Front-End Essentials

Lab Guides

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RECORD OF CHANGES

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	25/Jun/2018	Create a new Lab	Create new	DieuNT1	VinhNV
2	01/May/2019	Update Fsoft Template	Update	DieuNT1	VinhNV

Contents

	CODE:	FEE.M.L201 (Bootstrap 4)
FRESHER ACADEMY	TYPE:	Medium
	LOC:	200
	DURATION:	90 MINUTES

Day 2. Unit 3 – Bootstrap 4

Objectives

- Understand the basic concepts of Web Design (HTML, CSS, JS)

- Understand web design guidelines and process which you can apply to real world web projects

- Understand the syntax of HTML Element

- Understand important HTML Forms elements such as: form, form group, from control, submit

- Understand responsive web design by using CSS @media query

- Able use HTML and CSS to create a responsive web page

- Understand the core concepts of Bootstrap (layout, rows, grid, flex, components: buttons, alerts, utilities)
- Able to create complex, beautiful, responsive webpage with Bootstrap

Technical Requirements:

- Must use HTML, CSS, and Bootstrap 4
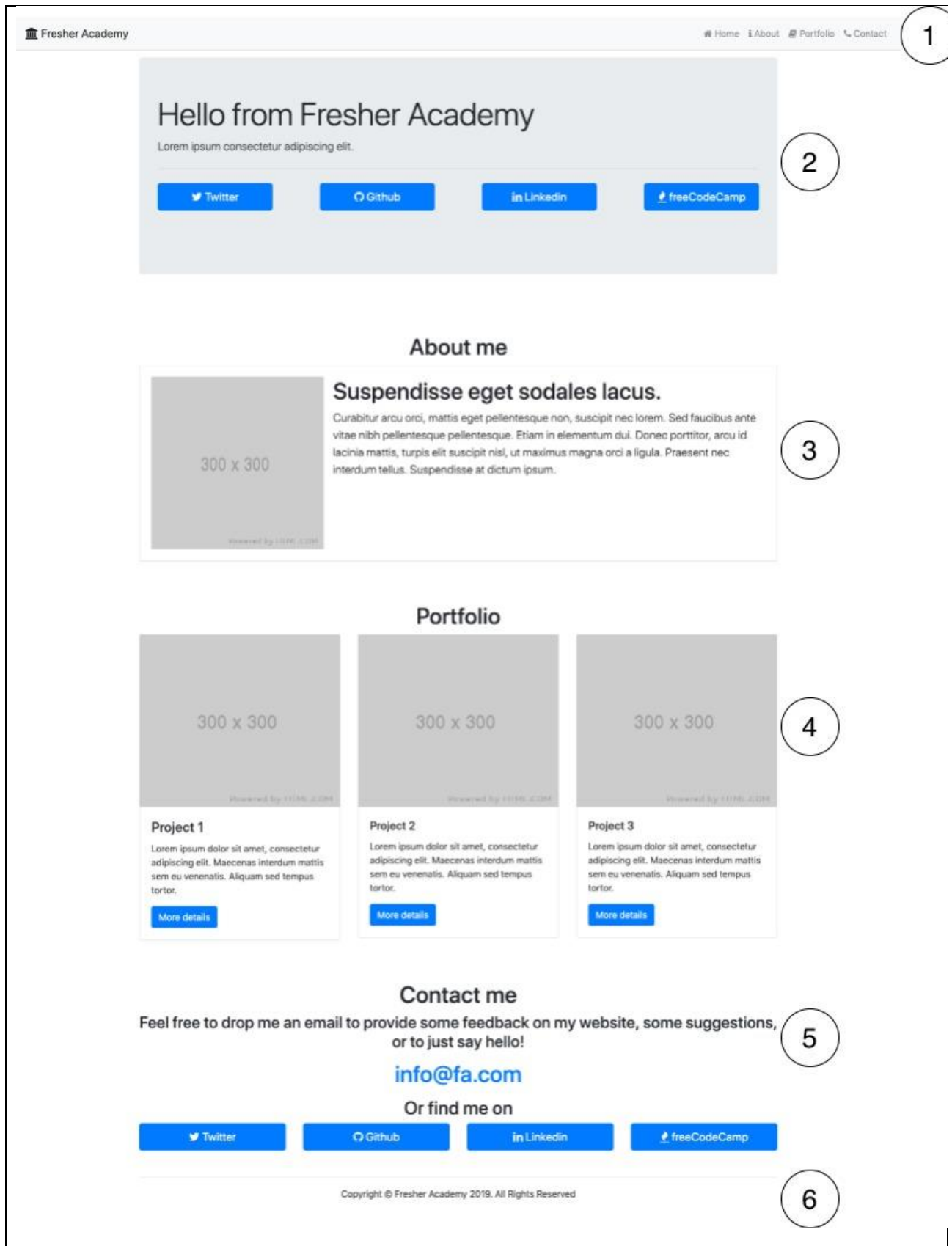
Specifications

You have to build a Personal Portfolio Webpage using HTML, CSS and Bootstrap 4.

The app is composed of 6 sections:

A Header: on the left is the Brand Name, and on the right side is 4 links: Home, About, Portfolio, Contact. The header must be fixed on top even if user scroll down. Also, if user click on any of 4 links, the corresponding section must be shown (i.e click on Contact will show Contact section)

1. Home section: a brief overview about the web site
2. About section
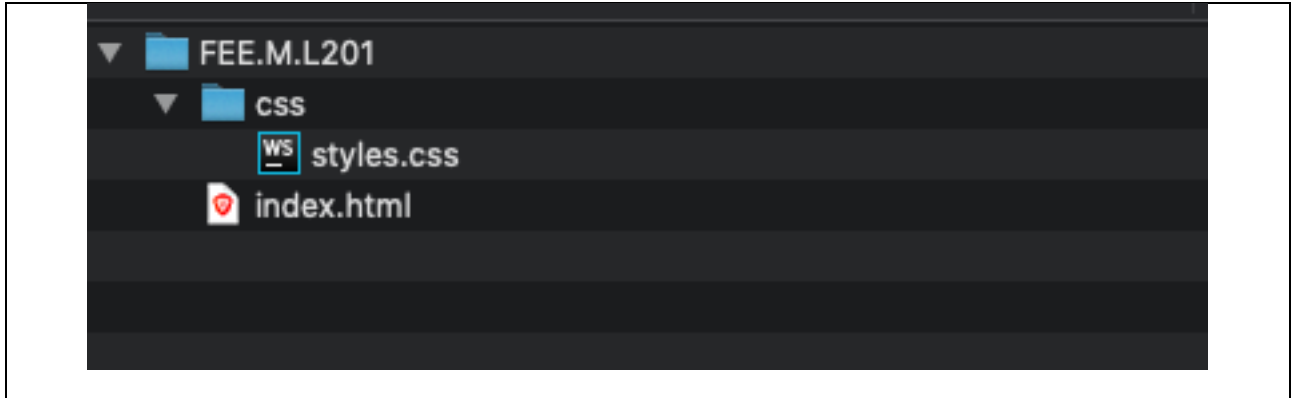3. Portfolio section
4. Contact section
5. Footer section

See figure below to understand better the app:

🏛 Fresher Academy   🏠 Home   i About   🖾 Portfolio   📞 Contact   **1**

Hello from Fresher Academy

Lorem ipsum consectetur adipiscing elit.

| 🐦 Twitter | ○ Github | in Linkedin | 🔥 freeCodeCamp |

2

About me

3

Suspendisse eget sodales lacus.

Curabitur arcu orci, mattis eget pellentesque non, suscipit nec lorem. Sed faucibus ante vitae nibh pellentesque pellentesque. Etiam in elementum dui. Donec porttitor, arcu id lacinia mattis, turpis elit suscipit nisl, ut maximus magna orci a ligula. Praesent nec interdum tellus. Suspendisse at dictum ipsum.

300 x 300

Powered by HTML.COM

Portfolio

4

300 x 300   300 x 300   300 x 300

Project 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas interdum mattis sem eu venenatis. Aliquam sed tempus tortor.

More details

Project 2

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas interdum mattis sem eu venenatis. Aliquam sed tempus tortor.

More details

Project 3

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas interdum mattis sem eu venenatis. Aliquam sed tempus tortor.

More details

Contact me

Feel free to drop me an email to provide some feedback on my website, some suggestions, or to just say hello!

5

info@fa.com

Or find me on

| 🐦 Twitter | ○ Github | in Linkedin | 🔥 freeCodeCamp |

Copyright © Fresher Academy 2019. All Rights Reserved   **6**
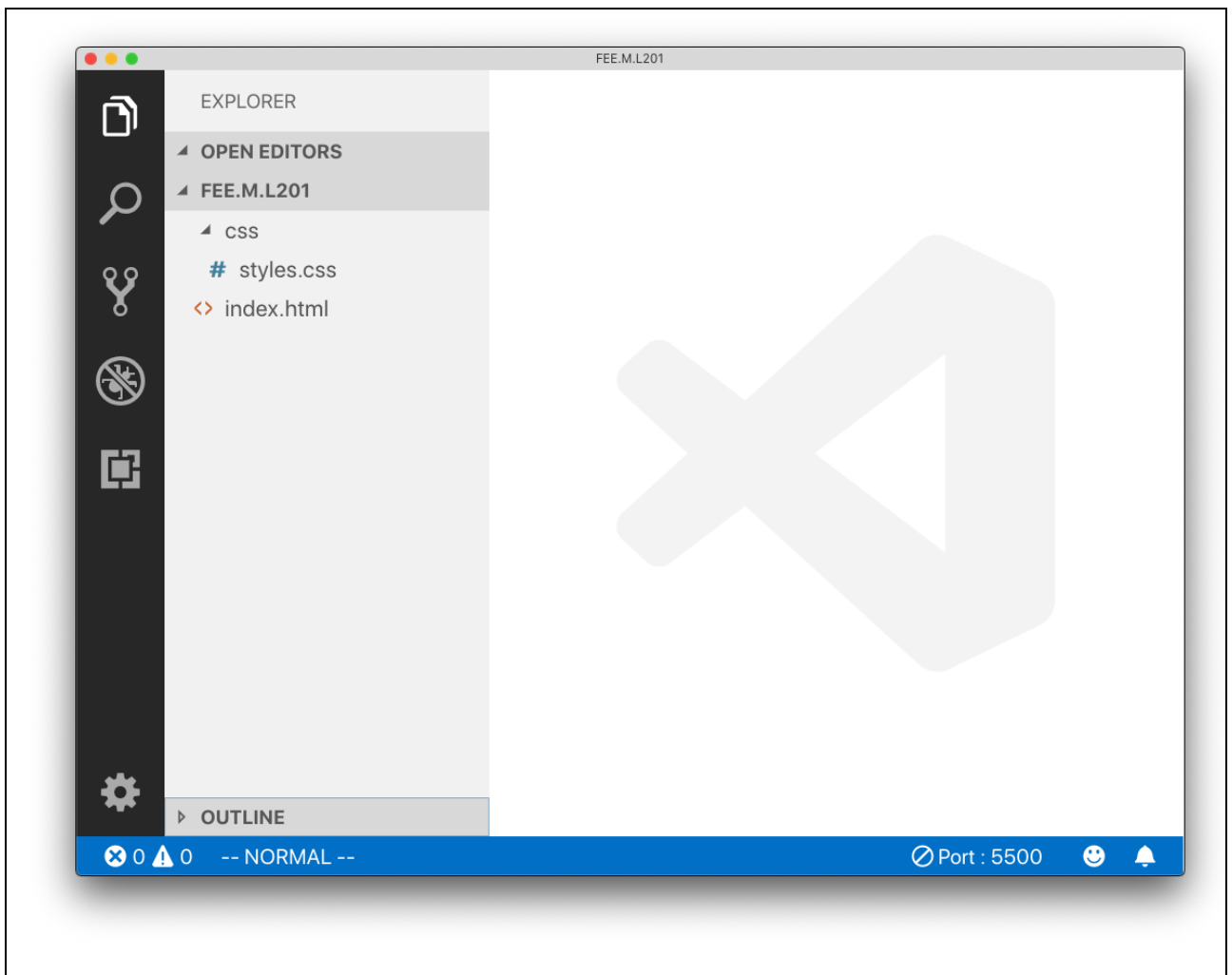
Guidelines

Step 1: Create project structure

Create the project structure like figure below:
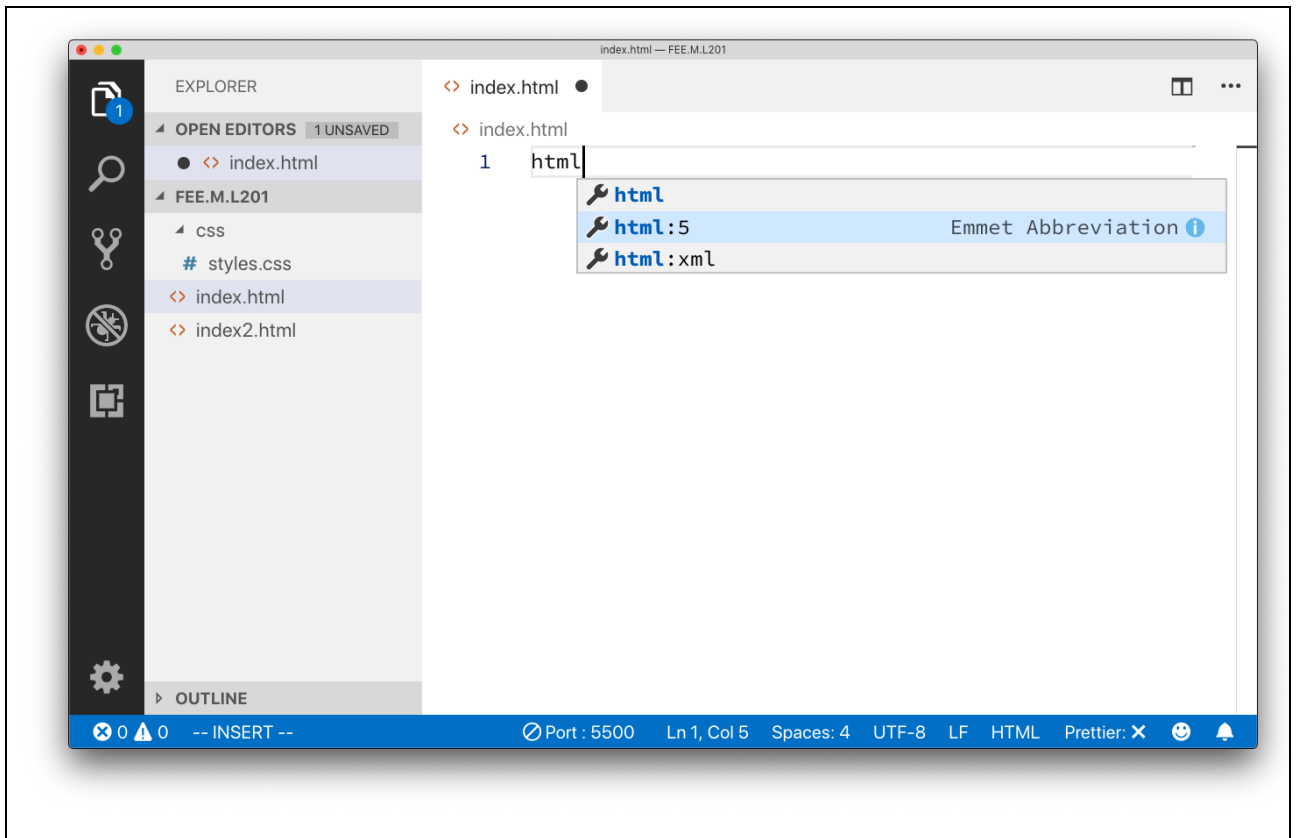

Step 2: Open project in IDE

Open the newly created project using Visual Studio Code
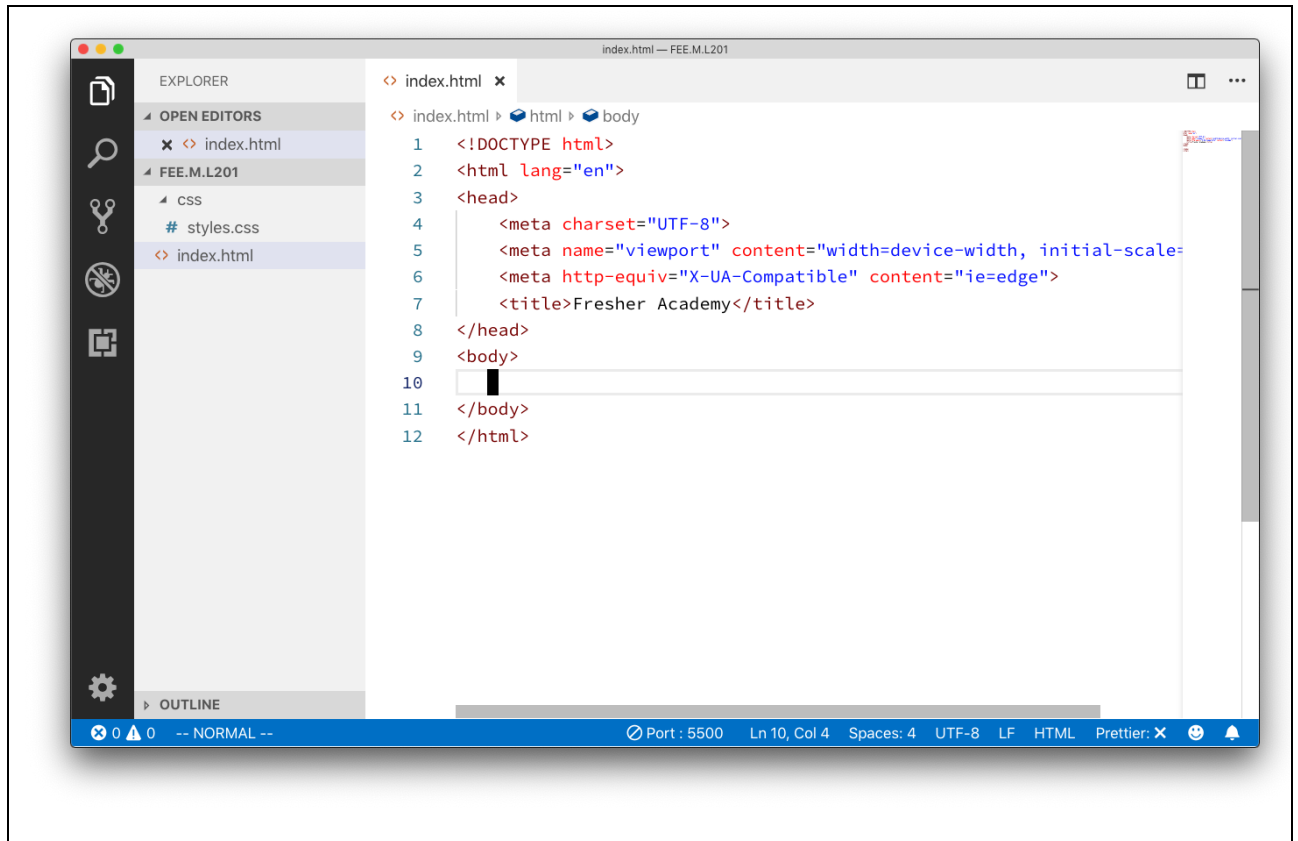
Step 3: Create basic HTML5 document

Open file **index.html** in VSC (Visual Studio Code), and type in html VSC will show a list of suggestions.
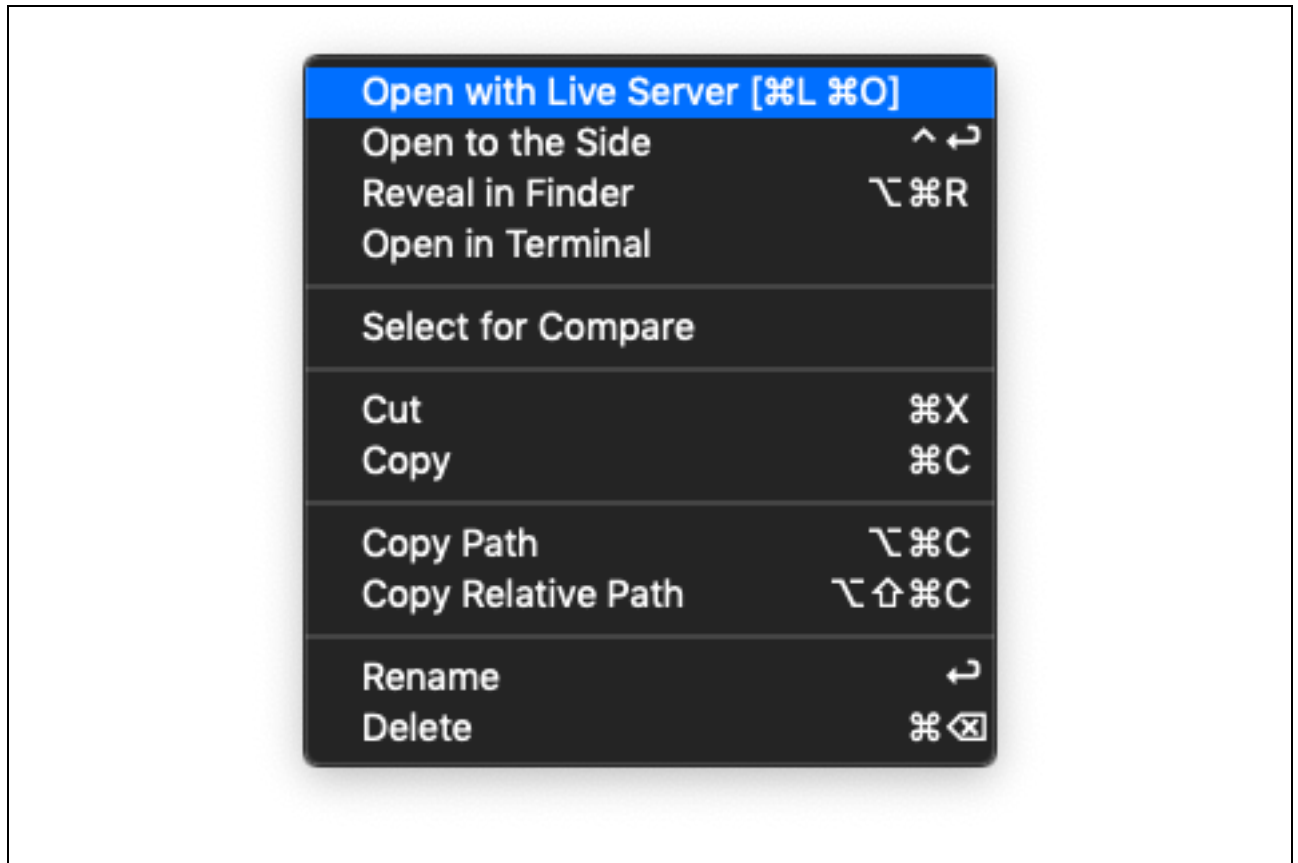
Choose **html:5** and press Enter

Step 4: Edit Title

Change the value inside title tag to **Fresher Academy** like figure below:
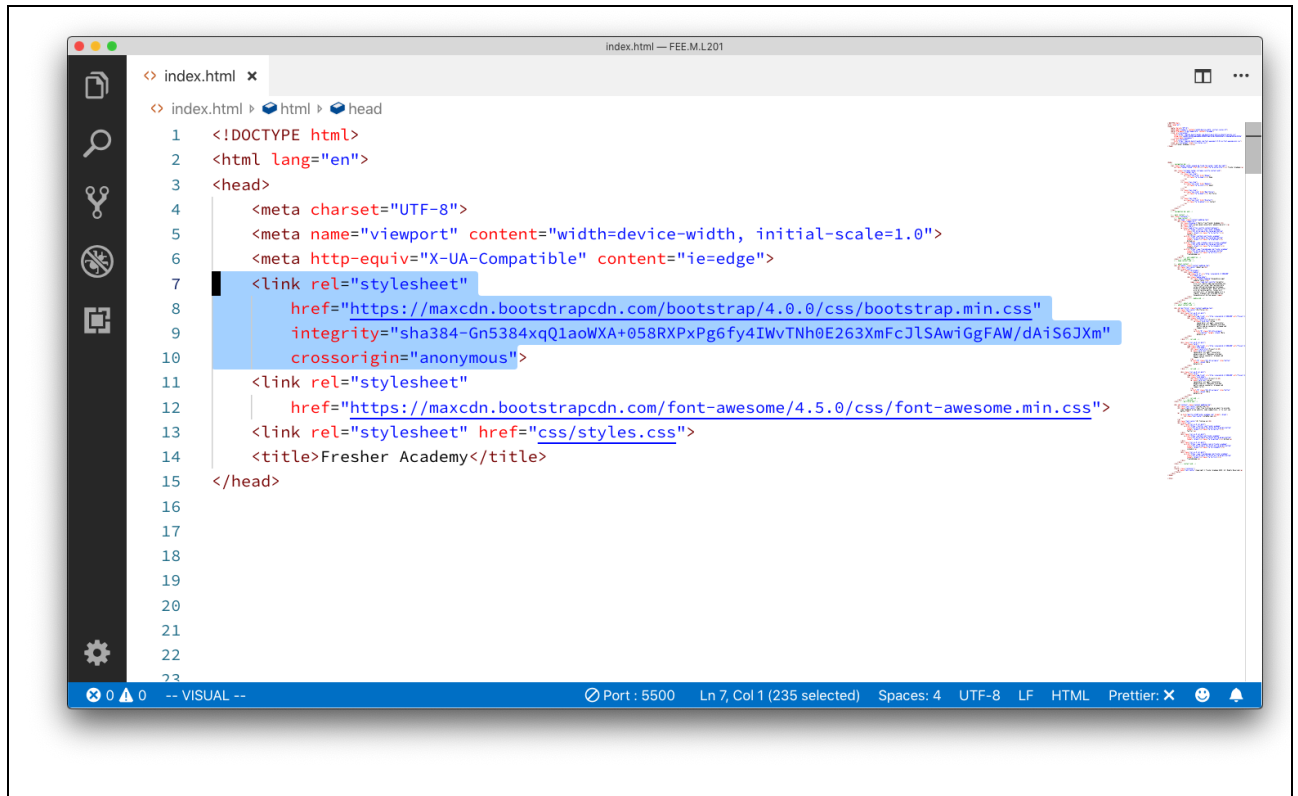
Step 5: Open Web site

Right-click on **index.html** file and click **Open with Live Server**

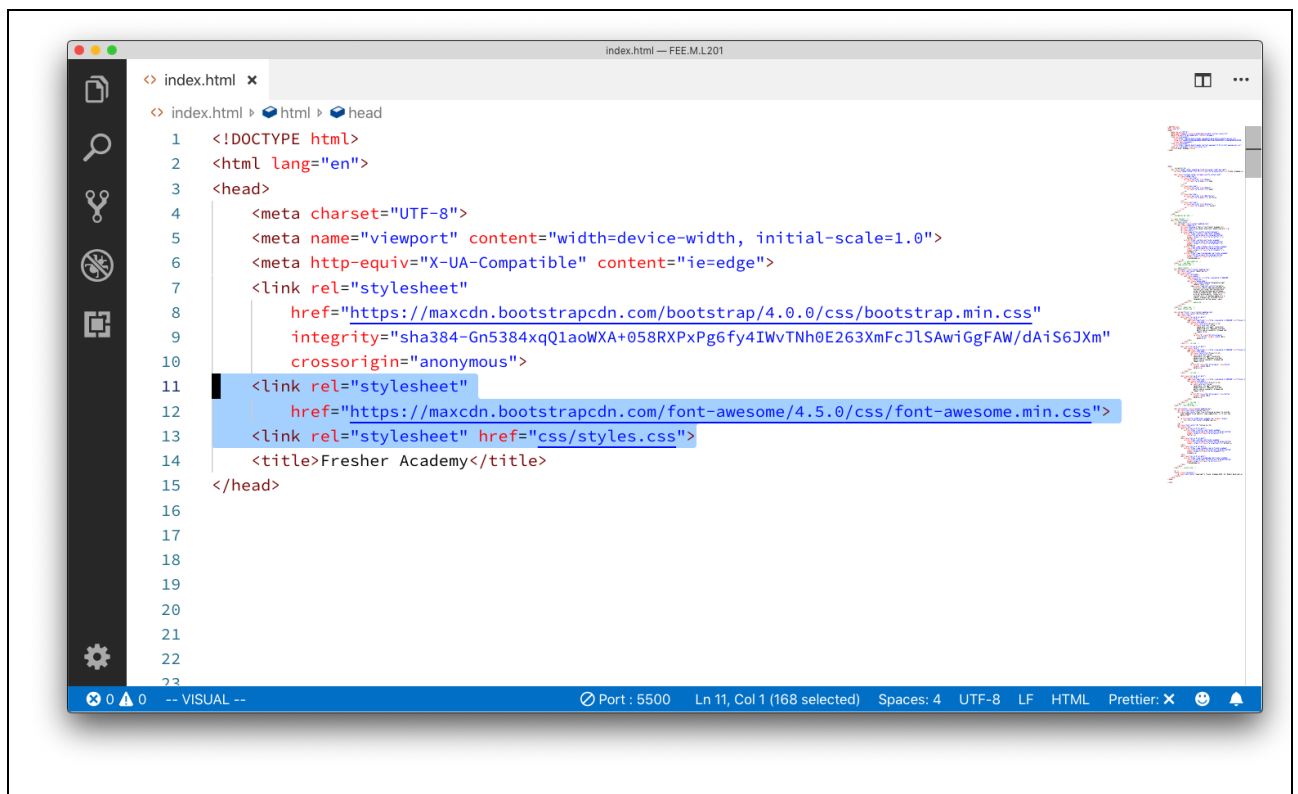Note: You must install **Live Server** extension of VSC

Step 6: Add Bootstrap 4

Add Bootstrap 4 CDN link into head section of **index.html** file

Step 7: Add Font Awesome

Add Font Awesome 4 CDN link into head section of **index.html** file

Step 8: Implement Header section

Take another look at the design and focus on the Header section, you should notice that Header section map to Navbar Component of Bootstrap 4.

The code below implements Header section (put inside **body** tag):

```
1.   <!-- navigation bar -->
2.       <nav class="navbar navbar-expand-md fixed-top navbar-light bg-light">
3.           <a class="navbar-brand" href="#"><i class="fa fa-university"></i> Fresher Academy</a>
4.
5.           <div class="collapse navbar-collapse justify-content-end">
6.               <ul class="navbar-nav">
7.                   <li class="nav-item">
8.                       <a class="nav-link" href="#home">
9.                           <i class="fa fa-home"></i> Home
10.                      </a>
11.                  </li>
12.                  <li class="nav-item">
13.                      <a class="nav-link" href="#about">
14.                          <i class="fa fa-info"></i> About
15.                      </a>
16.                  </li>
17.                  <li class="nav-item">
18.                      <a class="nav-link" href="#portfolio">
19.                          <i class="fa fa-book"></i> Portfolio
20.                      </a>
21.                  </li>
22.                  <li class="nav-item">
23.                      <a class="nav-link" href="#contact">
24.                          <i class="fa fa-phone"></i> Contact
25.                      </a>
26.                  </li>
27.              </ul>
28.          </div>
29.      </nav>
30.      <!-- navigation bar end -->
```

Step 9: Implement Home section

The Home section is implemented using Jumbotron component:

```
1.   <body>
2.       <!-- navigation bar -->
3.       <nav class="navbar navbar-expand-md fixed-top navbar-light bg-light">
4.           . . .
5.       </nav>
6.       <!-- navigation bar end -->
7.
8.       <!-- main content -->
9.       <div class="container">
10.          <!-- home content -->
11.          <div id="home" class="content">
12.              <div class="jumbotron">
13.                  <h1 class="display-4">Hello from Fresher Academy</h1>
14.                  <p class="lead">Lorem ipsum consectetur adipiscing elit.</p>
15.                  <hr class="my-4">
16.                  <p class="lead d-flex justify-content-between">
17.                      <a href="https://twitter.com/fresher-academy"
18.                          class="btn btn-primary btn-lg margin-bottom"
19.                          target='_blank'><i class="fa fa-twitter"></i>
20.                          Twitter</a>
21.                      <a href="https://github.com/fresher-academy"
22.                          class="btn btn-primary btn-lg margin-bottom"
```

```
23.                        target='_blank'><i class="fa fa-github"></i>
24.                        Github</a>
25.                    <a href="https://www.linkedin.com/in/fresher-academy"
26.                        class="btn btn-primary btn-lg margin-bottom"
27.                        target='_blank'><i class="fa fa-linkedin"></i>
28.                        Linkedin</a>
29.                    <a href="https://www.freecodecamp.com/fresher-academy"
30.                        class="btn btn-primary btn-lg margin-bottom"
31.                        target='_blank'><i class="fa fa-fire"></i>
32.                        freeCodeCamp</a>
33.                </p>
34.            </div> <!-- end jumbotron -->
35.         </div> <!-- end home -->
36.         <!-- home content end -->
37.     </div>
38. </body>
39.
```

Step 10: Implement About section

Similar to Home section, About section is implemented using Card component:

```
1.  <body>
2.      <!-- navigation bar -->
3.      <nav class="navbar navbar-expand-md fixed-top navbar-light bg-light">
4.          . . .
5.      </nav>
6.      <!-- navigation bar end -->
7.
8.      <!-- main content -->
9.      <div class="container">
10.         <!-- home content -->
11.         <div id="home" class="content">
12.             . . .
13.         </div> <!-- end home -->
14.         <!-- home content end -->
15.
16.         <!-- about content -->
17.         <div id="about" class="content">
18.             <h1 class="text-center">About me</h1>
19.             <div class="card">
20.                 <div class="card-body">
21.                     <div class="media">
22.                         <img class="mr-3" src="http://placehold.it/300x300"
23.                             alt="About me">
24.                         <div class="media-body">
25.                             <h1 class="media-heading">Suspendisse eget
26.                                 sodales lacus.</h1>
27.                             <span class="lead text-justify">Curabitur
28.                                 arcu orci, mattis eget pellentesque non,
29.                                 suscipit nec lorem. Sed faucibus ante
30.                                 vitae nibh pellentesque pellentesque.
31.                                 Etiam in elementum dui. Donec porttitor,
32.                                 arcu id lacinia mattis, turpis elit
33.                                 suscipit nisl, ut maximus magna orci a
34.                                 ligula. Praesent nec interdum tellus.
35.                                 Suspendisse at dictum ipsum.</span>
36.                         </div>
37.                     </div> <!-- media end -->
38.                 </div>
39.             </div>
40.         </div> <!-- about end -->
41.         <!-- about content end -->
```

```
42.        </div>
43. </body>
44.
```

Step 11: Implement Portfolio section

Same like About section, Portfolio section consists of 3 cards Component, each card represent a project:

```
1.  <body>
2.      <!-- navigation bar -->
3.      <nav class="navbar navbar-expand-md fixed-top navbar-light bg-light">
4.          . . .
5.      </nav>
6.      <!-- navigation bar end -->
7.
8.      <!-- main content -->
9.      <div class="container">
10.         <!-- home content -->
11.         <div id="home" class="content">
12.             . . .
13.         </div> <!-- end home -->
14.         <!-- home content end -->
15.
16.         <!-- about content -->
17.         <div id="about" class="content">
18.             . . .
19.         </div> <!-- about end -->
20.         <!-- about content end -->
21.
22.         <div id="portfolio" class="content">
23.             <h1 class="text-center">Portfolio</h1>
24.             <div class="row">
25.                 <div class="col-sm-6 col-md-4">
26.                     <div class="card">
27.                         <img class="img-fluid" src="http://placehold.it/300x300" alt="Project
    1">
28.                         <div class="card-body">
29.                             <h4 class="card-title">Project 1</h5>
30.                                 <p class="card-text">Lorem
31.                                     ipsum dolor sit amet, consectetur
32.                                     adipiscing elit. Maecenas interdum
33.                                     mattis sem eu venenatis. Aliquam sed
34.                                     tempus tortor.
35.                                 </p>
36.                                 <a href="#" class="btn btn-primary"
37.                                     role="button" target='_blank'>More
38.                                     details</a>
39.                         </div>
40.                     </div>
41.                 </div> <!-- col end -->
42.
43.                 <div class="col-sm-6 col-md-4">
44.                     <div class="card">
45.                         <img class="img-fluid" src="http://placehold.it/300x300" alt="Project
    2">
46.                         <div class="card-body">
47.                             <h5 class="card-title">Project 2</h5>
48.                                 <p class="card-text">Lorem
49.                                     ipsum dolor sit amet, consectetur
50.                                     adipiscing elit. Maecenas interdum
51.                                     mattis sem eu venenatis. Aliquam sed
52.                                     tempus tortor.
53.                                 </p>
```

```
54.                          <a href="#" class="btn btn-primary" role="button"
55.                             target='_blank'>More
56.                             details</a>
57.                        </div>
58.                    </div>
59.                </div> <!-- col end -->
60.
61.                <div class="col-sm-6 col-md-4">
62.                    <div class="card">
63.                        <img class="img-fluid" src="http://placehold.it/300x300" alt="Project
    2">
64.                        <div class="card-body">
65.                            <h5 class="card-title">Project 3</h5>
66.                            <p class="card-text">Lorem
67.                                ipsum dolor sit amet, consectetur
68.                                adipiscing elit. Maecenas interdum
69.                                mattis sem eu venenatis. Aliquam sed
70.                                tempus tortor.
71.                            </p>
72.                            <a href="#" class="btn btn-primary" role="button"
73.                                target='_blank'>More
74.                                details</a>
75.                        </div>
76.                    </div>
77.                </div> <!-- col end -->
78.            </div> <!-- row end -->
79.        </div> <!-- portfolio end -->
80.    </div>
81. </body>
82.
```

Step 12: Implement Contact section

The Contact section should be easy for you now, it's the same like Home section but without Jumbotron component

```
1.  <body>
2.      <!-- navigation bar -->
3.      <nav class="navbar navbar-expand-md fixed-top navbar-light bg-light">
4.          . . .
5.      </nav>
6.      <!-- navigation bar end -->
7.
8.      <!-- main content -->
9.      <div class="container">
10.         <!-- home content -->
11.         <div id="home" class="content">
12.             . . .
13.         </div> <!-- end home -->
14.         <!-- home content end -->
15.
16.         <!-- about content -->
17.         <div id="about" class="content">
18.             . . .
19.         </div> <!-- about end -->
20.         <!-- about content end -->
21.
22.         <div id="portfolio" class="content">
23.             . . .
24.         </div> <!-- portfolio end -->
25.
26.         <div id="contact" class="content">
```

```
27.              <h1 class="text-center">Contact me</h1>
28.              <h3 class="text-center">Feel free to drop me an email to provide
29.                  some feedback on my website, some suggestions, or to just say
30.                  hello!</h3>
31.              <p>
32.                  <a href="mailto:info@fresher-academy.com" target='_blank'>
33.                      <h1 class="text-center">info@fa.com</h1>
34.                  </a>
35.              </p>
36.              <h2 class="text-center">Or find me on</h2>
37.              <div class="row">
38.                  <div class="col-xs-6 col-md-3">
39.                      <a href="https://twitter.com/fresher-academy"
40.                          class="btn btn-primary btn-block btn-lg margin-bottom"
41.                          target='_blank'><i class="fa fa-twitter"></i>
42.                          Twitter</a>
43.                  </div>
44.                  <div class="col-xs-6 col-md-3">
45.                      <a href="https://github.com/fresher-academy"
46.                          class="btn btn-primary btn-block btn-lg margin-bottom"
47.                          target='_blank'><i class="fa fa-github"></i> Github</a>
48.                  </div>
49.                  <div class="col-xs-6 col-md-3">
50.                      <a href="https://www.linkedin.com/in/fresher-academy"
51.                          class="btn btn-primary btn-block btn-lg margin-bottom"
52.                          target='_blank'><i class="fa fa-linkedin"></i>
53.                          Linkedin</a>
54.                  </div>
55.                  <div class="col-xs-6 col-md-3">
56.                      <a href="https://www.freecodecamp.com/fresher-academy"
57.                          class="btn btn-primary btn-block btn-lg margin-bottom"
58.                          target='_blank'><i class="fa fa-fire"></i>
59.                          freeCodeCamp</a>
60.                  </div>
61.              </div>
62.          </div> <!-- contact end -->
63.      </div>
64. </body>
65.
```

Step 13: Implement Footer section

The last section is Footer, which consist of a horizontal rule (<hr>) and a Copyright text:

```
1.  <body>
2.      <!-- navigation bar -->
3.      <nav class="navbar navbar-expand-md fixed-top navbar-light bg-light">
4.          . . .
5.      </nav>
6.      <!-- navigation bar end -->
7.
8.      <!-- main content -->
9.      <div class="container">
10.         <!-- home content -->
11.         <div id="home" class="content">
12.             . . .
13.         </div> <!-- end home -->
14.         <!-- home content end -->
15.
16.         <!-- about content -->
17.         <div id="about" class="content">
18.             . . .
19.         </div> <!-- about end -->
```
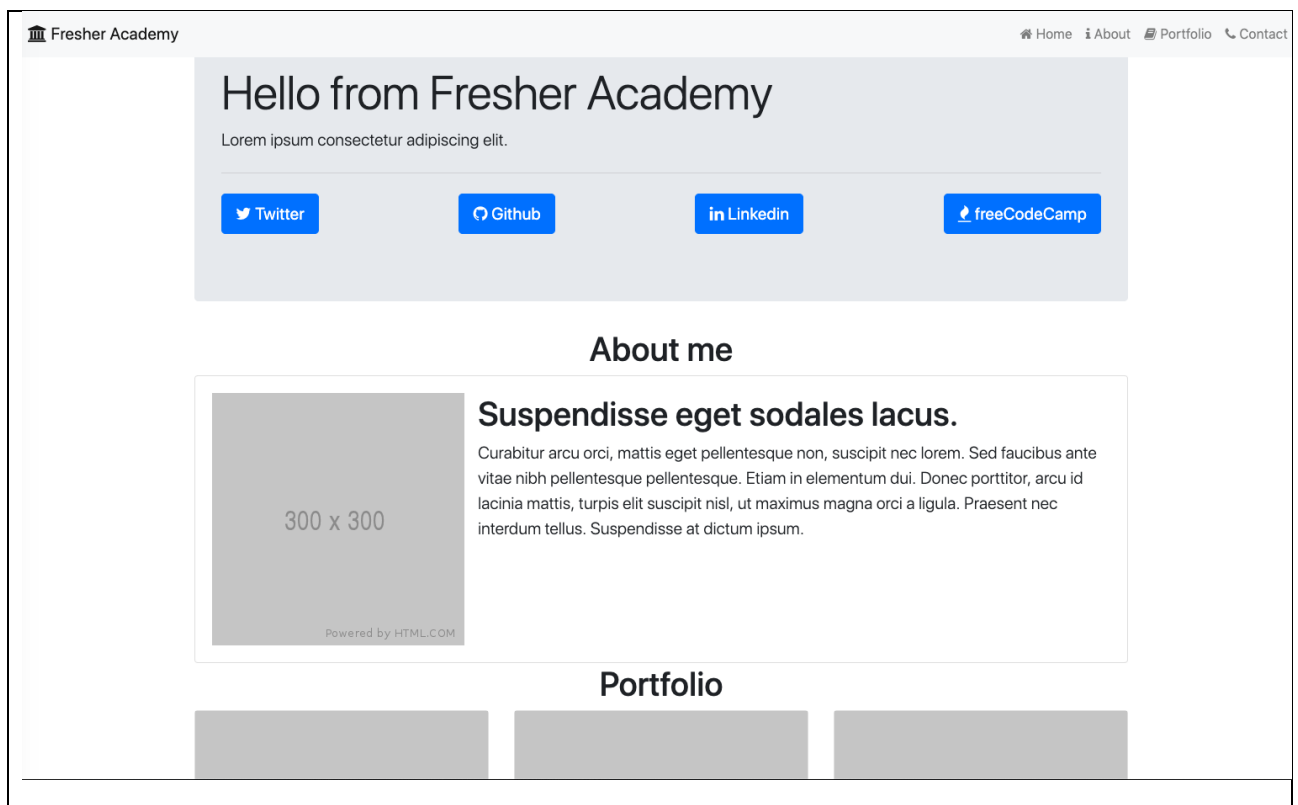
```
20.        <!-- about content end -->
21.
22.        <div id="portfolio" class="content">
23.            . . .
24.        </div> <!-- portfolio end -->
25.
26.        <div id="contact" class="content">
27.            . . .
28.        </div> <!-- contact end -->
29.
30.        <hr />
31.        <footer class="container">
32.            <p class="text-center">Copyright © Fresher Academy 2019. All Rights Reserved</p>
33.        </footer>
34.     </div>
35. </body>
```

Step 14: Verify and tweak

Open the app using Live Server, you should have the same layout like figure below:

The app looks pretty much like the design, except that:

1. It's hard to distinguish Header section with other sections
2. Home section, About section, Portfolio section, Contact section are next to each other, you need to add some space between them

Step 15: Add border to Header section

One trick to make element distinguish with other is to add border-bottom to it.

Add the following CSS to **css/styles.css** file:

```
1.  nav {
2.      border-bottom: 1px solid #ccc;
3.  }
4.
```

Note: make sure to add **styles.css** file to index.html

Step 16: Add space between each section

Add a new CSS class (mt-80) to **css/styles.css** file:

```
1.  nav {
2.      . . .
3.  }
4.
5.  .mt-80 {
6.    margin-top: 80px;
7.  }
```

Now use them in each section and verify the app again, it should look clearly now: