

**A**  
**Summer Internship Report**  
**On**  
**Technology Training in**  
**Web Development With HTML, CSS & JAVASCRIPT**

(IT346– Summer Internship - I)

**Prepared by**  
Ankit Aal(22IT001)

**Under the Supervision of**  
Dr. Priyanka Patel

**Submitted to**

Charotar University of Science & Technology (CHARUSAT)  
for the Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Technology (B.Tech.)  
for Semester 5

**Submitted at**



**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**Chandubhai S. Patel Institute of Technology (CSPIT)**  
**Faculty of Technology & Engineering (FTE), CHARUSAT**  
**At: Changa, Dist: Anand, Pin: 388421.**  
**July 2024**



Accredited with Grade A+ by NAAC

Accredited with Grade A+ by KCG

## CERTIFICATE

This is to certify that the report entitled "**Technology Training in Web development with HTML, CSS & JAVASCRIPT**" is a bonafied work carried out by **Ankit Aal(22IT001)** under the guidance and supervision of **Dr. Priyanka Patel** for the subject **Summer Internship – I (IT346)** of 5<sup>th</sup> Semester of Bachelor of Technology in **Information Technology** at Chandubhai S. Patel Institute of Technology (CSPIT), Faculty of Technology & Engineering (FTE) – CHARUSAT, Gujarat.

To the best of my knowledge and belief, this work embodies the work of candidate himself, has duly been completed, and fulfills the requirement of the ordinance relating to the B.Tech. Degree of the University and is up to the standard in respect of content, presentation and language for being referred by the examiner(s).

Under the supervision of,

Dr. Priyanka Patel  
Assistant Professor  
Dept. of Information Technology  
CSPIT, FTE,  
CHARUSAT, Changa, Gujarat

FOR, PRELAX INFOTECH  
  
PROPRIETOR

Mr. Keyur Anaghan  
C.E.O.  
Prelax Infotech

Dr. Parth Shah  
Head - Department of Information Technology, CSPIT, FTE,  
CHARUSAT, Changa, Gujarat.

**Chandubhai S. Patel Institute of Technology (CSPIT)**  
**Faculty of Technology & Engineezing (FTE), CHARUSAT**

At: Changa, Ta. Petlad, Dist. Anand, Pin: 388421. Gujarat.

## **SUMMER INTERNSHIP COMPLETION CERTIFICATE**



**PreLax Infotech**  
*We Elaborate Technology.*

Mo: 96 87 99 66 88  
www.prelax.in  
info@prelax.in

Date: 16<sup>th</sup> June 2024

### **INTERNSHIP CERTIFICATE**

#### **TO WHOM IT MAY CONCERN**

This is to certify that Ankit Aal worked as Web development Intern at PreLax Infotech from May 20, 2024 to June 16, 2024.

During his internship, he was exposed to the various activities in CSS, Js and React.Js .

Throughout the Internship, Ankit showed a high degree of responsibility, sincerity, a genuine desire to learn, and the motivation to take on new duties and difficulties. He is very gifted in synchronization and communication, and he pays astonishing attention to detail.

We wish him success in all his future endeavors.

For PreLax Infotech,

**FOR, PRELAX INFOTECH**

  
PROPRIETOR

**Keyur Anaghan [C.E.O]**

Place: Surat

615 to 618, Infinity Tower, Lal Darwaja Station Rd, beside Ayurvedic Collage, near railway station, Lal Darwaja, Surat, 395003

**Chandubhai S. Patel Institute of Technology (CSPIT)**  
**Faculty of Technology & Engineering (FTE), CHARUSAT**  
At: Changa, Ta. Petlad, Dist. Anand, Pin: 388421. Gujarat.

**Table of Contents**

<b>Acknowledgement</b>	v
<b>Abstract</b>	i
<b>Description of company / organization</b>	ii
<b>Chapter 1 Introduction</b>	1
1.1 Internship Objectives	1
1.2 Overview of Internship Activities	1
<b>Chapter 2 Tools and Technologies</b>	3
2.1 Introduction to HTML	3
2.2 Introduction to CSS	3
2.3 Introduction to JAVASCRIPT	4
2.3.1 Advance topics in JAVASCRIPT	4
2.4 Software Requirements	5
<b>Chapter 3 Task Description</b>	6
3.1 Task 1 Working Calculator	6
3.2 Task 2 Myntra Clone	7
3.3 Task 3 To-Do list	9
3.4 Task 4 4-connect Game	10
<b>Chapter 4 Learning Experiences</b>	11
4.1 Knowledge Acquired/Skills Learnt	11
4.2 Industry Practices Adapted	11
4.2.1 Taking Screenshots at Each Step	11
4.2.2 Coding Ethic	11
4.2.3 Continuous Testing	11
4.2.4 Code Review	12
<b>Chapter 5 Conclusion</b>	13
<b>References</b>	14

## **Acknowledgement**

I would like to extend my deepest gratitude to Prelax Infotech for providing me with this invaluable internship opportunity. Their structured and supportive program has significantly enhanced my web development skills.

I am profoundly thankful to Prof. Hemant Yadav, my counsellor, for his guidance, insightful feedback, and continuous encouragement throughout this internship. His expertise and support were crucial to my learning experience.

Additionally, I want to thank the dedicated mentors and instructors at Prelax Infotech for their knowledge and support, which have been pivotal to my development.

Thank you all for your invaluable support and contributions

## **Abstract**

This report presents a detailed account of my four-week internship at Prelax Infotech, focusing on web development using HTML, CSS and JavaScript. The internship provided a robust framework for learning and applying web development principles through a combination of theoretical instruction and practical assignments. Over the course of the program, I engaged in four significant tasks that reinforced my understanding of front-end development. This report outlines the objectives, the tools and technologies utilized, the specifics of each task, and the insights gained. Additionally, it reflects on the challenges encountered and the solutions devised, emphasizing the overall impact of the internship on my professional growth and technical proficiency. The experience has equipped me with essential skills and knowledge, preparing me for future endeavors in the field of web development.

## **Description of Prelax infotech**

Prelax Infotech, a premier IT solutions company, empowers businesses to navigate the complexities of digital transformation with unmatched expertise. With over nine years of industry experience, Prelax has established itself as a reliable partner, delivering top-notch software, mobile applications, websites, and a host of other services designed to meet clients' evolving needs and enhance their customer relationship management.

At the core of Prelax's success is a commitment to quality and innovation. The company boasts a team of experts who continuously push the boundaries of technology, ensuring that each project is executed with precision and creativity. This dedication has earned Prelax a reputation for delivering error-free solutions, as evidenced by their impressive 99% error-free track record.

Prelax's portfolio is a testament to its versatility and expertise. With over 150 websites published, 800 mobile apps delivered, and 450 graphic designs created, the company's impact is far-reaching. They serve a diverse clientele, including 70+ global customers, across various industries such as healthcare, real estate, retail, e-commerce, automotive, education, and entertainment. This broad industry experience enables Prelax to craft tailored solutions that drive business performance and enhance customer satisfaction.

The company's service offerings are extensive and designed to cater to the unique needs of modern businesses. Prelax excels in mobile application development for both iOS and Android platforms, web design and development, mobile game development, 3D graphics design, SEO/ASO, and e-commerce development. Their comprehensive approach ensures that clients receive holistic solutions that drive growth and innovation.

Prelax Infotech operates from multiple locations, including their head branch in Surat, Gujarat, and an international branch in Dubai, UAE. This global presence underscores their commitment to serving a diverse clientele with localized expertise.

## **List of Figures**

<b>Fig 1.1 Calculator</b>	<b>6</b>
<b>Fig 2.1 Landing Page</b>	<b>7</b>
<b>Fig 2.2 Discount Information</b>	<b>8</b>
<b>Fig 2.3 Fashion Discount</b>	
<b>Fig 3.1 To-Do list Page</b>	<b>9</b>
<b>Fig 4.1 4-connect Game Page</b>	<b>10</b>

## **List of Tables**

<b>Table 1.1 Overview of internship activates</b>	<b>2</b>
<b>Table 1.2 Task Description</b>	<b>6</b>
<b>Table 2.1 Table Name</b>	<b>7</b>
<b>Table 2.2 Table Name</b>	<b>9</b>
<b>Table 2.3 Table Name</b>	<b>10</b>

# CHAPTER-1 INTRODUCTION

## 1.1 Internship Objectives

The main purpose of this internship is to enhance professional and personal skill development, enabling us to gain a planned and directed learning experience. It also allows us to integrate knowledge gained through industry learning with the competencies acquired through actual experience in a professional setting. The goals of this internship are:

- Learn and develop practical skills
- Gain first-hand understanding of the inner workings of an organization
- Solve problems by taking initiative and using creativity
- Clarify career goals
- Observe and learn ethics at work
- Observe and work with professionals in the field

## 1.2 Overview of Internship Activities

During the internship, we engaged in a variety of activities that helped us apply our knowledge of HTML, CSS and JavaScript to real-world projects. These activities included:

- **Running Calculator** : Developed a simple running calculator that performs basic arithmetic operations. This project helped us understand the basics of user input handling using Html and Css.
- **Netflix Clone** : Created a Netflix Clone Website , focusing on the front-end design and user interface. This project provided insights into website layout, styling, and responsiveness using HTML and CSS.
- **To-Do List App** : Built a to-do list application that allows users to add, delete, and mark tasks as completed. This project reinforced our understanding of work handling in JavaScript.
- **Tic-Tac-Toe Game** : Designed and developed a tic-tac-toe game, enhancing our skills in game logic implementation and interactive user interfaces using HTML, CSS and JavaScript.

These projects provided valuable hands-on experience and helped us strengthen our practical skills in web development.

## 1.2 Overview of Internship Activities

	Date	Day	Name of Topic/Module
Week 1	13/05/2024	Monday	Introduction of Company and Internship plan
	14/05/2024	Tuesday	Given First Task and Video lectures (HTML, CSS & JS )
	15/05/2024	Wednesday	Implementation of HTML & CSS for Task
	16/05/2024	Thursday	Attached event listeners to HTML buttons and appropriate JavaScript Function calling
	17/05/2024	Friday	Implement functions to perform calculations.
	18/05/2024	Saturday	Deployed on GitHub Pages
Week 2	20/05/2024	Monday	Given Second Task
	21/05/2024	Tuesday	Learned Different Types of Section in Web page
	22/05/2024	Wednesday	Learned Bootstrap Library
	23/05/2024	Thursday	Learned CSS animation
	24/05/2024	Friday	Learned how to load JSON data to CSS template
	25/05/2024	Saturday	Deployed on GitHub Pages
Week 3	27/05/2024	Monday	Created the basic HTML structure for the To-Do List
	28/05/2024	Tuesday	Designed the layout and styles using CSS
	29/05/2024	Wednesday	Learned browser's Local storage
	30/05/2024	Thursday	Added JavaScript functionality for adding tasks
	31/05/2024	Friday	Implemented task completion and deletion features
	01/06/2024	Saturday	Deployed on GitHub Pages
Week 4	03/06/2024	Monday	Created the basic HTML structure for the Connect 4 game
	04/06/2024	Tuesday	Designed the layout and styles using CSS
	05/06/2024	Wednesday	Added JavaScript functionality for player moves
	06/06/2024	Thursday	Implemented win condition checks and game logic
	07/06/2024	Friday	Tested the game for various scenarios and edge cases
	08/06/2024	Saturday	Deployed on GitHub Pages

## CHAPTER-2 TOOLS AND TECHNOLOGIES

### 2.1 Introduction to HTML

- HTML is used to create web pages . it uses predefined tags and elements that instruct the browser on how to display the content . HTML is like the language that web pages speak. Imagine you're writing a letter to a friend. You use words and sentences to share your thoughts. Similarly, HTML is a set of instructions that you use to tell web browsers how to create a web page. Imagine a web browser as a super-smart friend who can understand these instructions and build something beautiful from them. It takes your HTML instructions and turns them into what you see on the screen when you visit a website.

### 2.2 Introduction to CSS

- CSS, or Cascading Style Sheets, is a language used to describe the presentation of a document written in HTML . It enables developers to separate content from design, allowing for greater flexibility and control in specifying how elements should appear. CSS defines the visual structure, layout, colors, fonts, and overall look and feel of a web page. By using CSS, developers can create responsive and visually appealing websites that adapt to different screen sizes and devices. With features like selectors, properties, and values, CSS provides powerful tools to enhance user experience and create consistent, maintainable styles across multiple web pages.
- **Selectors:** Allow you to target specific HTML elements to apply styles.
- **Box Model:** Defines how elements are structured and spaced, including margins, borders, padding, and content.
- **Flexbox and Grid Layout:** Modern layout modules that offer flexible and efficient ways to create complex web layouts.
- **Media Queries:** Enable responsive design by applying different styles based on screen size, orientation, and other media features.
- **Preprocessors:** Tools like Sass and LESS enhance CSS by allowing variables, nested rules, and mixins, making stylesheets more maintainable and scalable.

## 2.3 Introduction of JavaScript

- JavaScript is a dynamic language pivotal for web development, enabling interactive web pages and event handling. It supports asynchronous operations like callbacks, promises, and async/await for efficient execution. Popular frameworks include React, Angular, and Vue.js for building UIs and SPAs. Node.js extends JavaScript to server-side development. Tools like Webpack and Babel streamline coding tasks, while TypeScript adds static typing for enhanced code quality and maintainability, collectively enabling robust web applications.

### 2.3.1 Advance JavaScript

- Throughout the four-week internship, several advanced JavaScript technologies and concepts are covered comprehensively. The initial weeks focus on the fundamentals, introducing the syntax, operations, variables, data types, and basic control structures. Building on this foundation, the curriculum delves into data structures such as arrays and objects, alongside modern JavaScript operations like the spread operator and destructuring. String manipulations are also explored. Functions, a core part of JavaScript, are examined in depth, including declarations, expressions, arrow functions, and higher-order functions.
- In the third week, the focus shifts to working with numbers and dates, covering various manipulations and the use of date objects. Additionally, internationalization (Intl) features are introduced to format dates and numbers for different locales. The final week includes timers, using SetTimeout , SetInterval and ClearInterval for managing timed operations. Advanced DOM manipulation is a significant topic, involving DOM traversal, manipulation, and event handling, providing a thorough understanding of these advanced properties and methods essential for dynamic web development.

## 2.4 Software Requirements

- A text editor (Visual Studio Code) for coding.
- Web browsers (Chrome) for testing and compatibility.

## CHAPTER – 3 TASK DESCRIPTION

<b>Task 1</b>	
<b>Task Description</b>	The objective of a basic calculator in web development is to provide a user-friendly interface for performing basic arithmetic operations. Display the numbers and operations entered by the user in real-time. Update the result dynamically as the user inputs values or performs operations.
<b>Trigger</b>	Show the Calculator
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. User clicks '5', '5' appears on the display.</li> <li>2. User clicks '+', display updates to '5 +'.</li> <li>3. User clicks '3', display updates to '5 + 3'.</li> <li>4. User clicks '=', display shows '8'.</li> <li>5. As the user inputs '5 + 3 * 2', the display should dynamically show interim results like '5 + 3 = 8', then '8 * 2 = 16'.</li> <li>6. User clicks 'C', display clears and resets for new input.</li> </ol>
<b>Post Condition</b>	Dynamic Result and clear input
<b>Output Screenshots</b>	

Figure 1.1

### Task 2

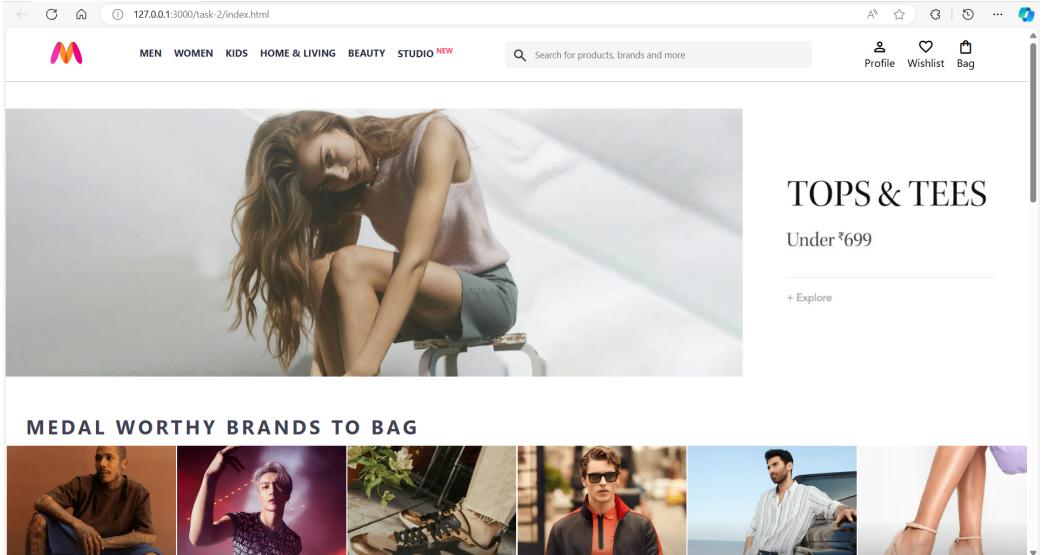
<b>Task Description</b>	
	Build a Myntra Clone website. You'll display text and photos with HTML, design navigation menu. Use CSS for styling and responsiveness across devices. while a footer holds static information. Optionally, include a simple form for user input. This project focuses on static elements, but lays the groundwork for a future dynamic websites.
<b>Trigger</b>	Landing Page Display
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. Users arrive and see the hero section and navigation bar.</li> <li>2. Users scroll down to see various fashion sections.</li> <li>3. Users explore the various offers section on specification fashion find answers to common questions.</li> <li>4. User find additional information</li> </ol>
<b>Post Condition</b>	<ol style="list-style-type: none"> <li>1. Users navigate through the visually engaging sections of the website.</li> <li>2. Users searches their product in the search bar to get started.</li> <li>3. Users access information about discount and latest trends.</li> <li>4. Users view discounts according to category.</li> <li>5. No data processing or backend interactions occur.</li> </ol>
<b>Output Screenshots</b>	

Figure 2.1

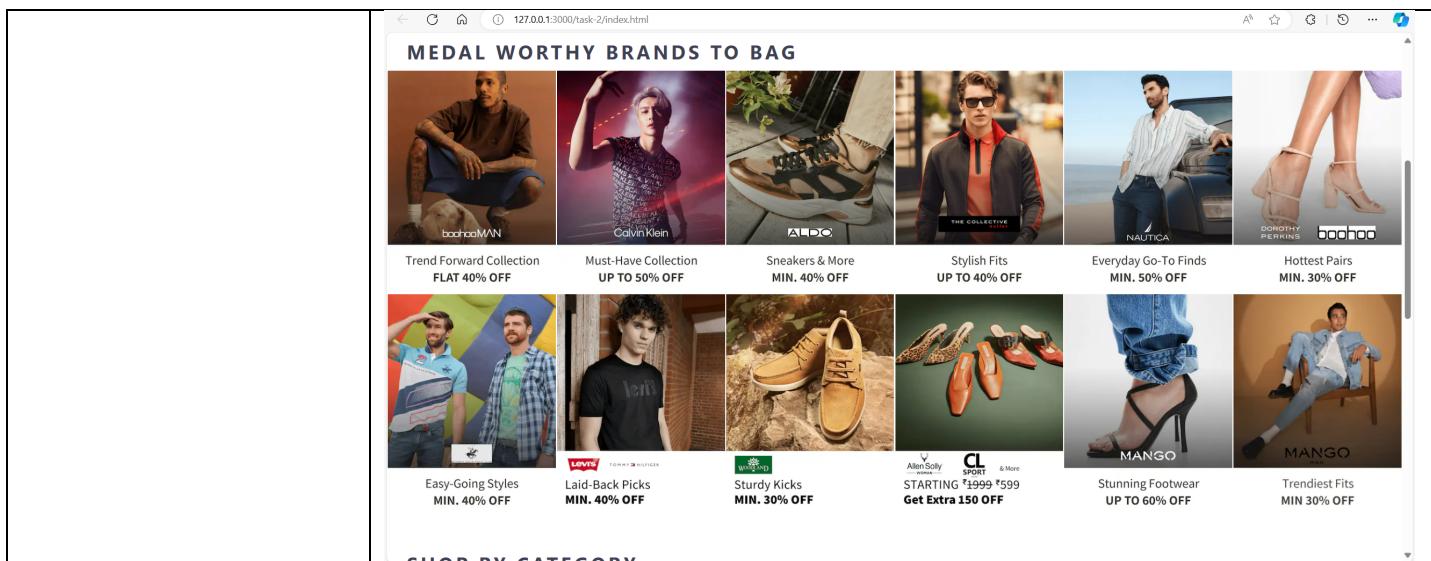


Figure 2.2

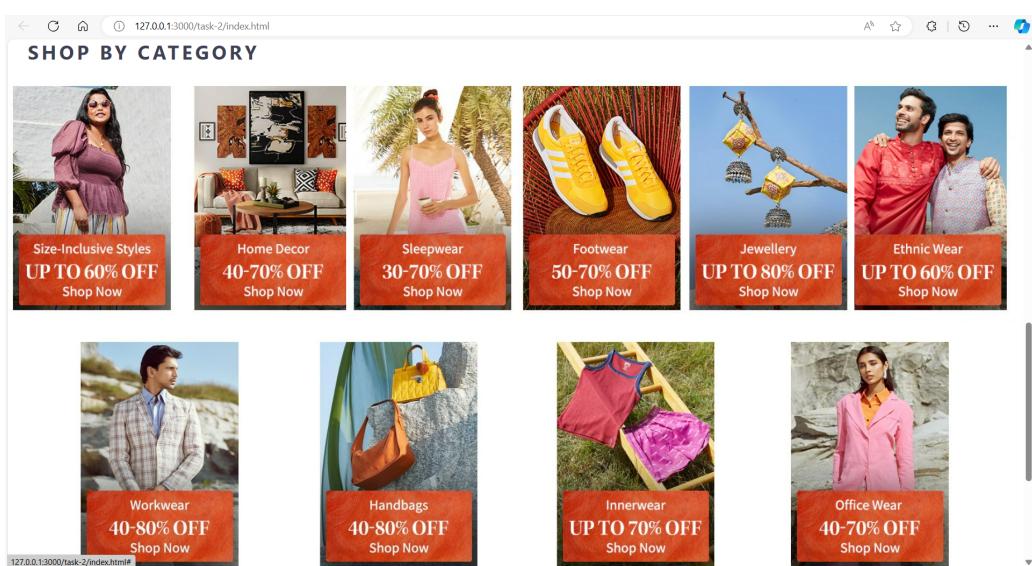


Figure 2.3

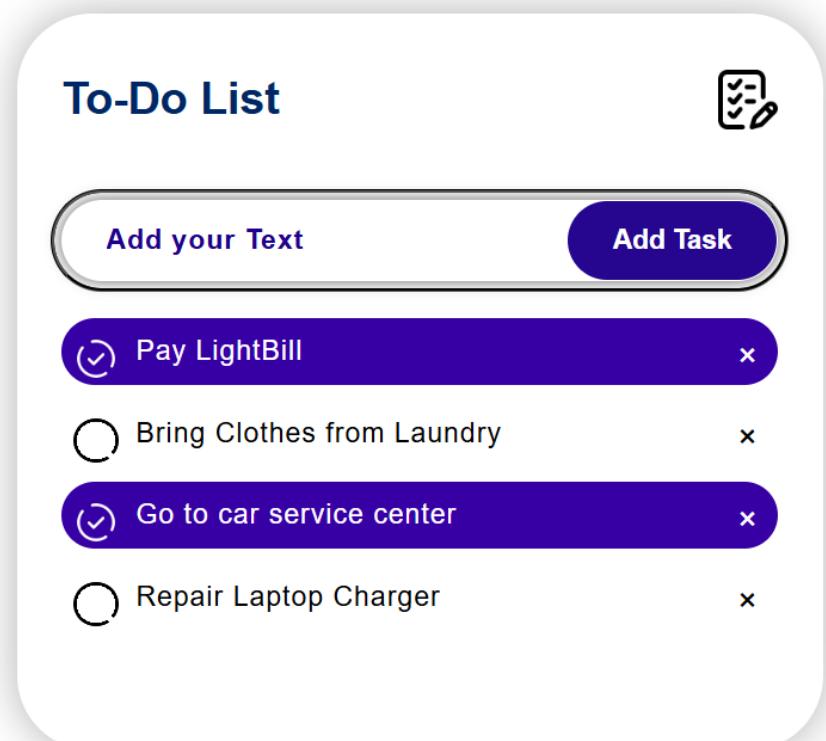
Task 3	
<b>Task Description</b>	The objective of creating a basic To-Do List with HTML, CSS, and JavaScript is to provide a simple and interactive way for users to manage and organize their tasks.
<b>Trigger</b>	To-Do List Application Display
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. User Adds a New Task</li> <li>2. User Deletes a Task</li> <li>3. User marks task as completed</li> <li>4. User Views All Tasks</li> </ol>
<b>Post Condition</b>	<ol style="list-style-type: none"> <li>1. The To-Do List application accurately reflects the user's input, displaying tasks in the order they were added.</li> <li>2. Tasks can be deleted, and the list updates dynamically to remove the deleted task.</li> <li>3. The application provides a simple, user-friendly interface for task management.</li> </ol>
<b>Output Screenshots</b>	

Figure 3.1

**Task 4**

<b>Task 4</b>	
<b>Task Description</b>	The objective of creating a basic Connect 4 game using HTML, CSS, and JavaScript is to implement a simple and interactive two-player game where players take turns dropping colored discs into a vertically suspended grid.
<b>Trigger</b>	Opening the Connect 4 Game Application
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. User Starts a New Game</li> <li>2. Players Take Turns</li> <li>3. Checking for a Win</li> <li>4. Game Ends in a Draw</li> <li>5. User Starts a New Game</li> </ol>
<b>Post Condition</b>	<ol style="list-style-type: none"> <li>1. The Connect 4 game interface correctly displays the grid, allows players to take turns, and updates the grid with each move.</li> <li>2. The game accurately detects a win or draw condition and announces the result.</li> <li>3. Players can start a new game at any time, and the grid resets properly.</li> </ol>
<b>Output Screenshots</b>	

Figure 4.1

## CHAPTER – 4 LEARNING EXPERIENCES

### 4.1 Knowledge Acquired/Skills Learnt

- During our web development internship, We gained substantial knowledge and skills in HTML, CSS, and JavaScript. We mastered HTML5 for creating semantic and accessible markup, and developed proficiency in CSS for styling, including Flex -box, Grid, and responsive design techniques. I honed my JavaScript skills, focusing on core concepts, DOM manipulation, event handling, and asynchronous programming. Our practical experience includes developing a simple calculator with real-time input

validation, an Website Clone website, a dynamic to-do list with local storage, and an interactive 4-connect game with complex game logic and a visually appealing interface.

### 4.2 Industry Practices Adapted

During my internship, I adopted several industry-standard practices to enhance productivity and maintain professionalism:

**4.2.1 Taking Screenshots at Each Step:** During my internship, I meticulously documented each step of task execution through screenshots. This method proved invaluable for tracking progress, swiftly resolving issues.

**4.2.2 Coding Ethics:** I upheld coding ethics by ensuring that my code was crafted with clarity, readability, and maintainability in mind. I prioritized respecting intellectual property rights and adhered to stringent standards for security and privacy, ensuring that the outcomes were both professional and dependable.

**4.2.3 Continuous Testing:** Regularly testing website modules was essential. Through systematic unit and integration tests, I proactively detected and

resolved bugs early in the development cycle. This approach significantly enhanced the stability and resilience of the website, ensuring a smoother user experience and greater reliability overall.

**4.2.4 Code Review:** Participating in code reviews provided valuable feedback and fostered a collaborative environment. This practice improved code quality and facilitated knowledge sharing, enhancing my coding skills and understanding.

## CHAPTER-5 CONCLUSION

From building a basic calculator to a 4-connect game, we learned the fundamentals of web development using HTML, CSS and JAVASCRIPT . This equips met to create interactive web applications with user-friendly interfaces, clear functionalities, and responsiveness across devices. these skills are valuable in various industries for crafting engaging web interfaces, building business-specific applications, and enhancing user experiences.

For deployment, GitHub pages offers a free and user-friendly option. it integrates directly with your GitHub repositories, making deployment a breeze. for complex applications requiring more resources or customization, consider cloud platforms like google cloud platform or amazon web services . We can use Render.com and Vercel.com or Netlify.com which provides best free Web hosting.

## References

HTML:

<https://developer.mozilla.org/en-US/docs/Web/HTML>

<https://youtu.be/kUMe1FH4CHE?si=4M9MHiIJ8CV63e3k>

CSS:

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

<https://developer.mozilla.org/en-US/docs/Web/CSS>

JAVASCRIPT:

<https://developer.mozilla.org/en-US/docs/Learn/JavaScript>

<https://youtu.be/tVzUXW6siu0?si=HBJL1yXSDYapywdH>