

Academic Year: 2025-26	Year: Third Year	Term: I
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Subject: Web Technology		
Assignment No.: 4		
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Lab Assignment: 04

Title: Bootstrap-Based UI: Create a website with Bootstrap components:
Application to consider (Any One):

1. Agriculture
2. Real Estate
- 3. Health and Fitness Website**
4. News Website
5. Social Media

Selected one – 3. Health and Fitness Website

Theory:

1. What is Bootstrap?

Bootstrap is a free, open-source front-end framework for creating responsive, mobile-first websites. It provides ready-to-use HTML, CSS, and JavaScript components such as navigation bars, buttons, forms, modals, and grids. Saves time because you don't have to code common UI elements from scratch.

- Created by: Mark Otto and Jacob Thornton at Twitter.
- Purpose: To make web development faster and easier.
- Current Version: Bootstrap 5 (no dependency on jQuery).

2. How to use Bootstrap? Stepwise Details

Bootstrap is a front-end CSS, JS, and component library that helps you quickly design responsive and modern-looking websites without writing much custom CSS.

Step 1 – Include Bootstrap in your project

There are two ways:

- **CDN (Content Delivery Network)** — fastest method (no download).

```
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.
css" rel="stylesheet">
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle
.min.js"></script>
```

- **Download** — install locally and link the CSS & JS files.

Step 2 – Set up HTML structure

Start with a basic HTML5 structure and add Bootstrap classes.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Bootstrap Example</title>
</head>
<body>
  <h1 class="text-center">Hello Bootstrap</h1>
</body>
</html>
```

Step 3 – Use Bootstrap classes for layout & styling

- **Layout:** Use Bootstrap's Grid System (container, row, col).

- **Components:** Use pre-designed buttons, alerts, modals, forms.

Example:

```
<div class="container">
  <div class="row">
    <div class="col-md-6 bg-primary text-white">Column 1</div>
    <div class="col-md-6 bg-success text-white">Column 2</div>
  </div>
</div>
```

Step 4 – Add interactivity with Bootstrap JavaScript

For dropdowns, modals, tooltips — Bootstrap uses JavaScript (already in the bundle file you linked).

Step 5 – Customize if needed

You can override Bootstrap styles with your own CSS or use Bootstrap's **utility classes**.

3. Key features of Bootstrap.

1. Responsive Design

- Websites adapt automatically to different screen sizes (mobile, tablet, desktop).
- Uses a 12-column fluid grid system to create flexible layouts.

2. Pre-styled Components

- Comes with ready-to-use UI elements like buttons, navbars, forms, modals, cards, alerts, etc.
- Saves time by avoiding the need to design from scratch.

3. Cross-browser Compatibility

- Works well on all major browsers like Chrome, Firefox, Safari, and Edge.

4. Customizable

- You can override styles with your own CSS.
- Supports Sass variables for deeper customization.

5. Mobile-first Approach

- Designed primarily for mobile devices and then scales up to larger screens.

6. Easy to Use

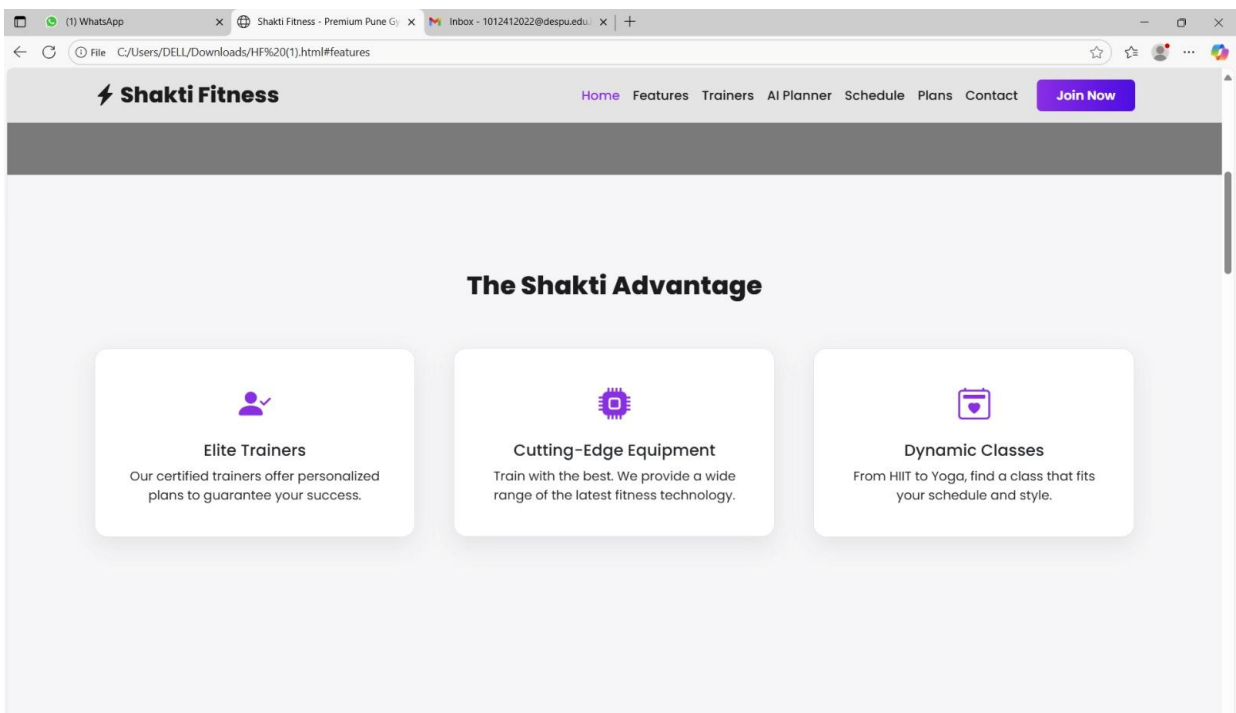
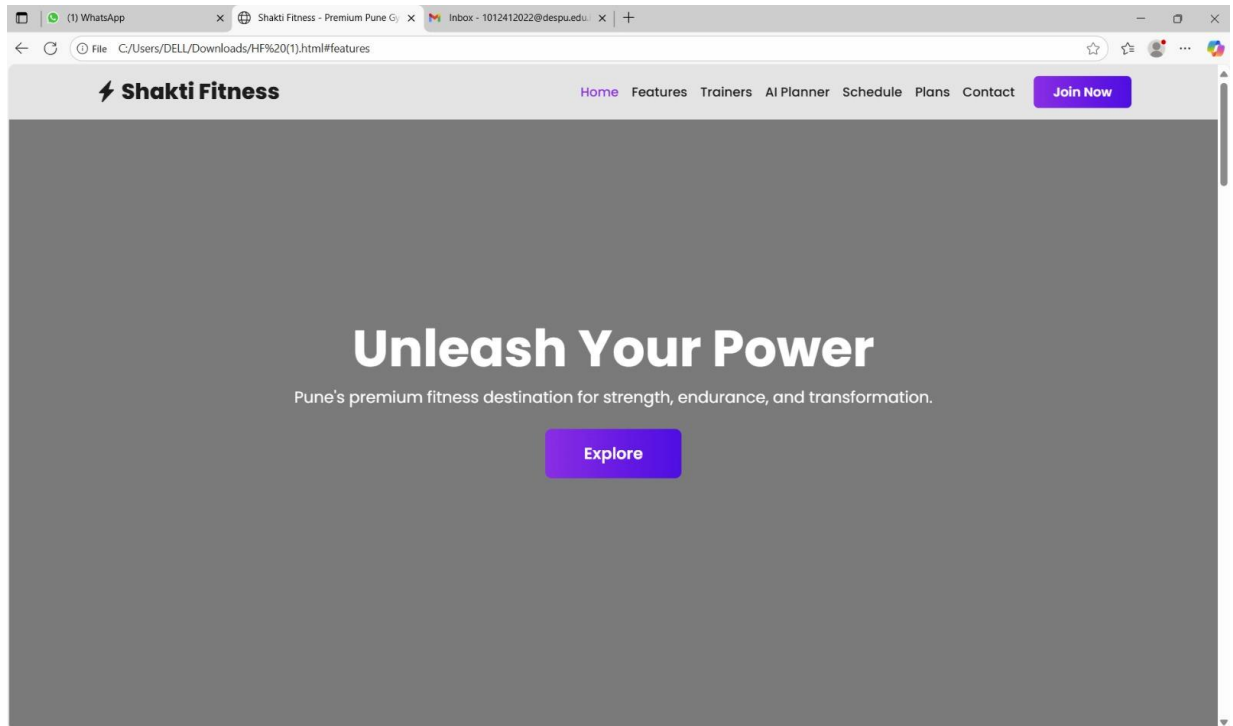
- You can add Bootstrap via CDN (just a link in HTML) or install via npm.
- Doesn't require deep design knowledge to create professional layouts.

7. Consistent Design

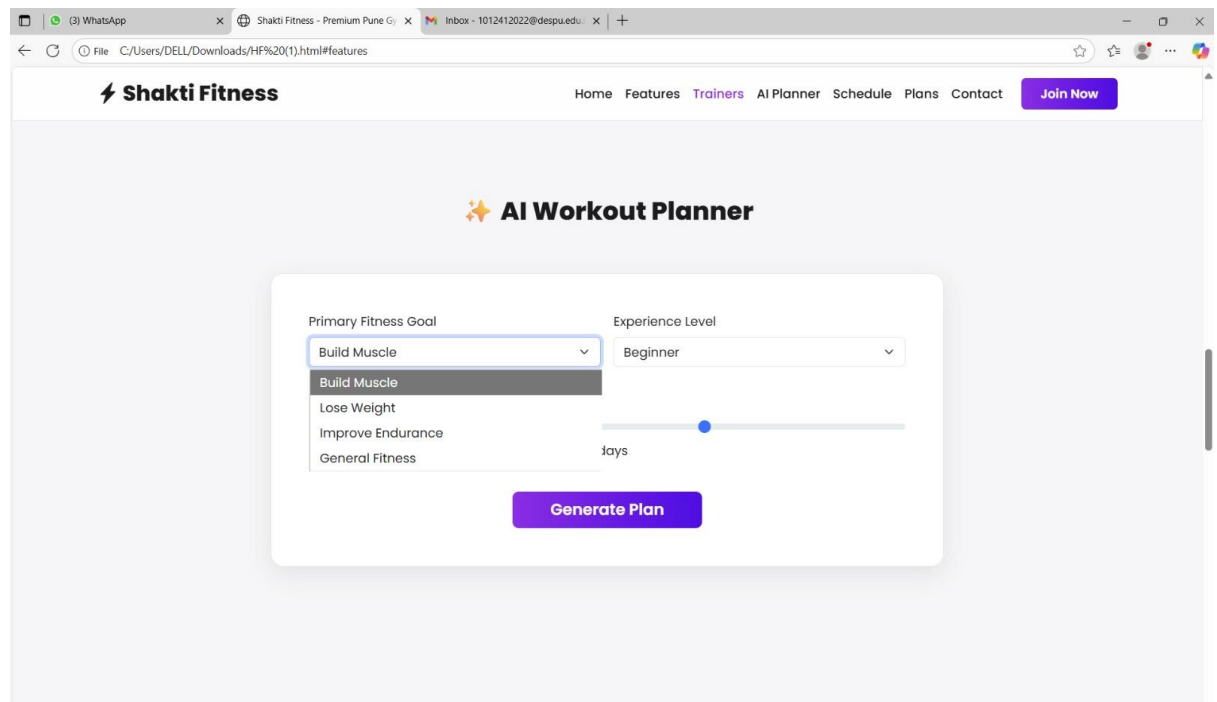
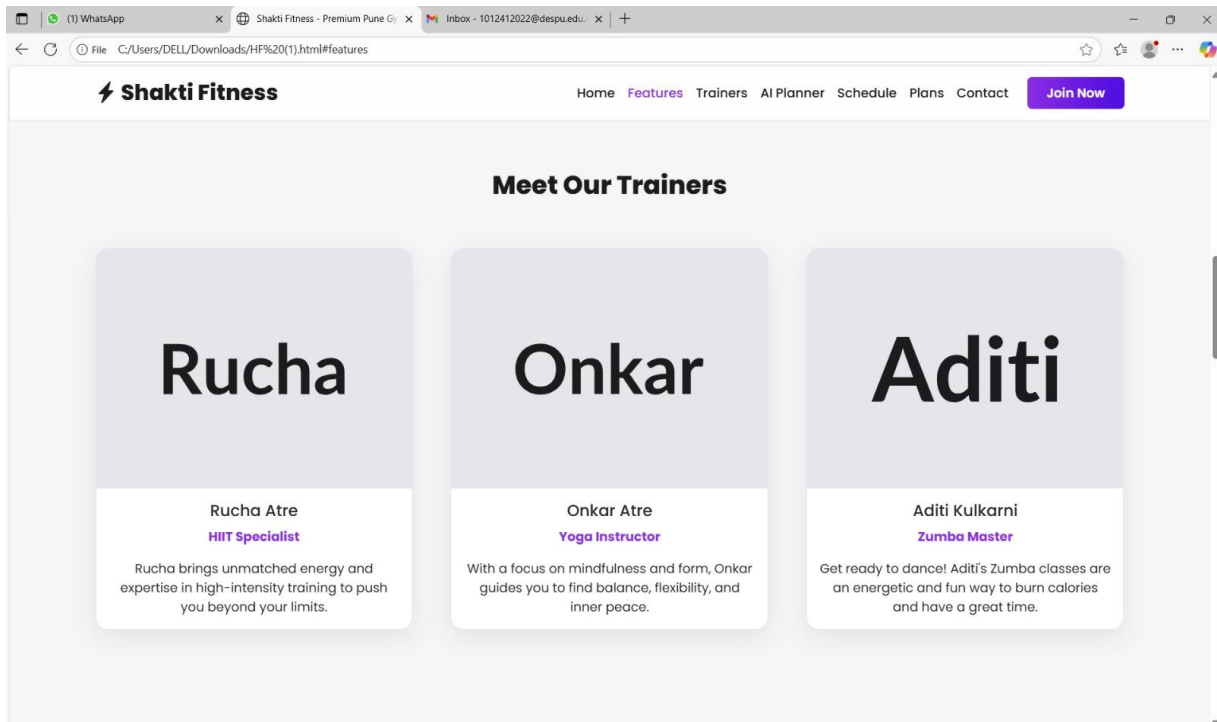
- Provides a unified look and feel across all browsers and devices.

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Screenshot of Webpage:



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The screenshot shows the 'AI Workout Planner' section of the Shakti Fitness website. The interface includes a navigation bar with links to Home, Features, Trainers, AI Planner (active), Schedule, Plans, and Contact, along with a 'Join Now' button. The main heading is 'AI Workout Planner'. Below it, there is a form with three input fields: 'Primary Fitness Goal' (set to 'Build Muscle'), 'Experience Level' (set to 'Beginner'), and 'Days Per Week' (set to '3 days' via a slider). A 'Generate Plan' button is located at the bottom of the form.

The screenshot shows the 'Class Schedule' section of the Shakti Fitness website. The navigation bar is the same as the previous screenshot, but the 'Schedule' link is now active. The main heading is 'Class Schedule'. Below it, there is a table showing the class schedule for Monday. The table has columns for the day of the week (Mon, Tue, Wed, Thu, Fri, Sat) and rows for different time slots (06:00-07:00, 07:30-08:30, 18:00-19:00). Each row contains the class name, the instructor's name, and a 'View Details' button.

Mon	Tue	Wed	Thu	Fri	Sat
06:00-07:00			HIIT	Rucha Atre	View Details
07:30-08:30			Yoga Flow	Onkar Atre	View Details
18:00-19:00			Zumba Fitness	Aditi Kulkarni	View Details

Find Your Perfect Plan

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School of Engineering and Technology
Department of Computer Science and Engineering
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The image shows two screenshots of a web browser displaying the Shakti Fitness website. The browser tabs include (2) WhatsApp, Shakti Fitness - Premium Pune Gy..., and Inbox - 1012412022@despu.edu... The address bar shows the file path C:/Users/DELL/Downloads/HF%20(1).html#features.

Find Your Perfect Plan

Basic	Pro	VIP
₹1500/mo	₹2500/mo	₹5000/mo
Gym Access Locker Room Access Basic Fitness Assessment Group Classes	Full Gym Access Unlimited Group Classes Advanced Fitness Assessment Towel Service	All Pro Benefits 4 Personal Training Sessions/mo Juice Bar Discount Guest Passes
Sign up	Get started	Contact us

Get In Touch

Name: Email:

Message:

[Send Message](#)

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Conclusion:

Bootstrap is a powerful, mobile-first front-end framework that simplifies website development by providing a responsive grid system, ready-to-use components, and utility classes. It speeds up design, ensures consistent styling across devices and browsers, and allows easy customization, making it a preferred choice for modern web development.

FAQs :

1. How many different layouts does Bootstrap have?

Bootstrap has two main layout types:

1. Fixed-width layout → Uses `.container` (has a maximum width that changes based on screen size).
2. Fluid layout → Uses `.container-fluid` (takes 100% width of the viewport at all times).

2. Why is Bootstrap preferred for website development over any other platform?

Bootstrap is preferred because:

- **Responsive by default** (mobile-friendly design).
- **Ready-to-use components** save development time.
- **Consistent design** across all browsers.
- **Cross-browser compatible** and **open-source**.
- **Easy integration** via CDN or local files.

3. What are collapsing elements in Bootstrap?

Collapsing elements are **UI elements that expand and collapse** to hide or show content.

- Example: Accordions, collapsible navigation menus.
- Implemented using **Bootstrap's Collapse JavaScript plugin**.
- Triggered via a button or link with `data-bs-toggle="collapse"`.

4. What is a Bootstrap Container?

A container is the main layout wrapper in Bootstrap.

- .container → Fixed-width layout (responsive max-width).
- .container-fluid → Full-width layout (100% of viewport).
- Containers provide padding and alignment for page content.

5. How is the tooltip different from the popover?

Feature	Tooltip	Popover
Purpose	Shows small text hints when hovering/focusing on an element.	Shows richer content (text, links, HTML) in a small popup.
Content	Short text only.	Can contain headings, paragraphs, HTML.
Trigger	Hover or focus.	Click or hover.
Size	Very small.	Larger, more detailed.