

***Front-End Essentials***

**Lab Guides**

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| --- | --- |
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RECORD OF CHANGES

|  |  |  |  |  |  |
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| No | Effective Date | Change Description | Reason | Reviewer | Approver |
|  | 25/Jun/2018 | Create a new Lab | Create new | DieuNT1 | VinhNV |
|  | 01/May/2019 | Update Fsoft Template | Update | DieuNT1 | VinhNV |
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|  | **CODE: FEE.M.L201 (Bootstrap 4)**  **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:

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Guidelines

Step 1: Create project structure

Create the project structure like figure below:

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Step 2: Open project in IDE

Open the newly created project using Visual Studio Code

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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

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Step 4: Edit Title

Change the value inside title tag to **Fresher Academy** like figure below:

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| --- |
|  |

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

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Step 6: Add Bootstrap 4

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

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Step 7: Add Font Awesome

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

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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. <div class="collapse navbar-collapse justify-content-end">
5. <ul class="navbar-nav">
6. <li class="nav-item">
7. <a class="nav-link" href="#home">
8. <i class="fa fa-home"></i> Home
9. </a>
10. </li>
11. <li class="nav-item">
12. <a class="nav-link" href="#about">
13. <i class="fa fa-info"></i> About
14. </a>
15. </li>
16. <li class="nav-item">
17. <a class="nav-link" href="#portfolio">
18. <i class="fa fa-book"></i> Portfolio
19. </a>
20. </li>
21. <li class="nav-item">
22. <a class="nav-link" href="#contact">
23. <i class="fa fa-phone"></i> Contact
24. </a>
25. </li>
26. </ul>
27. </div>
28. </nav>
29. <!-- 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. <!-- main content -->
8. <div class="container">
9. <!-- home content -->
10. <div id="home" class="content">
11. <div class="jumbotron">
12. <h1 class="display-4">Hello from Fresher Academy</h1>
13. <p class="lead">Lorem ipsum consectetur adipiscing elit.</p>
14. <hr class="my-4">
15. <p class="lead d-flex justify-content-between">
16. <a href="https://twitter.com/fresher-academy"
17. class="btn btn-primary btn-lg margin-bottom"
18. target='\_blank'><i class="fa fa-twitter"></i>
19. Twitter</a>
20. <a href="https://github.com/fresher-academy"
21. class="btn btn-primary btn-lg margin-bottom"
22. target='\_blank'><i class="fa fa-github"></i>
23. Github</a>
24. <a href="https://www.linkedin.com/in/fresher-academy"
25. class="btn btn-primary btn-lg margin-bottom"
26. target='\_blank'><i class="fa fa-linkedin"></i>
27. Linkedin</a>
28. <a href="https://www.freecodecamp.com/fresher-academy"
29. class="btn btn-primary btn-lg margin-bottom"
30. target='\_blank'><i class="fa fa-fire"></i>
31. freeCodeCamp</a>
32. </p>
33. </div> <!-- end jumbotron -->
34. </div> <!-- end home -->
35. <!-- home content end -->
36. </div>
37. </body>

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

**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. <!-- main content -->
8. <div class="container">
9. <!-- home content -->
10. <div id="home" class="content">
11. . . .
12. </div> <!-- end home -->
13. <!-- home content end -->
14. <!-- about content -->
15. <div id="about" class="content">
16. . . .
17. </div> <!-- about end -->
18. <!-- about content end -->
19. <div id="portfolio" class="content">
20. <h1 class="text-center">Portfolio</h1>
21. <div class="row">
22. <div class="col-sm-6 col-md-4">
23. <div class="card">
24. <img class="img-fluid" src="http://placehold.it/300x300" alt="Project 1">
25. <div class="card-body">
26. <h4 class="card-title">Project 1</h5>
27. <p class="card-text">Lorem
28. ipsum dolor sit amet, consectetur
29. adipiscing elit. Maecenas interdum
30. mattis sem eu venenatis. Aliquam sed
31. tempus tortor.
32. </p>
33. <a href="#" class="btn btn-primary"
34. role="button" target='\_blank'>More
35. details</a>
36. </div>
37. </div>
38. </div> <!-- col end -->
39. <div class="col-sm-6 col-md-4">
40. <div class="card">
41. <img class="img-fluid" src="http://placehold.it/300x300" alt="Project 2">
42. <div class="card-body">
43. <h5 class="card-title">Project 2</h5>
44. <p class="card-text">Lorem
45. ipsum dolor sit amet, consectetur
46. adipiscing elit. Maecenas interdum
47. mattis sem eu venenatis. Aliquam sed
48. tempus tortor.
49. </p>
50. <a href="#" class="btn btn-primary" role="button"
51. target='\_blank'>More
52. details</a>
53. </div>
54. </div>
55. </div> <!-- col end -->
56. <div class="col-sm-6 col-md-4">
57. <div class="card">
58. <img class="img-fluid" src="http://placehold.it/300x300" alt="Project 2">
59. <div class="card-body">
60. <h5 class="card-title">Project 3</h5>
61. <p class="card-text">Lorem
62. ipsum dolor sit amet, consectetur
63. adipiscing elit. Maecenas interdum
64. mattis sem eu venenatis. Aliquam sed
65. tempus tortor.
66. </p>
67. <a href="#" class="btn btn-primary" role="button"
68. target='\_blank'>More
69. details</a>
70. </div>
71. </div>
72. </div> <!-- col end -->
73. </div> <!-- row end -->
74. </div> <!-- portfolio end -->
75. </div>
76. </body>

**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. <!-- main content -->
8. <div class="container">
9. <!-- home content -->
10. <div id="home" class="content">
11. . . .
12. </div> <!-- end home -->
13. <!-- home content end -->
14. <!-- about content -->
15. <div id="about" class="content">
16. . . .
17. </div> <!-- about end -->
18. <!-- about content end -->
19. <div id="portfolio" class="content">
20. . . .
21. </div> <!-- portfolio end -->
22. <div id="contact" class="content">
23. <h1 class="text-center">Contact me</h1>
24. <h3 class="text-center">Feel free to drop me an email to provide
25. some feedback on my website, some suggestions, or to just say
26. hello!</h3>
27. <p>
28. <a href="mailto:info@fresher-academy.com" target='\_blank'>
29. <h1 class="text-center">info@fa.com</h1>
30. </a>
31. </p>
32. <h2 class="text-center">Or find me on</h2>
33. <div class="row">
34. <div class="col-xs-6 col-md-3">
35. <a href="https://twitter.com/fresher-academy"
36. class="btn btn-primary btn-block btn-lg margin-bottom"
37. target='\_blank'><i class="fa fa-twitter"></i>
38. Twitter</a>
39. </div>
40. <div class="col-xs-6 col-md-3">
41. <a href="https://github.com/fresher-academy"
42. class="btn btn-primary btn-block btn-lg margin-bottom"
43. target='\_blank'><i class="fa fa-github"></i> Github</a>
44. </div>
45. <div class="col-xs-6 col-md-3">
46. <a href="https://www.linkedin.com/in/fresher-academy"
47. class="btn btn-primary btn-block btn-lg margin-bottom"
48. target='\_blank'><i class="fa fa-linkedin"></i>
49. Linkedin</a>
50. </div>
51. <div class="col-xs-6 col-md-3">
52. <a href="https://www.freecodecamp.com/fresher-academy"
53. class="btn btn-primary btn-block btn-lg margin-bottom"
54. target='\_blank'><i class="fa fa-fire"></i>
55. freeCodeCamp</a>
56. </div>
57. </div>
58. </div> <!-- contact end -->
59. </div>
60. </body>

**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. <!-- main content -->
8. <div class="container">
9. <!-- home content -->
10. <div id="home" class="content">
11. . . .
12. </div> <!-- end home -->
13. <!-- home content end -->
14. <!-- about content -->
15. <div id="about" class="content">
16. . . .
17. </div> <!-- about end -->
18. <!-- about content end -->
19. <div id="portfolio" class="content">
20. . . .
21. </div> <!-- portfolio end -->
22. <div id="contact" class="content">
23. . . .
24. </div> <!-- contact end -->
25. <hr />
26. <footer class="container">
27. <p class="text-center">Copyright © Fresher Academy 2019. All Rights Reserved</p>
28. </footer>
29. </div>
30. </body>

**Step 14: Verify and tweak**

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

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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. }

**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. .mt-80 {
5. margin-top: 80px;
6. }

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

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