

UNIVERSITY OF THE PUNJAB
BS (SE) Fall 2022 Morning
Web Engineering - Lab 08

Submission Deadline: 11:59 PM (25th November, 2024)

Total Marks: 55 Marks

Overview

In this lab, we will explore how to use **CSS frameworks**, particularly **Bootstrap**, to enhance the presentation and responsiveness of web pages. Bootstrap is a powerful framework that enables developers to create visually appealing, responsive designs quickly.

Concepts Covered

1. Introduction to Bootstrap and its features.
2. Implementing responsive design for multiple device types.
3. Using components like **Navbar**, **Carousel**, **Cards**, and **Footer**.
4. Creating dropdown menus.
5. Incrementally designing a professional homepage.

Problem Statement

You are tasked with creating a webpage inspired by the Master Paints homepage using **Bootstrap**. This webpage should include dynamic and responsive features while showcasing modern design principles. The goal is to help you gain hands-on experience in structuring and styling a webpage with Bootstrap, progressively adding functionality until the webpage is complete.

Lab Tasks

Task 1: Building the Basic Structure (5 marks)

1. Set up the project by creating the following files and folders:
 - `index.html`
 - `style.css`
 - A folder named `images` to store images.
2. Add the basic structure for the webpage, including:
 - The `<head>` section with links to the Bootstrap CSS and JS
 - A `<body>` with placeholders for the **navbar**, **carousel**, **cards**, and **footer**.
3. Add a placeholder navbar at the top of the webpage.

Deliverable for Task 1: A basic webpage structure with placeholders for all components.

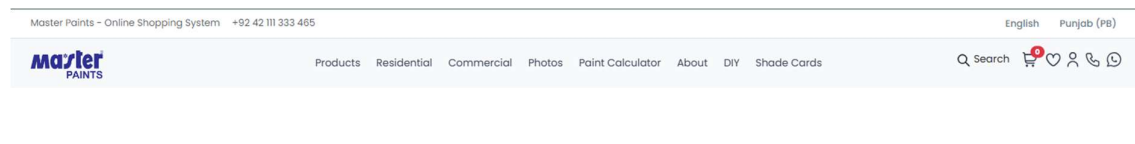
Task 2: Adding the Navbar (15 marks)

1. **Create a Fully Functional Navbar:**
 - Use Bootstrap components to create a **responsive navbar**.
2. **Dropdown Menus:**
 - Add dropdown menus for the following items:
 - **Products**
 - **Residential**
 - **Commercial**
3. **Alignment and Styling:**
 - Match the navbar's layout, alignment, and styling based on the design shown in the provided screenshot.
 - Key elements to include:
 - A logo on the left with "Master Paints" text.
 - Menu items such as **Products, Residential, Commercial, Photos, Paint Calculator, About, DIY, and Shade Cards** aligned horizontally.
 - Contact information displayed at the top, e.g., **Master Paints – Online Shopping System** with a phone number.
 - Additional options on the far right, such as:
 - A **language switcher** (e.g., "English" with dropdown).
 - A **search icon**.
 - User account-related icons (e.g., profile, cart, and wishlist icons) with appropriate spacing.

Deliverable for Task 2:

A working navbar with:

- Dropdown menus for **Products, Residential, and Commercial**.
- Responsive behavior across devices (desktop and mobile).



Task 3: Adding the Image Carousel (10 marks)

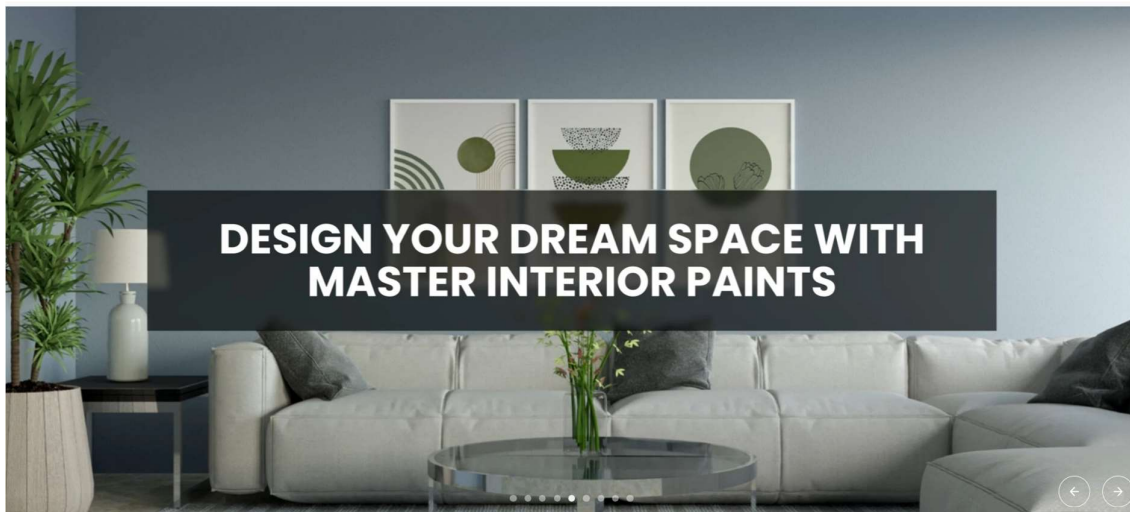
1. **Insert an Image Carousel:**
 - Use Bootstrap components to create a **responsive image carousel**.
2. **Add Carousel Content:**
 - Include at least **three high-quality images** related to interior design or paint themes.
 - The carousel should prominently display the heading:
"DESIGN YOUR DREAM SPACE WITH MASTER INTERIOR PAINTS"
 - Place the heading inside a **center-aligned dark overlay banner** with white text to enhance readability.
3. **Carousel Features:**

- Add **indicators** at the bottom of the carousel to show the current slide position.
 - Include **previous** and **next navigation buttons** for slide control.
4. **Styling and Alignment:**
- Match the design style shown in the screenshot:
 - Use a professional and clean layout.
 - Ensure the images are fully visible and adapt gracefully across devices.
 - Position the overlay text banner centrally, ensuring it stands out without obstructing key image details.

Deliverable for Task 3:

A fully functional **responsive image carousel** with:

- At least three images.
- Indicators and navigation buttons.
- A text overlay styled as shown in the provided screenshot.



Task 4: Adding a Product Card Section (10 marks)

1. **Create a Product Card Section:**
 - Use **Bootstrap components** to create a visually appealing and responsive card layout.
2. **Card Content:**
 - Add at least **eight product cards** to the section, each containing:
 - **An image** of the product (use high-resolution images to maintain quality).
 - **A title** to identify the product.
 - **A price or brief description** under the title.
3. **Styling and Alignment:**
 - Design the cards to match the professional style shown in the screenshot:
 - Each card should have a **clean white background** with subtle borders.
 - Use consistent **font sizes** and spacing for product titles and descriptions.

- Ensure the product image is prominent and aligns proportionally within the card.

4. Hover Effects (Optional):

- Add subtle hover effects (e.g., scaling the card or changing the box-shadow) to enhance interactivity and user experience.

Deliverable for Task 4:

A fully functional and **responsive product card section** showcasing at least eight products with:

- Images, titles, and descriptions.
- A grid layout that adjusts seamlessly for desktop, tablet, and mobile screens.



Task 5: Adding the Footer (15 marks)

1. Sections Included:

- **My Account:** Provide links for signing in, creating an account, accessing the wish list, and payment/FAQs.
- **Contact Us:** Include detailed contact information, office timings, and a link to the map for easy navigation.
- **Social Media Links with Icons:** Add prominent app download buttons for Google Play and the App Store, and, if applicable, links to social media platforms with their respective icons.

2. Design and Styling:

- **Visual Appeal:** Ensure the footer layout is clean, well-organized, and utilizes appropriate spacing, font sizes, and typography for readability and accessibility.
- **Responsiveness:**
 - The footer should adapt seamlessly to different screen sizes (desktop, tablet, and mobile).
 - Use a grid-based layout to ensure sections are properly aligned on all devices.

3. Deliverable for Task 5:

- A **fully functional and styled footer** that includes:
 - All required sections and links.
 - A professional design with a focus on usability.

- Responsive behavior that adjusts dynamically for different device types.

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Contact Number:
+92 42 111 333 465

Office Timing:
Mon-Sat 10am - 6pm

For Sales Inquiries:
sales@masterpaints.com

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Assessment Criteria

- **27%: Navbar with Dropdown Menus (15 marks)**
- **18%: Image Carousel (10 marks)**
- **18%: Footer Styling and Responsiveness (10 marks)**
- **18%: Product Card Section (10 marks)**
- **9%: Basic Structure (5 marks)**
- **10%: Overall Design and Responsiveness**

Helpful Resources

<https://getbootstrap.com/docs/5.3/getting-started/introduction/>

<https://www.youtube.com/watch?v=Awuh5ftrXPk>