

Bootstrap (LEVEL 4)

Session 1: Introduction and Basic Styling

Objective: Introduce students to Bootstrap and demonstrate the foundational styles and components they can implement to enhance the appearance of web pages.

1. Introduction to Bootstrap:

- Overview of Bootstrap as a CSS framework.
- Importance and advantages of using Bootstrap for responsive design.
- Quick start guide: How to include Bootstrap in your project.

2. Difference Between CSS and Bootstrap:

- Discuss how Bootstrap extends the capabilities of basic CSS.
- Explain the pre-built classes and components provided by Bootstrap for rapid development.

3. Basic Styling:

- Text: Learn how to style text using Bootstrap classes (e.g., ``text-center``, ``text-primary``, etc.).
- Color & Background: Apply color and background utilities to elements (``bg-primary``, ``text-white``, etc.).
- Image: Implement responsive images using ``img-fluid`` and other Bootstrap image classes.
- Border: Add borders and control their appearance with classes like ``border``, ``rounded``, etc.
- Width: Manage element width using Bootstrap width utilities.

4. Table:

- Styling tables, adding borders, striped rows.

Session 2: Buttons, Forms, and Layout

Objective: Explore more complex Bootstrap components such as buttons, forms, and layout controls to create user-friendly interfaces

1. Button:

- Learn to create and style buttons using Bootstrap (`btn`, `btn-primary`, etc.).
- Understand how to customize button sizes and states.

2. Button Group & Toolbar:

- Create groups of buttons using `btn-group`.
- Explore the toolbar component for combining multiple groups.

3. Form Control:

- Implement form controls (inputs, checkboxes, radio buttons) with Bootstrap's styling.
- Discuss how to ensure forms are responsive and accessible.

4. Margin and Padding:

- Utilize Bootstrap's margin (`m-`) and padding (`p-`) utilities to control spacing.

5. Tooltip:

- Implement tooltips using Bootstrap's JavaScript component to enhance user interactions.

Session 3: Layout Components and Progress Indicators

Objective: Deepen the understanding of Bootstrap's layout system and learn to use progress indicators to provide feedback to users.

1. Container:

- Learn about the Bootstrap grid container (``container``, ``container-fluid``) for managing responsive layouts.

2. Grid System:

- Master the Bootstrap grid system, including rows and columns, to create complex responsive layouts.

3. Table:

- Create responsive and styled tables using Bootstrap classes (``table``, ``table-striped``, etc.).

4. Progress:

- Implement progress bars to indicate the status of processes (``progress``, ``progress-bar``).

5. Spinner:

- Add loading spinners to your projects for visual feedback (``spinner-border``, ``spinner-grow``).

6. Toasts:

- Learn to use toasts as lightweight notifications for user feedback.

Session 4: Advanced Components

Objective: Explore advanced Bootstrap components to build feature-rich web interfaces.

1. Accordion:

- Implement collapsible accordion components for toggling content visibility.

2. Alerts:

- Display dismissible alerts to provide important messages (``alert``, ``alert-dismissible``).

3. Badge:

- Add badges to highlight counts, statuses, or additional information (``badge``, ``badge-pill``).

4. Card:

- Creating card components, card decks, and card groups.

5. Dropdown:

- Create dropdown menus for navigation and user actions (``dropdown``, ``dropdown-toggle``).

6. List:

- Style lists using Bootstrap's list group component (``list-group``, ``list-group-item``).

7. Pagination:

- Implement pagination controls for navigating through large sets of data (``pagination``, ``page-item``).

8. D-Flex (Justify-Content, Align-Content):

- Introduction to Bootstrap's flex utilities (``d-flex``, ``justify-content-*``, ``align-content-*``).
- Practical examples of creating flexible layouts with these utilities.

Session 5: Home Page Layout Design

Objective: Apply the knowledge gained to design and structure the layout of a Home page, incorporating Bootstrap components.

1. Design the Home Page Layout (Nav-bar, Side-bar, Main Content):

- Structure the Home page using a responsive layout with Bootstrap's grid system.
- Design a fixed or fluid navigation bar using `navbar`.
- Integrate a side-bar for additional navigation or information.

2. Design the Nav-bar:

- Customize the navigation bar with Bootstrap's classes, dropdowns, and collapsible features.

3. Design the Side-bar:

- Create a side-bar using Bootstrap's grid system and layout utilities.

4. Design the Login Page:

- Develop a responsive login form with Bootstrap's form controls and layout components.

Session 6: Signup Page and Main Content Design

Objective: Complete the web application by designing the signup page and main content area using Bootstrap.

1. Design the Signup Page:

- Build a signup page with form controls and responsive layout features, ensuring a user-friendly design.

2. Design the Main Content Section of the Home Page:

- Focus on the main content area of the Home page, utilizing Bootstrap's grid and flex utilities for an organized layout.

