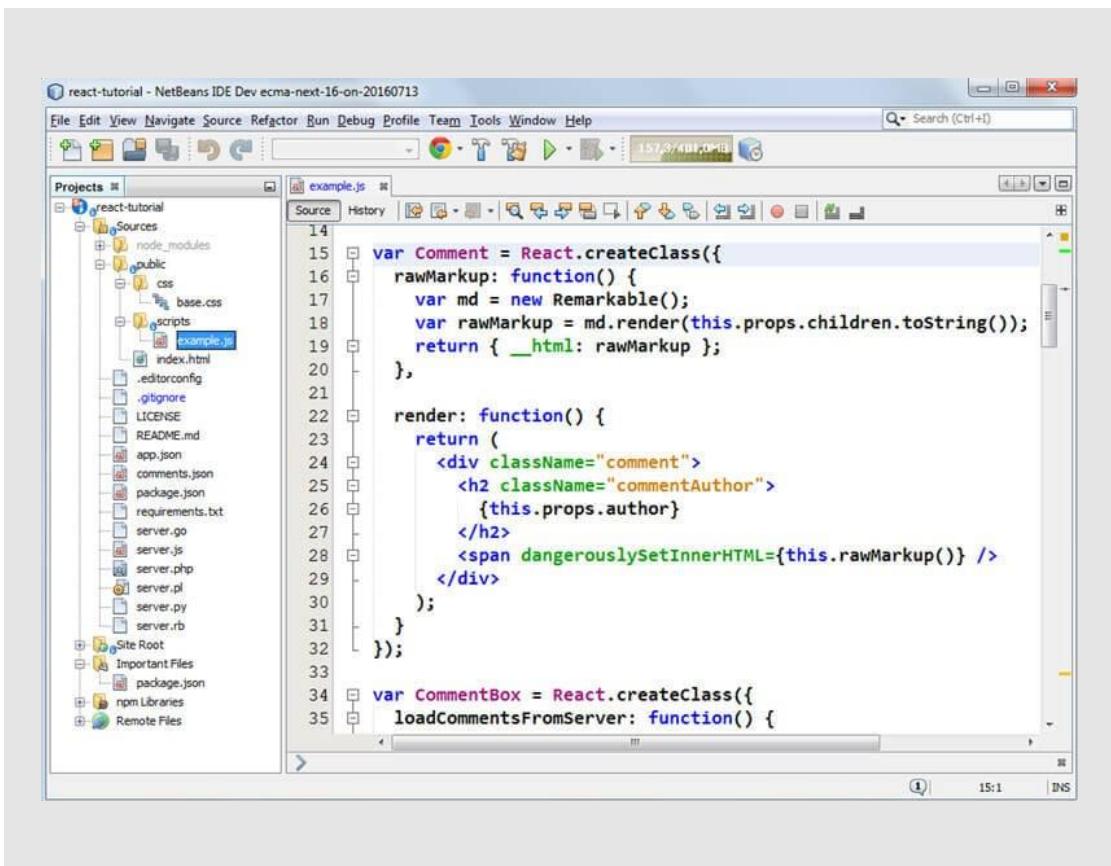
Change how HTML files are saved

- Set preferences that affect how HTML files are saved in TextEdit.
- In the TextEdit app on your Mac, choose TextEdit > Preferences, then click Open and Save.
- Below HTML Saving Options, choose a document type, a style setting for CSS and an encoding.

Change how HTML files are saved

- Select “Preserve white space” to include code that preserves blank areas in documents.
- If you open an HTML file and don’t see the code,TextEdit is displaying the file the same way a browser would (as formatted text).

NetBeans



The screenshot shows the NetBeans IDE interface with a project titled "react-tutorial". The left pane displays the project structure, which includes a "Sources" folder containing "node_modules", "public" (with "css" and "base.css"), "scripts" (with "example.js"), and "index.html". Other files like ".editorconfig", ".gitignore", "LICENSE", "README.md", "app.json", "comments.json", "package.json", "requirements.txt", "server.go", "server.js", "server.php", "server.pl", "server.py", "server.rb", "Site Root", "Important Files", "package.json", "npm Libraries", and "Remote Files" are also listed. The right pane shows the code editor for "example.js", displaying React component definitions for "Comment" and "CommentBox". The code uses ES6 syntax and JSX.

```
14 var Comment = React.createClass({  
15   rawMarkup: function() {  
16     var md = new Remarkable();  
17     var rawMarkup = md.render(this.props.children.toString());  
18     return { __html: rawMarkup };  
19   },  
20  
21   render: function() {  
22     return (  
23       <div className="comment">  
24         <h2 className="commentAuthor">  
25           {this.props.author}  
26         </h2>  
27         <span dangerouslySetInnerHTML={this.rawMarkup()} />  
28       </div>  
29     );  
30   },  
31 });  
32  
33 var CommentBox = React.createClass({  
34   loadCommentsFromServer: function() {  
35     //  
36   },  
37   render: function() {  
38     return (  
39       <div>  
40         <h3>Comments</h3>  
41         <CommentBoxList comments={this.state.comments} />  
42         <CommentForm />  
43       </div>  
44     );  
45   },  
46 }));  
47  
48 ReactDOM.render(<CommentBox />, document.querySelector('#content'));
```

NetBeans is an open source IDE used for developing software applications by developers. It can read and edit texts in HTML, PHP, C++ and a few more. It provides an intuitive user interface for macOS users and comes with customized key-bindings. Interestingly, it supports Git and management of source codes.

Sublime Text 2

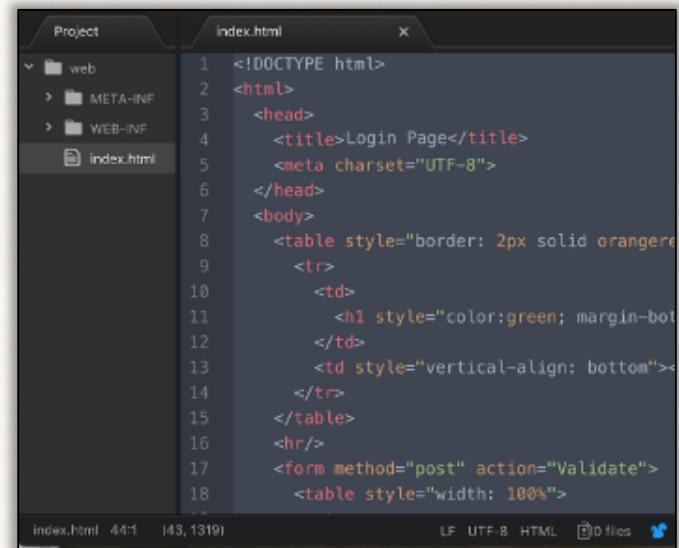
- Sublime Text 2 is the favorite of developers, because it can easily be completely customized to one's own needs by using a JSON file. Moreover, there are several extensions to “stretch” the editor with. For example, a must-have extension is Package Control, which you can use to easily find and install extensions and plug-ins from right within the editor. To describe the full extent of features of Sublime Text 2 is rather difficult, as it can do, through its plug-ins and extensions, basically anything you need it to do.

Brackets

- Brackets is a modern open source editor with several extremely interesting features. For example, when used in combination with Adobe Creative Cloud Extract (=preview) it can read design data such as colors, types, histories etc. directly from a PSD file and transform it into correct CSS code.

Atom

- Atom is an open-source and free to use text and code editor with a rich set of plug-ins for different functions.
- It can be downloaded from [Atom homepage](#), and it runs on Microsoft Windows, macOS, and Linux distributions. Atom highlights code written in many languages, including HTML, Java, Python, and others. Sample HTML code displayed in the Atom editor is shown in Figure



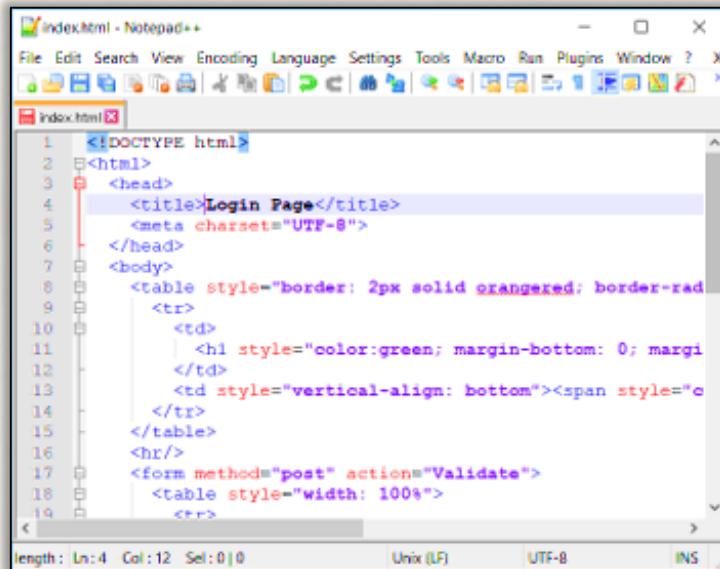
The screenshot shows the Atom code editor interface. On the left, there's a sidebar titled 'Project' with a tree view showing a 'web' folder containing 'META-INF', 'WEB-INF', and 'index.html'. The main area is titled 'index.html' and displays the following HTML code:

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <title>Login Page</title>
5      <meta charset="UTF-8">
6    </head>
7    <body>
8      <table style="border: 2px solid orange;">
9        <tr>
10          <td>
11            <h1 style="color:green; margin-bottom: 10px;">Welcome</h1>
12          </td>
13          <td style="vertical-align: bottom;">
14            <input type="text" name="username" value="User Name" style="width: 100%; height: 30px; border: 1px solid #ccc; padding: 5px; font-size: 14px;" />
15          </td>
16        </tr>
17      </table>
18      <hr/>
19      <form method="post" action="Validate">
20        <table style="width: 100%">
21          <tr>
22            <td style="width: 10%; text-align: right; padding-right: 10px;">
23              <label>Password:</label>
24            </td>
25            <td>
26              <input type="password" name="password" value="Password" style="width: 100%; height: 30px; border: 1px solid #ccc; padding: 5px; font-size: 14px;" />
27            </td>
28          </tr>
29        </table>
30      </form>
31    </body>
32  </html>
```

The status bar at the bottom shows 'index.html 44:1 143,13191 LF UTF-8 HTML'. There are also icons for file operations like Open, Save, and Find.

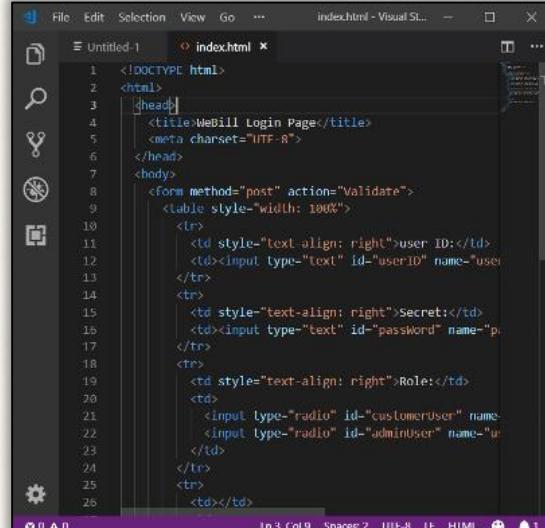
Notepad++

- Notepad++ is a free-to-use editor that supports several programming languages. It runs on Microsoft Windows and doesn't have packages for other operating systems. You can download Notepad++ from [Notepad++ home](#).



Visual Studio Code Editor

- Visual Studio Code is another powerful editor that can assist you in writing and editing HTML, CSS, and JavaScript code, and has extensions for supporting other major programming languages. It is also free to use. You can try this editor in Visual Studio Code.
- Figure shows you, its interface.



The screenshot displays the Visual Studio Code interface with the following details:

- Title Bar:** Shows "File Edit Selection View Go ..." and "index.html - Visual St...".
- Left Sidebar:** Includes icons for File Explorer, Search, and others.
- Code Editor:** Displays the following HTML code:

```
<!DOCTYPE html>
<html>
<head>
<title>WebBill Login Page</title>
<meta charset="UTF-8">
</head>
<body>
<form method="post" action="Validate">
<table style="width: 100%">
<tr>
<td style="text-align: right">user ID:</td>
<td><input type="text" id="userID" name="user"></td>
</tr>
<tr>
<td style="text-align: right">Secret:</td>
<td><input type="text" id="password" name="pass"></td>
</tr>
<tr>
<td style="text-align: right">Role:</td>
<td>
<input type="radio" id="customerUser" name="role" checked="">
<input type="radio" id="adminUser" name="role" checked="">
</td>
</tr>
<tr>
<td><input type="button" value="Submit" /></td>
<td><input type="button" value="Cancel" /></td>
</tr>
</table>
</form>
</body>
</html>
```
- Bottom Status Bar:** Shows "Line 3, Col 9" and "Spaces 2" along with icons for LF, HTML, and a bell notification.

That's all for now...