

## FSD Laboratory 02

**Aim:** Design and develop a responsive web page using Bootstrap front end framework.

**Objectives:**

1. To understand HTML tags
2. To learn the styling of web pages using CSS
3. To learn Bootstrap Front End Framework.

**Theory:**

1. Bootstrap Grid System.
2. Bootstrap .container and .container-fluid class.

**FAQ:**

1. What is a responsive website?
2. How Bootstrap helps to design a responsive website?

**Output:** Screenshots of the output to be attached.

**Problem Statement:**

Design and develop a responsive web page (For example student registration, course enrollment, library management system, online shopping system etc.) using Bootstrap front end framework. Web pages should contain HTML5 elements (Use all possible formatting for example font, colour etc.).

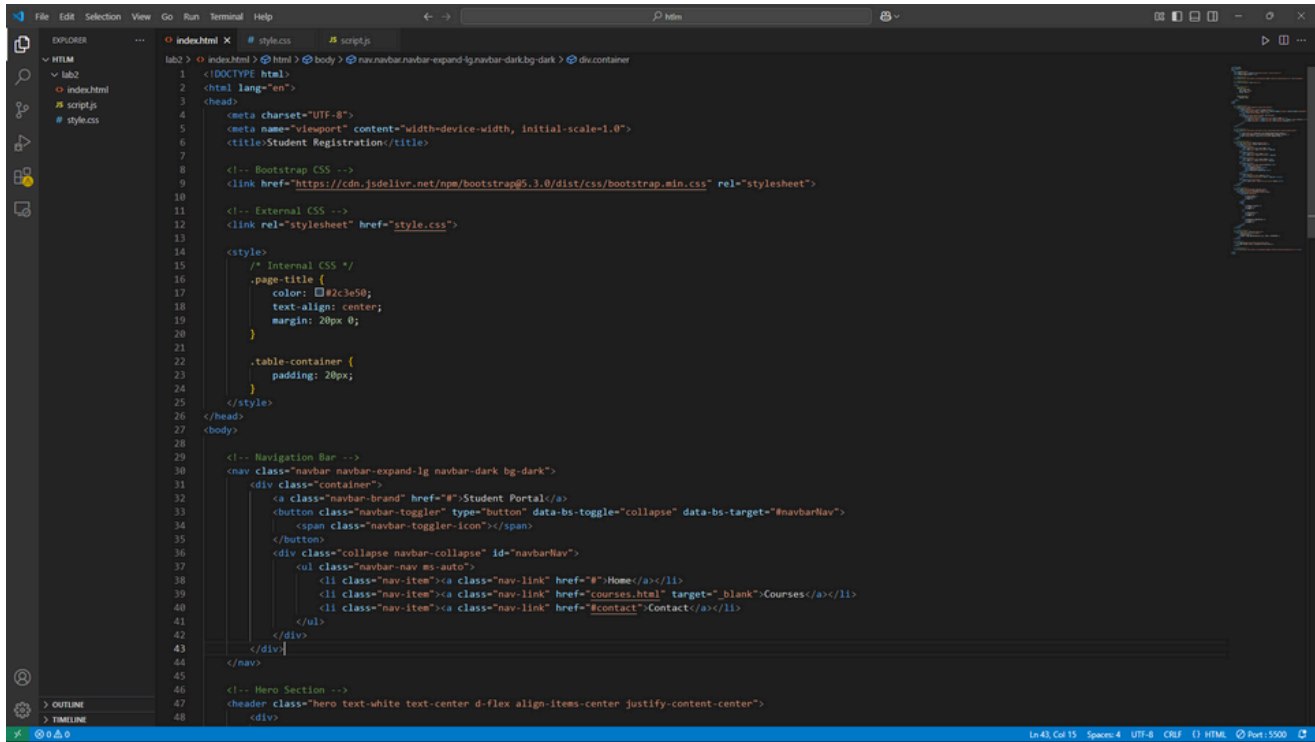
Web page should include various

- images,
- links within the page,
- tables
- lists
- form elements
- paragraphs
- links to other pages for navigation,
- new tabs.

Use Cascaded Style Sheets (CSS) to style the web pages designed. Make use of

- Three types of styles (Inline, Internal and External)
- border,
- margins,
- padding,
- navigation,
- dropdown list
- tag selector

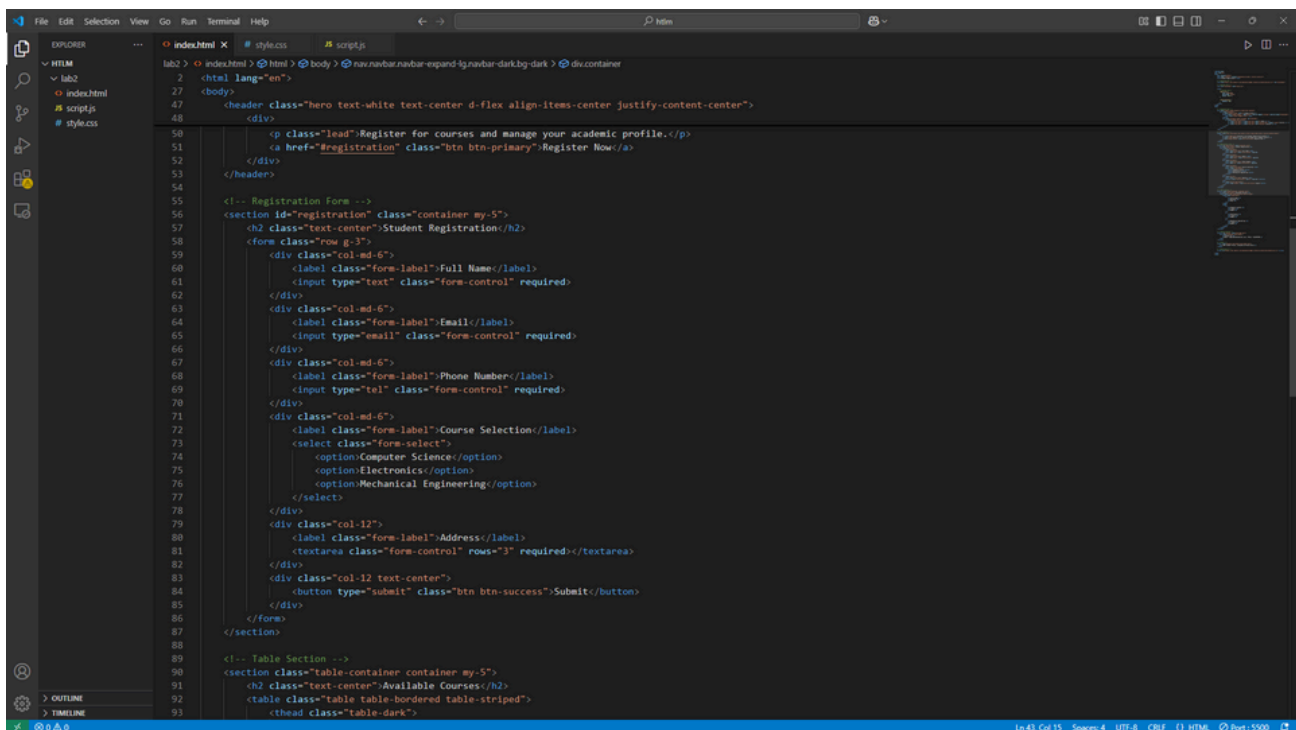
- class selector
- id selector
- exploring background image and position property etc.



```

1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta charset="UTF-8">
5    <meta name="viewport" content="width=device-width, initial-scale=1.0">
6    <title>Student Registration</title>
7  </head>
8  <!-- Bootstrap CSS -->
9  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">
10
11 <!-- External CSS -->
12 <link rel="stylesheet" href="style.css">
13
14 <style>
15   /* Internal CSS */
16   .page-title {
17     color: #007bff;
18     text-align: center;
19     margin: 20px 0;
20   }
21
22   .table-container {
23     padding: 20px;
24   }
25 </style>
26 </head>
27 <body>
28
29 <!-- Navigation Bar -->
30 <nav class="navbar navbar-expand-lg navbar-dark bg-dark">
31   <div class="container">
32     <a class="navbar-brand" href="#">Student Portal</a>
33     <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav">
34       <span class="navbar-toggler-icon"></span>
35     </button>
36     <div class="collapse navbar-collapse" id="navbarNav">
37       <ul class="navbar-nav ms-auto">
38         <li class="nav-item"><a class="nav-link" href="#">Home</a></li>
39         <li class="nav-item"><a class="nav-link" href="courses.html" target="_blank">Courses</a></li>
40         <li class="nav-item"><a class="nav-link" href="#">Contact</a></li>
41       </ul>
42     </div>
43   </div>
44 </nav>
45
46 <!-- Hero Section -->
47 <header class="hero text-white text-center d-flex align-items-center justify-content-center">
48   <div>

```



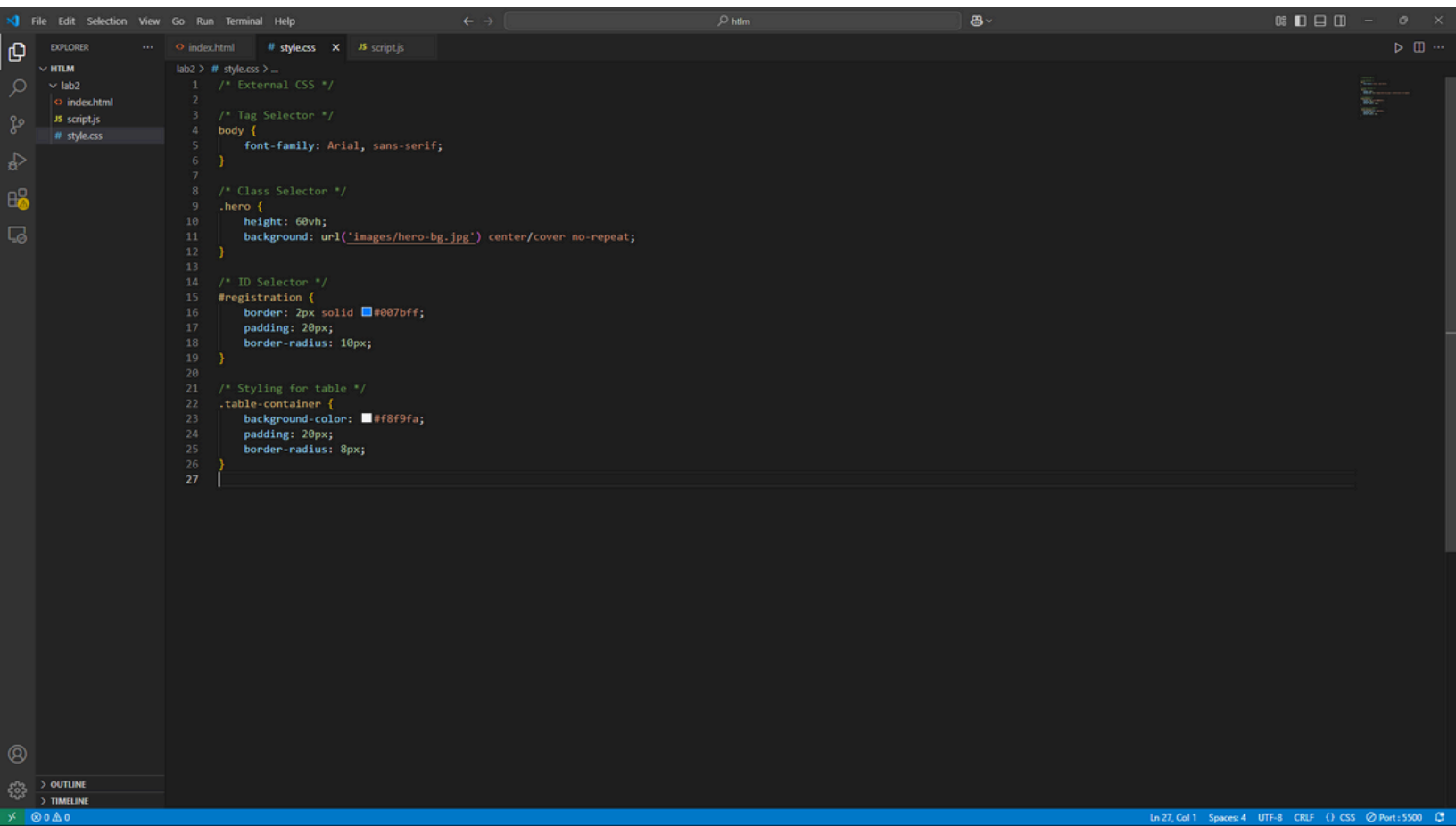
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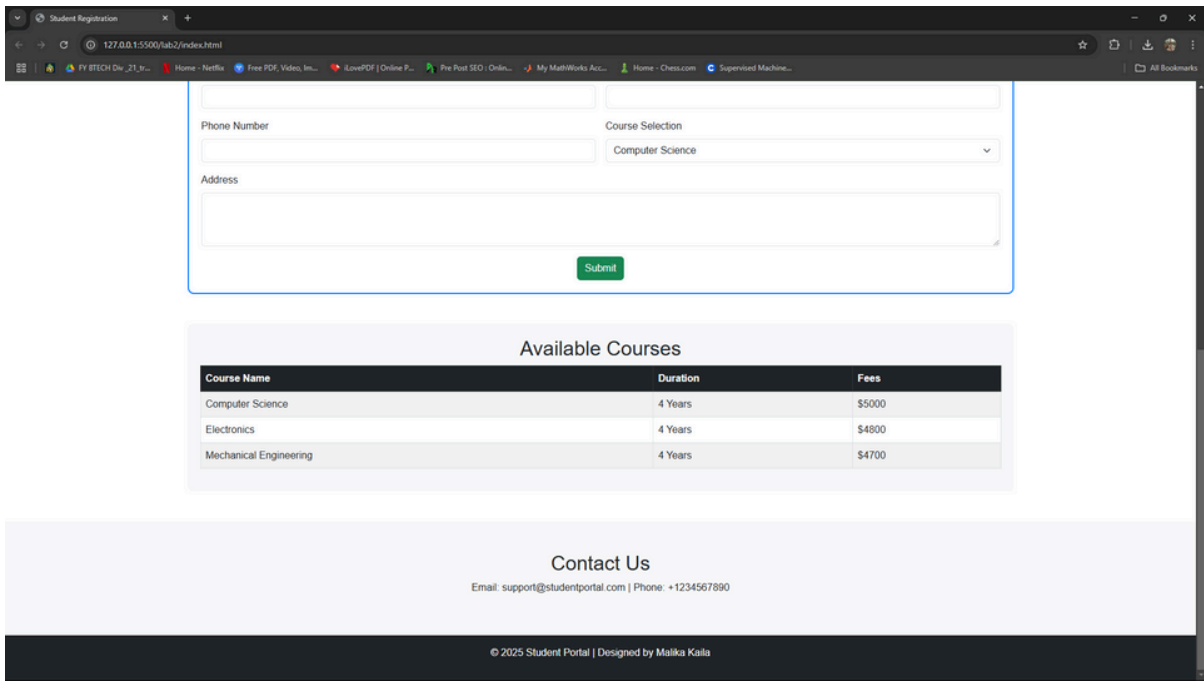
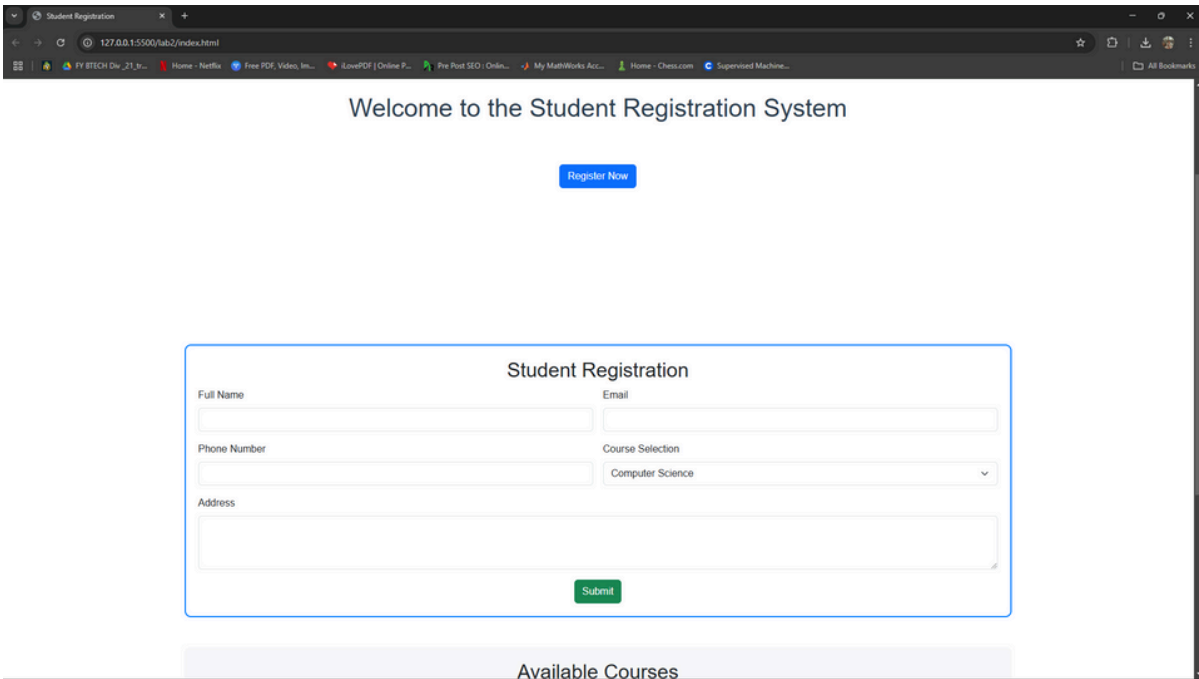
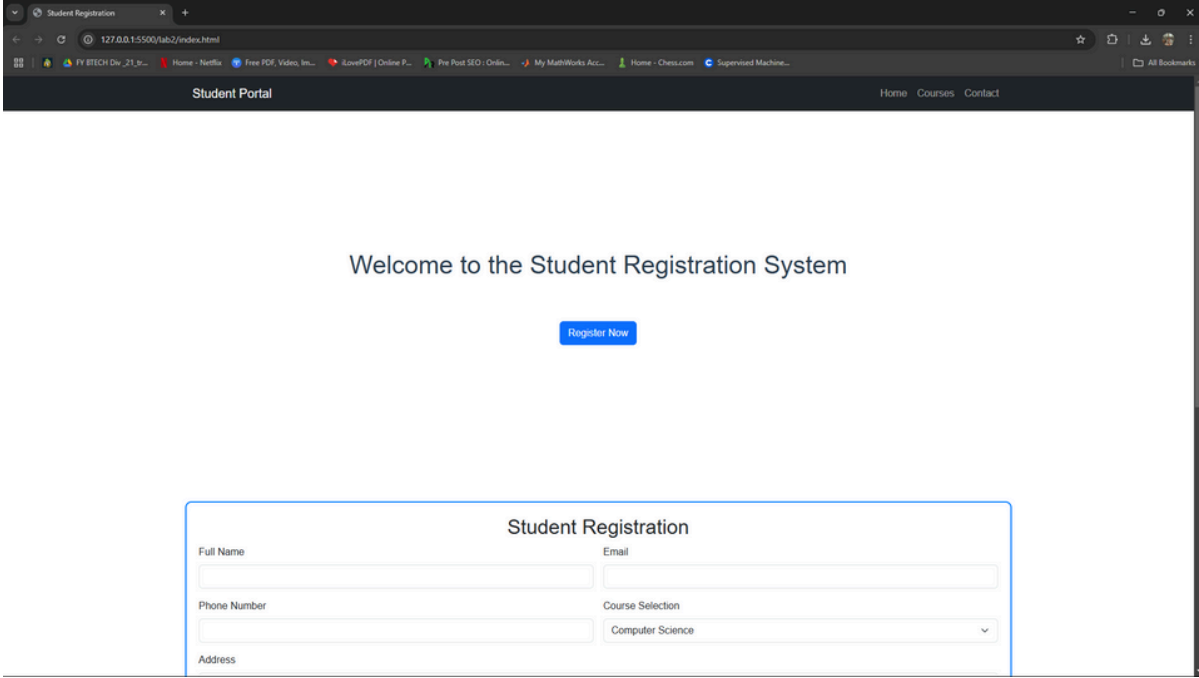
49     <p class="lead">Register for courses and manage your academic profile.</p>
50     <a href="#" class="btn btn-primary">Register Now</a>
51   </div>
52 </header>
53
54 <!-- Registration Form -->
55 <section id="registration" class="container my-5">
56   <h2 class="text-center">Student Registration</h2>
57   <div class="row g-3">
58     <div class="col-md-6">
59       <label class="form-label">Full Name</label>
60       <input type="text" class="form-control" required>
61     </div>
62     <div class="col-md-6">
63       <label class="form-label">Email</label>
64       <input type="email" class="form-control" required>
65     </div>
66     <div class="col-md-6">
67       <label class="form-label">Phone Number</label>
68       <input type="tel" class="form-control" required>
69     </div>
70     <div class="col-md-6">
71       <label class="form-label">Course Selection</label>
72       <select class="form-select">
73         <option>Computer Science</option>
74         <option>Electronics</option>
75         <option>Mechanical Engineering</option>
76       </select>
77     </div>
78     <div class="col-12">
79       <label class="form-label">Address</label>
80       <textarea class="form-control" rows="3" required></textarea>
81     </div>
82     <div class="col-12 text-center">
83       <button type="submit" class="btn btn-success">Submit</button>
84     </div>
85   </div>
86 </form>
87 </section>
88
89 <!-- Table Section -->
90 <section class="table-container container my-5">
91   <h2 class="text-center">Available Courses</h2>
92   <table class="table table-bordered table-striped">
93     <thead class="table-dark">

```

```
File Edit Selection View Go Run Terminal Help
lab2 > index.html X # style.css # script.js
lab2 > index.html > html > body > nav.navbar.navbar-expand-lg.navbar-dark.bg-dark > div.container
2 <html lang="en">
27 <body>
90 <section class="table-container container my-5">
92 <table class="table table-bordered table-striped">
93 <thead class="table-dark">
94 <tr>
95 </tr>
96 </thead>
97 <tbody>
98 <tr>
99 <td>Computer Science</td>
100 <td>4 Years</td>
101 <td>$5000</td>
102 </tr>
103 <tr>
104 <td>Electronics</td>
105 <td>4 Years</td>
106 <td>$4800</td>
107 </tr>
108 <tr>
109 <td>Mechanical Engineering</td>
110 <td>4 Years</td>
111 <td>$4700</td>
112 </tr>
113 </tbody>
114 </table>
115 </section>
116 <!-- Contact Section -->
117 <section id="contact" class="bg-light py-5">
118 <div class="container text-center">
119 <h2>Contact Us</h2>
120 <p>Email: support@studentportal.com | Phone: +1234567890</p>
121 </div>
122 </section>
123 <!-- Footer -->
124 <footer class="bg-dark text-white text-center py-3">
125 <p>© 2025 Student Portal | Designed by Malika Kalla</p>
126 </footer>
127 <!-- Bootstrap JS -->
128 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
129 </body>
130 </html>
131
132
133
134
135
136
137
138
Ln 43, Col 15 Spaces: 4 UTF-8 CR LF 1 HTML Port: 5500
```

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## Q1) Bootstrap grid system.

- It is a responsive layout system that allows developers to create grid system based designs for web pages easily. It is based on 12 column grid layout, offering flexibility to arrange content across different screen size from mobile to desktop by using classes like: container, row and col. Developers can build responsive websites that adapt seamlessly to various devices.

## Q2) Bootstrap container & container fluid class.

- Container class creates a fixed width container that adjust its size based on the screen breakpoint, maintaining consistent margins.
- Container fluid class creates a full width container that spans the entire width of viewport, regardless of screen size, making it ideal for layouts that need to use the full width of the screen.



Q What is responsive website?

→ A responsive website is a site designed to adapt its layout and content dynamically to fit various screen sizes and devices such as desktops, tablets and smartphones. It ensures optimal user experience by using techniques like flexible grids, fluid images and media queries to adjust the design seamlessly across different resolutions.

Q How bootstrap helps to design a responsive website?

A Bootstrap helps design responsive websites by providing a mobile first framework with a 12 column grid system, responsive classes and predefined CSS styles. Its components such as container, row & column adapts layouts to various screen sizes using breakpoints, while utilities like media queries & flexible elements ensure consistent & responsive design across devices.