



CSR BOOTCAMP - 2025

COURSE - BOOTSTRAP



Table of Contents

1. **Overview**
2. **Learning Objectives**
3. **Pre-requisites**
 - Folder Setup
4. **Chapter 1: Introduction to HTML**
 - What is HTML
 - Basic HTML Structure
 - Common HTML Tags
 - Attributes
5. **Chapter 2: Introduction to CSS**
 - What is CSS?
 - Common CSS Properties?
 - CSS Selectors
 - Types of CSS
 - Examples
6. **Chapter 3: Introduction to Bootstrap**
 - What is Bootstrap?
 - What is Responsive Design?
 - Why use Bootstrap?
 - How to include bootstrap in a Project?
 - How to add bootstrap to your page?
7. **Chapter 4: Bootstrap Containers**
 - Fixed Containers
 - Fluid Containers
 - Container padding
8. **Chapter 5: Bootstrap Grid System**
 - What is a Grid System?
 - How it works?
9. **Chapter 6: Bootstrap Components and Utilities**
 - UI Components
 - Bootstrap Tables
 - Bootstrap Colors
 - Bootstrap Typography
 - Bootstrap Images
 - Bootstrap. Alerts



- Bootstrap Buttons
- Bootstrap Badges
- Bootstrap Cards
- Bootstrap Pagination
- Bootstrap Dropdowns
- Bootstrap Carousel
- Bootstrap Navbar
- Bootstrap Popovers
- Bootstrap Tooltip
- Bootstrap Flex

10. Chapter 7: Bootstrap Forms

- Bootstrap Forms
- Bootstrap Select Menus
- Bootstrap Checks and Radios
- Bootstrap Range Sliders
- Bootstrap Input and Groups
- Bootstrap Floating Labels
- Bootstrap Form Validation



Module: Designing a Simple and Beautiful Website with HTML, CSS & Bootstrap

Overview:

In this module, you'll learn how to create a **simple and beautiful websites** using:

- **HTML** (to build the structure)
- **CSS** (to style the content)
- **Bootstrap** (to make it look professional and responsive)

Learning Objectives:

By the end of this module, students will be able to:

- Understand the basics of HTML tags and structure.
- Use CSS to apply colours, fonts, and layouts.
- Use Bootstrap components like cards, grids, buttons, and navbar.
- Design and present a simple and beautiful website.

Pre-requisites:

Before you start coding, make sure you have the following:

- **Web browser** (Chrome, Firefox, Edge)
- Install **Code Editor** – like **Visual Studio Code** (recommended)
- Download from: <https://code.visualstudio.com>

Folder Setup

MyPortfolio/

— index.html

— style.css

You'll only need two files to start:

- index.html – main webpage
- style.css – custom styles (if needed)



CHAPTER 1: Introduction to HTML

What is HTML?

HTML stands for **Hyper Text Markup Language**. It is used to create the structure of a webpage.

Basic HTML Structure:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>My Portfolio</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<link href="style.css" rel="stylesheet">
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
</head>
<body>

<!-- Website content will go here -->

<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></s
cript>
</body>
</html>
```

Common HTML Tags:

Tag	Description	Example
<h1> to <h6>	Headings	<h1>Main Title</h1>
<p>	Paragraph	<p>This is a paragraph.</p>
<a>	Link	Click me
	Image	
<div>	Container	<div class="section">Content here</div>



Tag	Description	Example
<code></code>	Inline container	<code>Small text</code>
<code></code> , <code></code> , <code></code>	Lists	<code>Item</code>
<code><table></code>	Table	<code><table><tr><td>Data</td></tr></table></code>
<code><form></code>	Form	<code><form><input type="text"></form></code>

Attributes

Attributes give more info to tags.

```

```

```
<a href="https://google.com" target="_blank">Open Google</a>
```



CHAPTER 2: Introduction to CSS

What is CSS?

CSS stands for **Cascading Style Sheets**. It is used to **style** the HTML content. It controls **colors, sizes, spacing, fonts, and layout**.

Link it in HTML:

```
<link rel="stylesheet" href="style.css">
```

Common CSS Properties

Property	What it does	Example
color	Text color	color: blue;
background-color	Background color	background-color: yellow;
font-size	Size of text	font-size: 20px;
text-align	Align text	text-align: center;
margin	Space outside element	margin: 10px;
padding	Space inside element	padding: 5px;
border	Adds border	border: 1px solid black;
Width, height	Size of the box	width: 200px; height:200px;
display	Layout behaviour	display: flex;

CSS Selectors

Selector	Example	Selects
Element	p	All <p> tags
Class	.title	All elements with class="title"
ID	#main	Element with id="main"
Group	h1, h2	All <h1> and <h2>
Descendant	div p	All <p> inside <div>

Types of CSS

Type	Example	Where it's written
Inline	<p style="color:red;">Red text</p>	Inside HTML tag



Type	Example	Where it's written
Internal	Inside <style> tag in HTML	In <head>
External	Linked via CSS file	<link rel="stylesheet" href="style.css">

Example:

1. Inline CSS

CSS styles applied **directly inside an HTML tag** using the style attribute.

```
<!DOCTYPE html>
<html>
<head>
  <title>Inline CSS Example</title>
</head>
<body>
  <h1 style="color: blue; text-align: center;">This is a heading with Inline CSS</h1>
  <p style="color: green; font-size: 18px;">This paragraph is styled using inline CSS.</p>
</body>
</html>
```

2. Internal CSS

```
<!DOCTYPE html>
<html>
<head>
  <title>Internal CSS Example</title>
  <style>
    h1 {
      color: blue;
      text-align: center;
    }
    p {
      color: green;
      font-size: 18px;
    }
  </style>
</head>
<body>
  <h1>This is a heading with Internal CSS</h1>
  <p>This paragraph is styled using internal CSS.</p>
</body>
</html>
```




3. External CSS

CSS styles written in a **separate file** (e.g., styles.css), linked to the HTML using <link> tag.

Index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>External CSS Example</title>
  <link rel="stylesheet" href="styles.css" />
</head>
<body>
  <h1>This is a heading with External CSS</h1>
  <p>This paragraph is styled using external CSS.</p>
</body>
</html>
```

Styles.css

```
h1 {
  color: blue;
  text-align: center;
}
p {
  color: green;
  font-size: 18px;
}
```

HTML + CSS Together:

HTML builds the structure:

```
<p>This is a paragraph.</p>
```



CSS styles it:

```
p {  
  color: red;  
  font-size: 16px;  
}
```



CHAPTER 3: Introduction to Bootstrap

What is Bootstrap?

Bootstrap is a free **front-end framework** for faster and easier web development

Bootstrap includes **HTML** and **CSS** based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins

Bootstrap also gives you the ability to easily create responsive designs

What is a Responsive Design?

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

Why use Bootstrap?

Advantages of Bootstrap:

- **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- **Mobile-first approach:** In Bootstrap, mobile-first styles are part of the core framework
- **Browser compatibility:** Bootstrap 5 is compatible with all modern browsers (Chrome, Firefox, Edge, Safari, and Opera). **Note** that if you need support for IE11 and down, you must use either BS4 or BS3.

Speeds up development, ensures uniform design, mobile-friendly (responsive), great documentation and community

How to include Bootstrap in a project:

- **Using CDN:** add <link> and <script> tags to your HTML.
- **Downloading files** from the Bootstrap site and linking locally.
- **Via package managers** like npm (npm install bootstrap)

How to Add Bootstrap to Your Page:

Bootstrap 5 uses HTML elements and CSS properties that require the HTML5 doctype.



Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct title and character set:

```
<html lang="en">
<head>
  <title>Bootstrap</title>
  <meta charset="utf-8">
</head>
</html>
```

To ensure proper rendering and touch zooming, add the following <meta> tag inside the <head> element:

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

The **width=device-width** part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

The **initial-scale=1** part sets the initial zoom level when the page is first loaded by the browser.

Add this in the <head> section:

```
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
```

Add this in the <body> section:

```
<script src="
https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script
>
```



CHAPTER 4: Bootstrap Containers

Containers are used to pad the content inside of them, and there are two container classes available:

1. The **.container** class provides a responsive **fixed width container**
2. The **.container-fluid** class provides a **full width container**, spanning the entire width of the viewport

1.Fixed Container:

Example:

```
<div class="container">
  <h1>My Profile</h1>
  <p>This is some text.</p>
</div>
```

2.Fluid Container:

Use the **.container-fluid** class to create a full width container, that will always span the entire width of the screen (width is always 100%)

```
<div class="container-fluid">
  <h1>My Profile</h1>
  <p>This is some text.</p>
</div>
```

3.Container Padding:

By default, containers have left and right padding, with no top or bottom padding. Therefore, we often use **spacing utilities**, such as extra padding and margins to make them look even better. For example, **.pt-5** means "add a large **top padding**."

```
<div class="container pt-5"></div>
```



CHAPTER 5: Bootstrap Grid System

What is the grid system?

A layout method based on dividing the page into **12 columns**, helping designs adapt to different screen sizes.

The grid system is responsive, and the columns will re-arrange automatically depending on the screen size

The Bootstrap 5 grid system has six classes:

- .col- (extra small devices - screen width less than 576px)
- .col-sm- (small devices - screen width equal to or greater than 576px)
- .col-md- (medium devices - screen width equal to or greater than 768px)
- .col-lg- (large devices - screen width equal to or greater than 992px)
- .col-xl- (xlarge devices - screen width equal to or greater than 1200px)
- .col-xxl- (xxlarge devices - screen width equal to or greater than 1400px)

Example:

```
<div class="container">
<div class="row">
<div class="col-md-6">Left</div>
<div class="col-md-6">Right</div>
</div>
</div>
```

- container – wraps everything
- row – creates a horizontal group
- col-md-6 – takes 6 of 12 columns on medium+ screens

How it works:

- Use containers (.container or .container-fluid), rows (.row), and columns (.col-md-6, .col-sm-4, etc.)
- shows simple examples, like two columns side by side, then stacking on mobile



CHAPTER 6: Bootstrap Components & Utilities

UI Components:

Examples: **Typography**, **Colors**, **images**, **tables**, **buttons**, **forms**, **navbars**, **alerts**, **cards**, **modals**

1.Bootstrap Tables:

Used to display data in rows and columns.

```
<table class="table">
  <thead>
    <tr>
      <th>Name</th>
      <th>Age</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Alice</td>
      <td>7</td>
    </tr>
    <tr>
      <td>Bob</td>
      <td>8</td>
    </tr>
  </tbody>
</table>
```

Variants:

- table-striped – adds zebra-stripes
- table-bordered – adds borders
- table-hover – row highlights on hover
- table-dark – dark mode table

```
<table class="table table-hover table-striped table-bordered">
```

2.Bootstrap Colors

Bootstrap has **built-in color utility classes** for text, backgrounds, borders, and more.

Text Colors



<p class="text-primary">Primary text</p>

<p class="text-success">Success text</p>

<p class="text-danger">Danger text</p>

Background Colors:

<div class="bg-warning text-white p-3">Warning Box</div>

Common Colors:

Class Name	Result
primary	Blue
secondary	Gray
success	Green
danger	Red
warning	Yellow/Orange
info	Cyan
light	Light grey
dark	Dark grey

3. Bootstrap Typography

Typography helps style text beautifully.

Headings:

<h1 class="display-1">Big Heading</h1>

<h2 class="display-2">Smaller</h2>

Lead Paragraph:

<p class="lead">This is a larger, lead paragraph.</p>

Text Alignment:

<p class="text-center">Centered text</p>

<p class="text-end">Right aligned</p>

Text Utilities:

- fw-bold – bold
- fst-italic – italic



- text-uppercase – ALL CAPS
- text-lowercase – lowercase
- text-capitalize – Capitalize Each Word

4. Bootstrap Images

Make Images Responsive:

```

```

- img-fluid makes it scale with the screen size

Rounded Images:

```

```

- img-thumbnail adds a border
- rounded-circle makes it round (great for profile photos)

5. Bootstrap Alerts

Used to show messages or notifications.

```
<div class="alert alert-success" role="alert">  
  Your message has been sent!  
</div>
```

Types of Alerts:

- alert-primary
- alert-secondary
- alert-success
- alert-danger
- alert-warning
- alert-info
- alert-light
- alert-dark

6. Bootstrap Buttons

```
<button class="btn btn-primary">Click Me</button>
```

Button Variants:

- btn-secondary



- btn-success
- btn-danger
- btn-warning
- btn-info
- btn-light
- btn-dark

Outline Buttons:

```
<button class="btn btn-outline-success">Success</button>
```

Sizes:

```
<button class="btn btn-primary btn-sm">Small</button>
```

```
<button class="btn btn-primary btn-lg">Large</button>
```

7. Bootstrap Badges

Badges are small count indicators (like notification bubbles).

```
<h4>Messages <span class="badge bg-danger">3</span></h4>
```

- Use with bg-* for color
- Can also be used inside buttons:

```
<button class="btn btn-primary">  
  Notifications <span class="badge bg-light text-dark">5</span>  
</button>
```

8. Bootstrap Cards

Cards display content in a box-like layout.

```
<div class="card" style="width: 18rem;">  
    
  <div class="card-body">  
    <h5 class="card-title">My Project</h5>  
    <p class="card-text">This is a description.</p>  
    <a href="#" class="btn btn-primary">View</a>  
  </div>  
</div>
```



9. Bootstrap Pagination

Used to split pages or sections.

```
<nav>
  <ul class="pagination">
    <li class="page-item"><a class="page-link" href="#">Previous</a></li>
    <li class="page-item"><a class="page-link" href="#">1</a></li>
    <li class="page-item"><a class="page-link" href="#">2</a></li>
    <li class="page-item"><a class="page-link" href="#">Next</a></li>
  </ul>
</nav>
```

10. Bootstrap Dropdowns

Used for selecting items from a list.

```
<div class="dropdown">
  <button class="btn btn-secondary dropdown-toggle" data-bs-toggle="dropdown">
    Choose Option
  </button>
  <ul class="dropdown-menu">
    <li><a class="dropdown-item" href="#">Option 1</a></li>
    <li><a class="dropdown-item" href="#">Option 2</a></li>
  </ul>
</div>
```

11. Bootstrap Carousel (Image Slider)

```
<div id="myCarousel" class="carousel slide" data-bs-ride="carousel">
  <div class="carousel-inner">
    <div class="carousel-item active">
      
    </div>
    <div class="carousel-item">
      
    </div>
  </div>
  <button class="carousel-control-prev" type="button" data-bs-target="#myCarousel"
  data-bs-slide="prev">
    <span class="carousel-control-prev-icon"></span>
  </button>
```



```
<button class="carousel-control-next" type="button" data-bs-target="#myCarousel" data-bs-slide="next">
  <span class="carousel-control-next-icon"></span>
</button>
</div>
```

12. Bootstrap Navbar

Used to create menus at the top of your site.

```
<nav class="navbar navbar-expand-lg navbar-dark bg-dark">
  <div class="container-fluid">
    <a class="navbar-brand" href="#">MySite</a>
    <button class="navbar-toggler" data-bs-toggle="collapse" data-bs-target="#navLinks">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navLinks">
      <ul class="navbar-nav ms-auto">
        <li class="nav-item"><a class="nav-link" href="#home">Home</a></li>
        <li class="nav-item"><a class="nav-link" href="#about">About</a></li>
      </ul>
    </div>
  </div>
</nav>
```

13. Bootstrap Popovers

Popovers are small popup messages shown when you click something.

Enable via JavaScript:

```
<button type="button" class="btn btn-secondary" data-bs-toggle="popover" title="More Info" data-bs-content="This is extra info.">
  Click for Info
</button>
```

```
<script>
  const popoverTriggerList = document.querySelectorAll('[data-bs-toggle="popover"]')
  const popoverList = [...popoverTriggerList].map(el => new bootstrap.Popover(el))
</script>
```

14. Bootstrap Tooltip



Tooltips appear when you hover over an element.

```
<button type="button" class="btn btn-info" data-bs-toggle="tooltip" title="This is a tooltip!">  
  Hover me  
</button>
```

```
<script>  
  const tooltipTriggerList = document.querySelectorAll('[data-bs-toggle="tooltip"]')  
  const tooltipList = [...tooltipTriggerList].map(el => new bootstrap.Tooltip(el))  
</script>
```

15. Bootstrap Flex (Flexbox Layout)

Bootstrap uses **Flexbox** for modern layouts.

Example Layout:

```
<div class="d-flex justify-content-between">  
  <div>Left</div>  
  <div>Right</div>  
</div>
```

Common Flex Classes:

Class	Purpose
d-flex	Make element flex
justify-content-center	Center items horizontally
justify-content-between	Space between items
align-items-center	Align vertically
flex-column	Stack items vertically
flex-row	Default row layout



CHAPTER 7: Bootstrap Forms

1. Bootstrap 5 Forms

Bootstrap provides powerful and easy-to-use form elements to collect user input.

Basic Example:

```
<form>
  <div class="mb-3">
    <label for="username" class="form-label">Name</label>
    <input type="text" class="form-control" id="username" placeholder="Enter your
name">
  </div>
  <div class="mb-3">
    <label for="email" class="form-label">Email address</label>
    <input type="email" class="form-control" id="email" placeholder="Enter your email">
  </div>
  <button type="submit" class="btn btn-primary">Submit</button>
</form>
```

Explanation:

- form-control – makes inputs full-width and styled
- mb-3 – margin bottom (spacing)
- form-label – styles labels
- btn and btn-primary – styled Bootstrap button

2. BS5 Select Menus

Used for dropdown selection in a form.

```
<div class="mb-3">
  <label for="class" class="form-label">Select your class</label>
  <select class="form-select" id="class">
    <option selected>Select class</option>
    <option value="1">7th Grade</option>
    <option value="2">8th Grade</option>
  </select>
</div>
```



Notes:

- Use form-select instead of form-control for <select>
- Bootstrap automatically styles it beautifully

3. Bootstrap 5 Checks and Radios

Used for multiple or single-choice options.

Checkboxes:

```
<div class="form-check">
  <input class="form-check-input" type="checkbox" id="subscribe">
  <label class="form-check-label" for="subscribe">Subscribe to newsletter</label>
</div>
```

Radio Buttons:

```
<div class="form-check">
  <input class="form-check-input" type="radio" name="gender" id="male" value="male">
  <label class="form-check-label" for="male">Male</label>
</div>

<div class="form-check">
  <input class="form-check-input" type="radio" name="gender" id="female"
value="female">
  <label class="form-check-label" for="female">Female</label>
</div>
```

4. BS5 Range Sliders

Use range inputs for selecting a value between a minimum and maximum.

```
<label for="volume" class="form-label">Volume</label>
<input type="range" class="form-range" min="0" max="100" id="volume">
```

- form-range styles the slider
- min and max define limits

5. BS5 Input Groups

Use input groups to attach buttons, text, or icons to inputs.

With Text:



```
<div class="input-group mb-3">
  <span class="input-group-text">@</span>
  <input type="text" class="form-control" placeholder="Username">
</div>
```

With Buttons:

```
<div class="input-group mb-3">
  <input type="text" class="form-control" placeholder="Search">
  <button class="btn btn-outline-secondary" type="button">Go</button>
</div>
```

6. BS5 Floating Labels

Floating labels stay inside the input until the user types.

```
<div class="form-floating mb-3">
  <input type="email" class="form-control" id="floatingEmail"
placeholder="name@example.com">
  <label for="floatingEmail">Email address</label>
</div>
```

```
<div class="form-floating">
  <textarea class="form-control" placeholder="Your message"
id="floatingTextarea"></textarea>
  <label for="floatingTextarea">Message</label>
</div>
```

Note: Make sure to add placeholder (even if empty) for proper label behavior

7. BS5 Form Validation

Bootstrap helps show if a form is filled correctly using simple classes.

Client-side Example:

```
<form class="needs-validation" novalidate>
  <div class="mb-3">
    <label for="name" class="form-label">Name</label>
    <input type="text" class="form-control" id="name" required>
    <div class="valid-feedback">Looks good!</div>
    <div class="invalid-feedback">Please enter your name.</div>
  </div>
```




```
<button class="btn btn-primary" type="submit">Submit</button>
</form>
```

Class	What it does
form-control	Styles input fields
form-label	Styles labels
form-select	Styles dropdowns
form-check	Container for checkboxes/radios
form-range	Styles sliders
form-floating	Enables floating labels
input-group	Groups input with button/text
is-valid / is-invalid	Manually show validation
was-validated	Enables automatic validation feedback