



<b>Course Name:</b>	Web Programming Laboratory (216U01L405)	<b>Semester:</b>	<b>IV</b>
<b>Date of Performance:</b>	01/ 02/2026	<b>DIV/ Batch No:</b>	<b>B2</b>
<b>Student Name:</b>	Ashwera Hasan	<b>Roll No:</b>	<b>16010124107</b>

### Experiment No: 1

**Title:** Design and Development of a Web Portal using HTML5

**Aim of the Experiment:** To design and develop a multi-page, case-study-based web portal using HTML5, demonstrating proper document structure, semantic elements, formatting, lists, links, images, tables.

**Objectives of the Experiment:**

1. Develop structured and semantic HTML5 documents
2. Create interactive and media-rich web pages
3. Apply real-world problem context to web development
4. Build a basic but complete front-end web portal

**COs to be achieved:**

CO1: Design dynamic web pages using various HTML tags.

**Books/ Journals/ Websites references:**

1. Students should write

**Theory:**

Students should write about HTML 5 (citation needed for content taken (IEEE or APA7 style))

**Problem statement:** “College Event & Student Services Web Portal” A college wants to develop a basic HTML5-based web portal to showcase events, registrations, information, and services for students. Each task contributes one page or feature of this portal

Task:

**Task 1: Home Page – HTML5 Document Structure & Global Attributes**



**Use Case:**

Design the **Home Page** of the College Event Portal.

**Requirements:**

- Use proper HTML5 document structure
- Display college name, logo text, and academic year
- Use global attributes (id, class, title, style)
- Add a tooltip on the college name

**Deliverable:** index.html

**Skills Tested:** Document structure, global attributes

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**Task 2: Event Description Page – Formatting & Text-Level Tags**

**Use Case:**

Create a page describing an **Annual TechFest**.

**Requirements:**

- Highlight event name using `<strong>` and `<mark>`
- Use `<em>` for themes and `<small>` for disclaimers
- Use `<sup>` and `<sub>` for dates and versions
- Use `<abbr>` for technical terms

**Deliverable:** event-details.html

**Skills Tested:** Formatting & text-level tags

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**Task 3: About Department Page – Block vs Inline Formatting**

**Use Case:**

Design an **About Computer Engineering Department** page.

**Requirements:**

- Use `<div>` sections for Vision, Mission, Facilities
- Use `<blockquote>` for HoD's message
- Inline formatting inside paragraphs
- Apply background colors to block sections

**Deliverable:** about-dept.html

**Skills Tested:** Block-level and inline elements

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**Task 4: Student Clubs Page – Lists & Nested Lists**

**Use Case:**

Display **Student Clubs and Activities**.

**Requirements:**

- Ordered list for technical clubs
- Unordered list for cultural clubs
- Nested list showing events under each club
- Description list explaining club acronyms



**Deliverable:** clubs.html

**Skills Tested:** List tags

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#### **Task 5: Navigation Page – Hyperlinks**

**Use Case:**

Create a **Navigation Menu** for the portal.

**Requirements:**

- Link to all internal pages created so far
- External link to university website
- Email link to event coordinator
- Telephone link for student helpdesk

**Deliverable:** navigation.html

**Skills Tested:** Hyperlink tags

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#### **Task 6: Campus Map – Image & Image Map**

**Use Case:**

Provide an interactive **Campus Map**.

**Requirements:**

- Display campus image
- Create image map with clickable areas:
  - Auditorium
  - Library
- Each area opens a relevant page or link

**Deliverable:** campus-map.html

**Skills Tested:** Image and image maps

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#### **Task 7: Result Summary Page – Tables**

**Use Case:**

Display **Event Competition Results**.

**Requirements:**

- Table showing Team Name, Event, Position, Score
- Use `<caption>`, `<thead>`, `<tbody>`, `<tfoot>`
- Merge header cells using colspan

**Deliverable:** results.html

**Skills Tested:** Table tags

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#### **Task 8: Event Registration – Forms**

**Use Case:**

Create an **Online Event Registration Form**.

**Requirements:**

- Student name, email, roll number
- Event selection (dropdown)
- Gender (radio)
- Skills (checkbox)
- Submit and reset buttons

**Deliverable:** register.html

**Skills Tested:** Form tags

#### **Task 09: Media & Frames – Executable Content**

**Use Case:**

Create a **Media Gallery & Information Page**.

**Requirements:**

- Embed previous year event video using <video>
- Add background music using <audio>
- Embed Google Map or college site using <iframe>
- Use <noscript> message

**Deliverable:** media.html

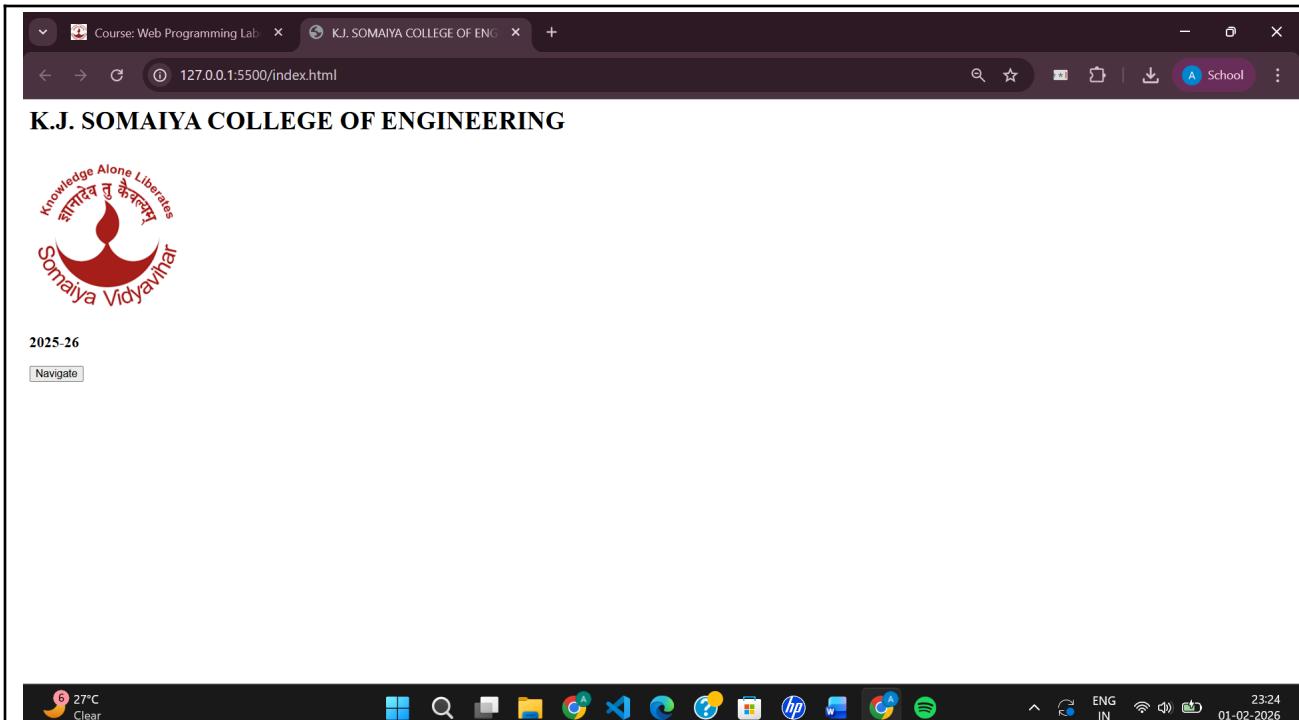
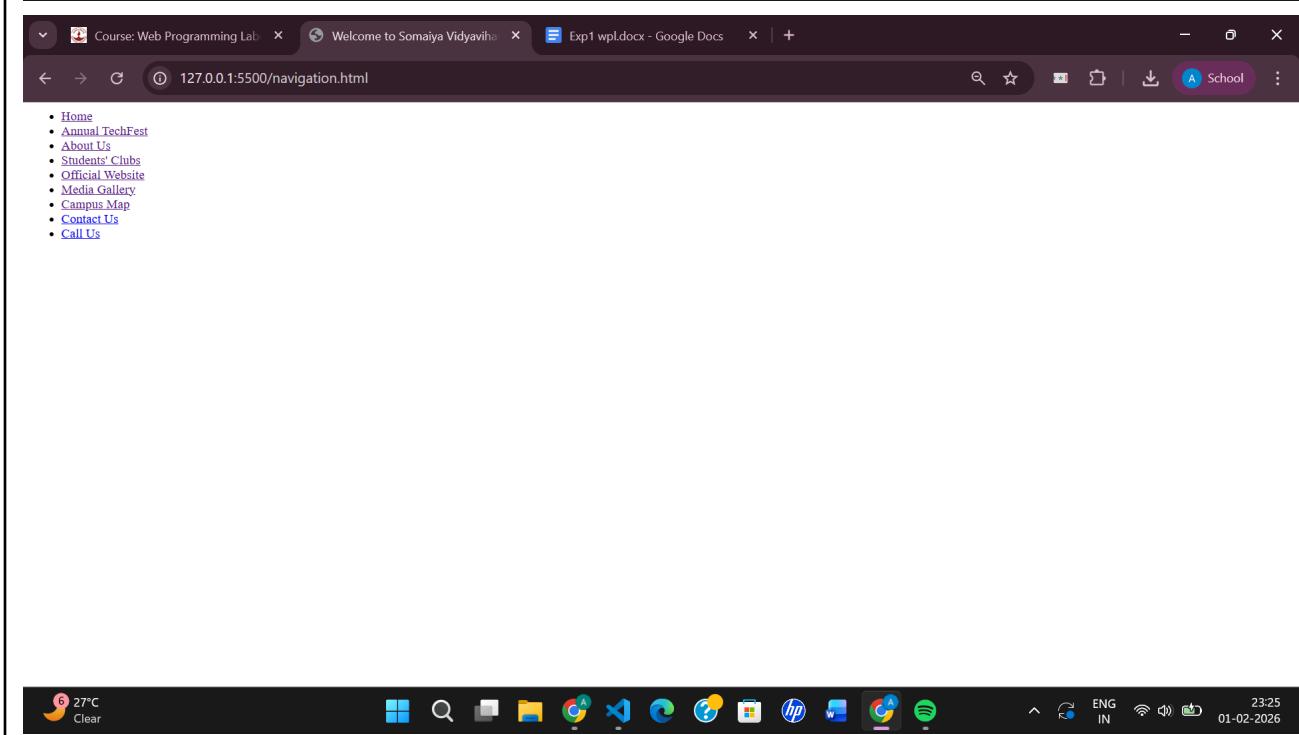
**Skills Tested:** Frames & executable tags

#### **Code :**

<https://github.com/ashwera/webProgrammingLab>

\*This is a private repository to prevent plagiarism

#### **Output / Screenshot:**

27°C Clear

23:24 ENG IN 01-02-2026

27°C Clear

23:25 ENG IN 01-02-2026



**SOMAIYA**  
VIDYAVIHAR UNIVERSITY

K J Somaiya School of Engineering  
(formerly K J Somaiya College of Engineering)

**K. J. Somaiya School of Engineering, Mumbai-77**  
(Somaiya Vidyavihar University)  
**Department of Computer Engineering**



Course: Web Programming Lab | Welcome to Somaiya Vidyavihar | TechFest | Exp1 wpl.docx - Google Docs | 127.0.0.1:5500/event-details.html

## Annual TechFest

*Disclaimer: Participation is free of cost. Any party claiming to charge on behalf of the college is not authorized.*

Date: 20th January, 2026 Version 1.0  
Technical abbreviations:  
FAQ  
Register | View Results | Back to Home

27°C Clear | Register | Exp1 wpl.docx - Google Docs | 127.0.0.1:5500/register.html

Student Name: \_\_\_\_\_  
Email: \_\_\_\_\_  
Roll Number: \_\_\_\_\_  
Select Event:   
Gender:   
Programming  
Public Speaking  
Teamwork  
Sportsmanship  
Skills (optional):   
Register | Reset | Back

27°C Clear | 23:25 | ENG IN | 01-02-2026



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Course: Web Programming Lab | Welcome to Somaiya Vidyavihar | Results | 127.0.0.1:5500/results.html | Exp1 wpl.docx - Google Docs | + | School | :

## Results

Team Name	Result
Robo Warriors	1st Place - Robotics Competition
Code Masters	2nd Place - Coding Challenge
Design Gurus	3rd Place - Design Contest

Congratulations to all teams for their outstanding performance!

27°C Clear | 23:25 | 01-02-2026

Course: Web Programming Lab | Welcome to Somaiya Vidyavihar | 127.0.0.1:5500/about-dept.html | Exp1 wpl.docx - Google Docs | + | School | :

## About Computer Engineering Department

### Vision

To be a center of excellence in computer engineering education and research, fostering innovation and producing globally competent professionals.

### Mission

- Provide quality education in computer engineering through a well-structured curriculum and experienced faculty.
- Encourage research and development activities to address real-world challenges.
- Foster industry-academia collaboration for practical exposure and skill enhancement.
- Promote ethical practices, teamwork, and lifelong learning among students.

### Facilities

- State-of-the-art computer labs with high-performance workstations
- Research laboratories equipped with latest software and hardware
- Library with extensive collection of technical books and journals
- Wi-Fi enabled campus for seamless connectivity

### HOD's Message

Welcome to the **Computer Engineering Department at K.J. Somaiya College of Engineering**. Our department is dedicated to nurturing the next generation of computer engineers who will lead innovation and drive technological advancements. We are committed to providing a holistic education that combines theoretical knowledge with practical skills. Join us on this exciting journey of learning and discovery!

- Dr. D. Sharma, Head of Department

27°C Clear | 23:25 | 01-02-2026



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**Somaiya**  
TRUST

**Students' Clubs and Activities**

**Technical Clubs**

- 1. CodeCell
  - Intro to Competitive Programming
  - Coffee with CodeCell
  - Capture the flag
  - Hack
- 2. KJSSE CSI
  - KJ Somaiya School of Engineering's Computer Society of India Student Chapter
  - Workshops
  - Guest Lectures
  - Project Expo
- 3. ACM Student Chapter
  - Programming Contests
  - Tech Talks
  - Workshops
- 4. Datazen
  - Datathon
  - Case Study
  - Data science events
- 5. SMLRA
  - Machine Learning Workshops
  - Guest Lectures

**Cultural Clubs**

- Palinoia
- Glitterati
- Octavium
- Insignia
- Shutterbugs

**Media Gallery**



0:00 / 0:10



27°C Clear ENG IN 23:26 01-02-2026

Course: Web Programming Lab | Welcome to Somaiya Vidyavihar | Media Gallery | Exp1 wpl.docx - Google Docs

//note: KJSCE website refuses to connect to unauthorized webpages



A screenshot of a web browser window displaying an aerial view of the K. J. Somaiya School of Engineering campus. The campus features several modern buildings with white and light-colored facades, a large green lawn with a running track, and a dense area of trees and smaller buildings. The browser's address bar shows the URL 127.0.0.1:5500/campus-map.html. The taskbar at the bottom of the screen shows various application icons, the date 01-02-2026, and the time 23:26.

### Post Lab Subjective/Objective type Questions:

1. Write HTML code to create a hyperlink that opens in a new tab.

```
<a href="https://example.com" target="_blank">Click Here</a>
```

2. Differentiate between block-level and inline elements with examples.

Block-level elements start on a new line and occupy full width. They can have height, width, margin, and padding. Examples are <div>, <p>, and <h1>.

Inline elements stay within the same line. They take only content width. Height and width cannot be set. Examples are <span>, <a>, and <strong>.

3. Why are semantic tags preferred over <div> tags?

Semantic tags describe content meaning clearly. They improve code readability. They help search engines understand structure. They improve accessibility for screen readers. <div> has no meaning. It is only a container.

4. Why is <iframe> preferred over <frame> in modern HTML?

<iframe> is supported in HTML5. It embeds content within a page. It does not break page structure. <frame> is obsolete. <frame> required framesets. Framesets are not supported now.

5. Evaluate the importance of using alt attribute in images.

The alt attribute describes image content. It helps screen readers read images. It improves accessibility for users. It shows text if images fail. It helps search engines index images.



6. Suggest two additional features that can improve the given web portal and explain how HTML5 supports them.

One feature is video integration. It improves user engagement. HTML5 supports this using the <video> tag. It allows native playback. No plugins are needed. Another feature is form validation. It improves data accuracy. HTML5 provides built-in input types. It also supports attributes like required and pattern.

#### **Conclusion and Discussion:**

The experiment was able to practically help implement every tag and feature of HTML in making a fully responsive and working website with all required components. We were able to implement basic styling using CSS. Additionally, hyperlinking pages together made the entire site complete and connected. We practiced tags and used all variants of features to practically test and understand why one is better than the other, like div and semantic tags for example.