

## FSD Laboratory 02

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**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.

The Bootstrap Grid System is an vital part of Bootstrap's responsive configuration framework. It allows complex format through a sequence of rows and columns. This machine is based totally on a 12-column grid machine, making it very bendy for programming.

**Basic making plans**

**Container:** Extreme outdoors cover. There are sorts of pots in Bootstrap.

**.Field:** Provides a responsive fixed-width object.

**.Field-fluid:** Provides a full-width box, which extends to the overall width of the viewport.

**Rows:** Used to create horizontal line businesses. The rows ought to be located inside the container.

**Columns:** Defines the vertical distribution of space in rows. Predefined lessons along with .Col-, .Col-sm-, .Col-md-, .Col-lg-, and .Col-xl- are used to generate labels corresponding to reactive breakpoints.

**Responsive breakpoint**

Bootstrap's grid gadget is responsive, that means columns might be rearranged based on screen/device length. There are 5 grid damage points:

Another small toolbar: <576px (col-) .

Small Devices: ≥576px (col-sm-) .

Device spacing: ≥768px (col-md-) .

Device size: ≥992px (col-lg-) .

Maximum device sizes: ≥1200px (col-xl-) .

Each breakpoint corresponds to exclusive screen sizes, and columns can be detailed to deal with these levels separately.

**Grid Classes**

**.Col-:** Creates a column that spans one or greater of the 12 to be had columns. If no breakpoint is distinct, it applies to all breakpoints.

**.Col-sm-:** Creates one or extra colour-extensive columns on small devices.

**.Col-md-:** Creates a column width of one or greater hues on intermediate devices.

**.Col-lg-:** Creates one or greater shade width columns in larger gadgets.

.Col-xl: Creates one or greater coloration diffuse oversize gadgets.

2. Bootstrap .container and .container-fluid class.

.container

The .Container class provides a responsive fixed-width box. It centers your text and applies padding to the left and right edges. .Box changes expanded to unique breakpoints to save information when searching efficiently across all devices.

Breaking points and width:

Hundred% to 576px

Within 540px  $\geq 576$ px

720px in  $\geq 768$ px

960px in  $\geq 992$ px

1140px in  $\geq 1200$ px

1320px in  $\geq 1400$ px

.Container elegance ensures that your content is not too detailed on large screens, is legible and looks good on the screen.

FAQ:

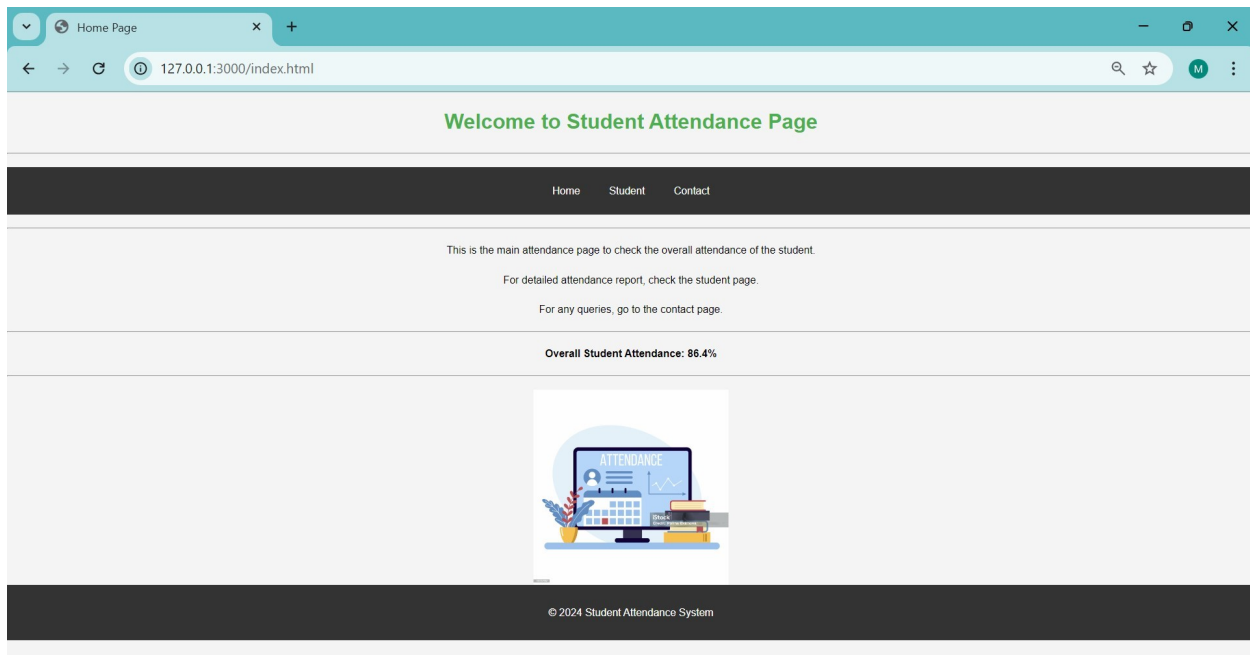
1. What is a responsive website?

A responsive website is designed to provide an optimal viewing and interaction experience across a wide range of devices, from desktop computers to mobile phones. This adaptability ensures that the website's layout, images, and other elements automatically adjust to fit the screen size and resolution of the device being used. The key components of a responsive website include flexible grids and layouts that change based on screen size and orientation, flexible images that resize appropriately, and media queries that apply different styles depending on device characteristics. By being responsive, a website ensures improved user experience by facilitating easy reading and navigation with minimal resizing, panning, and scrolling.

2. How Bootstrap helps to design a responsive website?

Bootstrap is a strong front-end framework that makes it easier to build websites that adapt to different screens. It has a grid system with preset classes that change based on screen size, which keeps the layout looking good on all devices. Bootstrap contains classes to show, hide, and resize elements depending on the screen. It has flexible media classes to make sure images and other media fit well in their containers. The framework's parts, like navigation bars and carousels, are built to look good and work well on different devices right from the start. Bootstrap uses CSS media queries and puts mobile first, which helps designers create websites that work well on all screens.

Output: Screenshots of the output to be attached.



## Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Home Page</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <header>
    <h1>Welcome to Student Attendance Page</h1>
    <hr>
    <nav>
      <a href="index.html">Home</a>
      <a href="report.html">Student</a>
```

```
<a href="contact.html">Contact</a>
</nav>
<hr>
</header>
<main>
  <p>This is the main attendance page to check the overall attendance of the student.</p>
  <p>For detailed attendance report, check the student page.</p>
  <p>For any queries, go to the contact page.</p>
  <hr>
  <p><strong>Overall Student Attendance: 86.4%</strong></p>
  <hr>
  
</main>
<footer>
  <p>&copy; 2024 Student Attendance System</p>
</footer>
</body>
</html>
```

## style.css

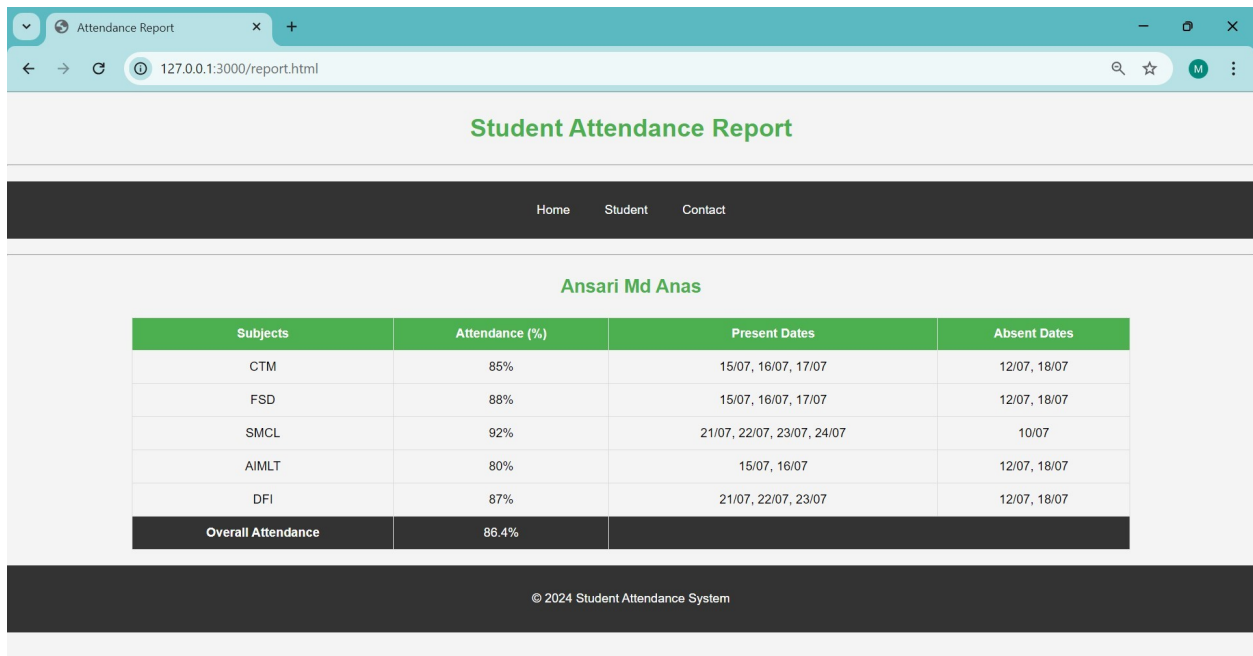
```
body {
  font-family: 'Helvetica Neue', Arial, sans-serif;
  margin: 0;
  padding: 0;
  line-height: 1.6;
  background-color: #f4f4f4;
}

h1 {
  text-align: center;
  color: #4CAF50;
  margin-top: 20px;
}
```

```
hr {  
    margin: 20px 0;  
}  
  
nav {  
    background-color: #333;  
    text-align: center;  
    padding: 10px 0;  
}  
  
nav a {  
    color: white;  
    padding: 14px 20px;  
    text-decoration: none;  
    display: inline-block;  
}  
  
nav a:hover {  
    background-color: #ddd;  
    color: black;  
}  
  
p {  
    text-align: center;  
    margin: 20px 0;  
}  
  
img {  
    display: block;  
    margin: 0 auto;  
    max-width: 100%;  
    height: auto;  
}
```

```
footer {  
    background-color: #333;  
    color: white;  
    text-align: center;  
    padding: 10px 0;  
    width: 100%;  
    position: static; /* Changed from fixed to static for better UX */  
}
```

```
@media (max-width: 600px) {  
    nav a {  
        display: block;  
        padding: 10px;  
    }  
}
```



Attendance Report

127.0.0.1:3000/report.html

### Student Attendance Report

Home Student Contact

**Ansari Md Anas**

Subjects	Attendance (%)	Present Dates	Absent Dates
CTM	85%	15/07, 16/07, 17/07	12/07, 18/07
FSD	88%	15/07, 16/07, 17/07	12/07, 18/07
SMCL	92%	21/07, 22/07, 23/07, 24/07	10/07
AIMLT	80%	15/07, 16/07	12/07, 18/07
DFI	87%	21/07, 22/07, 23/07	12/07, 18/07
<b>Overall Attendance</b>	<b>86.4%</b>		

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report.html

<!DOCTYPE html>

```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Attendance Report</title>
  <link rel="stylesheet" href="style1.css">
</head>
<body>
  <header>
    <h1>Student Attendance Report</h1>
    <hr>
    <nav>
      <a href="index.html">Home</a>
      <a href="report.html">Student</a>
      <a href="contact.html">Contact</a>
    </nav>
    <hr>
  </header>
  <main>
    <h2>Ansari Md Anas</h2>
    <table>
      <thead>
        <tr>
          <th>Subjects</th>
          <th>Attendance (%)</th>
          <th>Present Dates</th>
          <th>Absent Dates</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>CTM</td>
          <td>85%</td>
          <td>15/07, 16/07, 17/07</td>
```

		<td>12/07, 18/07</td>
</tr>		
<tr>		
		<td>FSD</td>
		<td>88%</td>
		<td>15/07, 16/07, 17/07</td>
		<td>12/07, 18/07</td>
</tr>		
<tr>		
		<td>SMCL</td>
		<td>92%</td>
		<td>21/07, 22/07, 23/07, 24/07</td>
		<td>10/07</td>
</tr>		
<tr>		
		<td>AIMLT</td>
		<td>80%</td>
		<td>15/07, 16/07</td>
		<td>12/07, 18/07</td>
</tr>		
<tr>		
		<td>DFI</td>
		<td>87%</td>
		<td>21/07, 22/07, 23/07</td>
		<td>12/07, 18/07</td>
</tr>		
</tbody>		
<tfoot>		
<tr>		
		<td><strong>Overall Attendance</strong></td>
		<td>86.4%</td>
		<td colspan="2"></td>
</tr>		
</tfoot>		





```
</table>
</main>
<footer>
  <p>&copy; 2024 Student Attendance System</p>
</footer>
</body>
</html>
```

### style1.css

```
body {
  font-family: 'Helvetica Neue', Arial, sans-serif;
  margin: 0;
  padding: 0;
  line-height: 1.6;
  background-color: #f4f4f4;
}

h1, h2 {
  text-align: center;
  color: #4CAF50;
  margin-top: 20px;
}

hr {
  margin: 20px 0;
}

nav {
  background-color: #333;
  text-align: center;
  padding: 10px 0;
}
```



```
nav a {
    color: white;
    padding: 14px 20px;
    text-decoration: none;
    display: inline-block;
}

nav a:hover {
    background-color: #ddd;
    color: black;
}

p {
    text-align: center;
    margin: 20px 0;
}

table {
    width: 80%;
    margin: 20px auto;
    border-collapse: collapse;
}

table, th, td {
    border: 1px solid #ddd;
    padding: 8px;
}

th, td {
    text-align: center;
}

thead {
    background-color: #4CAF50;
```

```
color: white;
}

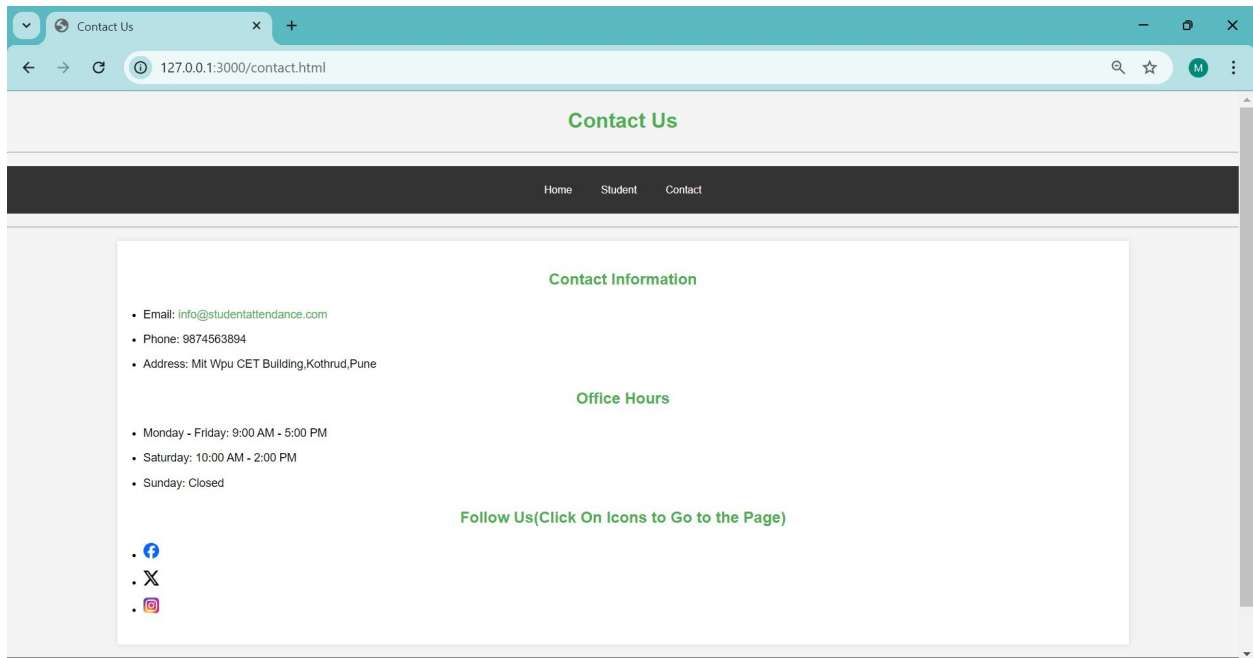
tfoot {
  background-color: #333;
  color: white;
}

img {
  display: block;
  margin: 0 auto;
  max-width: 100%;
  height: auto;
}

footer {
  background-color: #333;
  color: white;
  text-align: center;
  padding: 10px 0;
  width: 100%;
  position: static; /* Changed from fixed to static for better UX */
}

@media (max-width: 600px) {
  nav a {
    display: block;
    padding: 10px;
  }

  table {
    width: 100%;
  }
}
```



## contact.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Contact Us</title>
  <link rel="stylesheet" href="style2.css">
</head>
<body>
  <header>
    <h1>Contact Us</h1>
    <hr>
    <nav>
      <a href="index.html">Home</a>
      <a href="report.html">Student</a>
      <a href="contact.html">Contact</a>
    </nav>
    <hr>
```

```
</header>

<main>

  <section>

    <h2>Contact Information</h2>

    <ul>

      <li>Email: <a
href="mailto:info@studentattendance.com">info@studentattendance.com</a></li>

      <li>Phone: 9874563894</li>

      <li>Address: Mit Wpu CET Building,Kothrud,Pune</li>

    </ul>

  </section>

  <section>

    <h2>Office Hours</h2>

    <ul>

      <li>Monday - Friday: 9:00 AM - 5:00 PM</li>

      <li>Saturday: 10:00 AM - 2:00 PM</li>

      <li>Sunday: Closed</li>

    </ul>

  </section>

  <section>

    <h2>Follow Us(Click On Icons to Go to the Page)</h2>

    <ul>

      <li><a href="https://facebook.com" target="_blank"></a></li>

      <li><a href="https://twitter.com" target="_blank"></a></li>

      <li><a href="https://instagram.com" target="_blank"></a></li>

    </ul>

  </section>

</main>

<footer>

  <p>&copy; 2024 Student Attendance System</p>

</footer>

</body>
```



</html>

## style2.css

```
body {  
    font-family: 'Helvetica Neue', Arial, sans-serif;  
    margin: 0;  
    padding: 0;  
    line-height: 1.6;  
    background-color: #f4f4f4;  
}
```

```
h1, h2 {  
    text-align: center;  
    color: #4CAF50;  
    margin-top: 20px;  
}
```

```
hr {  
    margin: 20px 0;  
}
```

```
nav {  
    background-color: #333;  
    text-align: center;  
    padding: 10px 0;  
}
```

```
nav a {  
    color: white;  
    padding: 14px 20px;  
    text-decoration: none;  
    display: inline-block;  
}
```

```
nav a:hover {  
    background-color: #ddd;  
    color: black;  
}  
  
main {  
    width: 80%;  
    margin: 20px auto;  
    padding: 20px;  
    background-color: white;  
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);  
}  
  
section {  
    margin-bottom: 20px;  
}  
  
ul {  
    list-style-type: disc; /* Changed to disc for bullet points */  
    padding-left: 20px; /* Added padding for bullet points */  
}  
  
ul li {  
    margin: 10px 0;  
    font-size: 1.1em;  
}  
  
ul li a {  
    color: #4CAF50;  
    text-decoration: none;  
}  
  
ul li a:hover {
```

```
text-decoration: underline;  
}
```

```
footer {  
    background-color: #333;  
    color: white;  
    text-align: center;  
    padding: 10px 0;  
    width: 100%;  
    position: static; /* Changed from fixed to static for better UX */  
}
```

```
@media (max-width: 600px) {  
    nav a {  
        display: block;  
        padding: 10px;  
    }  
  
    main {  
        width: 100%;  
        padding: 10px;  
    }  
}
```

### **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.