

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

(An Autonomous Institute, Affiliated to VTU, Belagavi BANGALORE – 560056)



## Internship Report

On

### “FRONTEND WEB DEVELOPMENT”

*Submitted in partial fulfilment of the requirement for the award of the Degree of*

### BACHELOR OF ENGINEERING

IN

### COMPUTER SCIENCE AND ENGINEERING

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Duration	4 weeks

*Under the Guidance of*

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
2023 – 2024

# Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

(An Autonomous Institute, Affiliated to VTU, Belagavi BANGALORE – 560056)



## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING CERTIFICATE

This is to certify that the internship project entitled “ **TEMPERATURE CONVERTER**” is a bonafide work carried out by **LIKHITH T USN: 1DA21CS076** in the partial fulfillment for the award of Degree in Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belgaum during the year 2023-24. It is certified that all corrections/suggestions indicated for the internal assessment have been incorporated in the report deposited in the departmental library. This internship report has been approved as it satisfies the academic requirements in the respect of internship prescribed for Bachelor of Engineering Degree.

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INTERNAL GUIDE  
**Mrs. LAVANYA SANTHOSH**  
Assistant Professor, Dept. of CSE  
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### Viva-Voce Examination

Name of the Examiners

Signature with Date

1.



INTERN ID  
MV1023FWDB2020

# CERTIFICATE OF COMPLETION

THIS CERTIFICATE IS AWARDED TO

## Likhith T

(1DA21CS076)

pursuing Bachelor of Engineering at **Dr. Ambedkar Institute Of Technology**, has  
successfully completed the offline internship on

**"Frontend Web Development"** at

**Mevi Technologies LLP**, Bangalore, from **October 12th to November 12th, 2023.**



REGISTERED

*Vedavathi P*

DIRECTOR  
MEVI TECHNOLOGIES LLP



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The satisfaction that accompanies to this seminar would be incomplete without the mention of the people who made it possible, without whose constant guidance and encouragement would have made our efforts go in vain.

I consider myself privileged to express my gratitude and respect towards all those who guided me through the technical seminar, **LIKHITH T.**

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**LIKHITH T**

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# ABSTRACT

This internship report encapsulates the immersive experience gained during a comprehensive web development internship. The report provides a detailed overview of the knowledge, skills, and insights acquired while working on various projects and tasks related to web development.

The internship primarily focused on honing skills in front-end development technologies. It involved hands-on experience in HTML, CSS, JavaScript, and popular frameworks/libraries such as React.js and Angular.js for creating dynamic and responsive user interfaces.

Throughout the internship, practical applications of web development concepts were explored, including version control with Git, responsive web design principles, API integration, and testing methodologies.

The report also discusses challenges faced, lessons learned, and the overall impact of the internship on personal and professional growth. It concludes with reflections on the significance of continuous learning and adaptation in the rapidly evolving field of web development.

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## CHAPTER 1

# INTRODUCTION

### ABOUT THE COMPANY:

Mevi Technology Company stands as a beacon of technological innovation in today's dynamic business environment. This comprehensive report provides an in-depth analysis and insight into the core facets of Mevi Technology, shedding light on its origins, key technological advancements, corporate culture, and future prospects.

Mevi Technology Company, established in the year of 2022 in Tumakuru has emerged as a trailblazer in the realm of IT sector particularly for students who are struggling to emerge to the Technology . Headquartered in Tumkur Karnataka, the company has rapidly grown from its humble beginnings to become a formidable player in the global technology landscape.

An analysis of Mevi Technology's market presence and global impact is crucial for understanding the company's position in the competitive landscape. This section provides an overview of Mevi's market share, strategic partnerships, and the geographical regions where it has made significant inroads.



Company staffs

# INTRODUCTION TO WEB DEVELOPMENT

## 1.1 Introduction to web development

Web development refers to the creating, building and maintaining of websites. It includes aspects such as web design, web programming, and database management. Web development is the creation of an application that works over the internet, i.e. website. Web development is closely related to the job of designing the features and functionality of apps.

The word Web Development is made up of two words, that is:

- Web: It refers to websites, web pages or anything that works over the internet
- Development: It refers to building the application from scratch

Web development encompasses various aspects such as front-end development, back-end development, and full-stack development.

## 1.2 Types of web development

1. Front-End development
2. Back-End development
3. Full-stack development



### **1.2.1 Introduction to front-end development**

The part of a website where the user interacts directly is termed as front-end.

Front-end development refers to the process of creating the visual and interactive elements of a website or application that users interact with directly.

Front-end development includes using languages such as HTML for content structure, CSS for styling and JavaScript for interactivity of a website.

### **1.2.2 Introduction to back-end development**

Back-end refers to the server side of web development.

Back-end development involves working on the server-side operations, databases and server logic to ensure the website functions correctly.

Back-end development utilizes programming languages like Python, PHP, Ruby, Node.js etc.

### **1.2.3 Introduction to full-stack development**

Full-stack development combines both front-end and back-end development skills.

Full-stack development enables the developers to work on both client and server sides of a web application

## Chapter 2




### REQUIREMENT SPECIFICATION

Various tools and technology used for front-end development are listed below:

- HTML (Hypertext and Mark-up language)
- CSS (Cascading Style Sheets)
- JavaScript



### What's the Difference?

	<b>HTML</b> Hypertext Markup Language	<b>Create the structure</b> <ul style="list-style-type: none"><li>• Controls the layout of the content</li><li>• Provides structure for the web page design</li><li>• The fundamental building block of any web page</li></ul>
	<b>CSS</b> Cascading Style Sheet	<b>Stylize the website</b> <ul style="list-style-type: none"><li>• Applies style to the web page elements</li><li>• Targets various screen sizes to make web pages responsive</li><li>• The fundamental building block of any web page</li></ul>
	<b>Javascript</b>	<b>Increase interactivity</b> <ul style="list-style-type: none"><li>• Adds interactivity to a web page</li><li>• Handles complex functions and features</li><li>• Programmatic code which enhances functionality</li></ul>

## 2.1 HARDWARE REQUIREMENTS:

The section of hardware configuration is an important task related to the software development. Insufficient random-access memory may affect adversely on the speed and efficiency of the entire system. The process should be powerful to handle the entire operations. The hard disk should have sufficient capacity to store the file and application.

- Process : Pentium IV and above
- Processor speed : 2.4Hz onwards
- System memory : 2 GB minimum 4 GB recommended
- Hard disk : 80Gb
- RAM : 2 MB(minimum)

## 2.2 SOFTWARE REQUIREMENTS:

A major element in building a system is the section of compatible software since the software in the market is experiencing in geometric Progression. Selected software should be acceptable by the firm and one user as well as it should be feasible for the system.

- Operating System : Windows 7 and above
- Working Environment : Google Chrome and Visual Studio Code



## Chapter 3

# DESCRIPTION

## HTML

HTML is the combination of hypertext and mark-up language.

HTML (Hypertext Markup Language) is a fundamental language used in front- end web development. It provides the structure and content of web pages.

Here's an overview of HTML's role in front-end development

### 1. Structure:

HTML defines the structure of web pages using elements like `<html>`, `<head>`, `<body>`, `<header>`, `<footer>`, `<nav>`, `<section>`, `<article>`, etc. These elements organize content semantically, allowing browsers and search engines to understand the hierarchy and purpose of different parts of the page.

### 2. Content creation:

HTML allows you to create content by using various tags. For instance, `<p>` is used for paragraphs, `<h1>`-`<h6>` for headings, `<ul>` and `<ol>` for lists, `<a>` for links, `<img>` for images, `<table>` for tabular data etc.

### 3. Semantic markup:

HTML5 introduced semantic elements that help define the meaning of content more precisely. Using elements like `<header>`, `<nav>`, `<section>`, and `<article>` provides clearer semantics for both developers and search engines, enhancing accessibility and SEO.

## 4. Forms:

HTML includes elements for creating interactive forms, such as `<form>`, `<input>`, `<textarea>`, `<select>`, `<button>`, etc., allowing users to input data and interact with websites.

## 5. Multimedia integration:

HTML includes elements for creating interactive forms, such as `<form>`, `<input>`, `<textarea>`, `<select>`, `<button>`, etc., allowing users to input data and interact with websites.

## 6. Accessibility:

Properly structured HTML helps in creating accessible websites by using elements and attributes that assist screen readers and other assistive technologies.

Example:

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>
<h1>This is a Heading</h>
<p>This is a Paragraph</p>
</body>
</html>
```

Output:

This is a Heading This is a Paragraph

## **CSS (cascading style sheet)**

CSS (cascading style sheet) is a fundamental technology used in front-end development. Its responsible for controlling the presentation, layout, and design of web pages.

Here are key aspects of CSS in front-end development:

### **1.Styling and Design:**

- Selectors: CSS selectors help target HTML elements to apply style.
- Properties and values: control various styling attributes such as color, font, size, spacing, borders, background and more.
- Responsive design: use media queries to create responsive layouts that adapt to different screen sizes and devices’

### **2.Layout:**

- Box model: understanding how elements rendered in terms of their content, padding, borders, and margins.
- Flexbox and grid: powerful layout models layout that offer more control and flexibility in arranging elements within the container.

### **3.Compatibility and Cross-Border Support:**

- Ensuring CSS code works consistently across different browsers and versions.
- Using vendor prefixes for specific properties to ensure compatibility with older browser.

#### 4. Animations and Transitions:

- Utilizing CSS transitions and animations to create engaging and interactive elements without JavaScript.

#### 5. Preprocessors:

- Tools like Sass, LESS, or stylus offer features like variables, nesting, and functions, enhancing the capability of CSS.

#### 6. Frameworks and Libraries:

- Using CSS frameworks like bootstrap, foundation, or tailwind CSS to expedite development by providing pre-built components and style.

#### 7. Optimization and Performance:

- Minifying and composing CSS files to reduce loading time.
- Employing techniques like CSS Sprites or icon fonts to optimize rendering performance.

#### 8. Maintainability and Scalability:

- Writing modular, reusable CSS code to maintain consistency and scalability across large projects.
- Employing methodologies like BEM (bold element modifier) or SMACSS (scalable and modular architecture for CSS) for better organization and structure

## **JAVASCRIPT**

JavaScript is a programming language commonly used in front-end web development to create interactive and dynamic user experiences within web browsers. It's one of the three core technologies of the web along with HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets).

JavaScript's role in front-end development:

### 1. Enhancing user interactivity:

JavaScript allows developers to create interactive elements on web pages. This includes things like form validation, pop-up alerts, sliders, accordions, and other dynamic content that responds to user actions.

### 2. Manipulating the DOM:

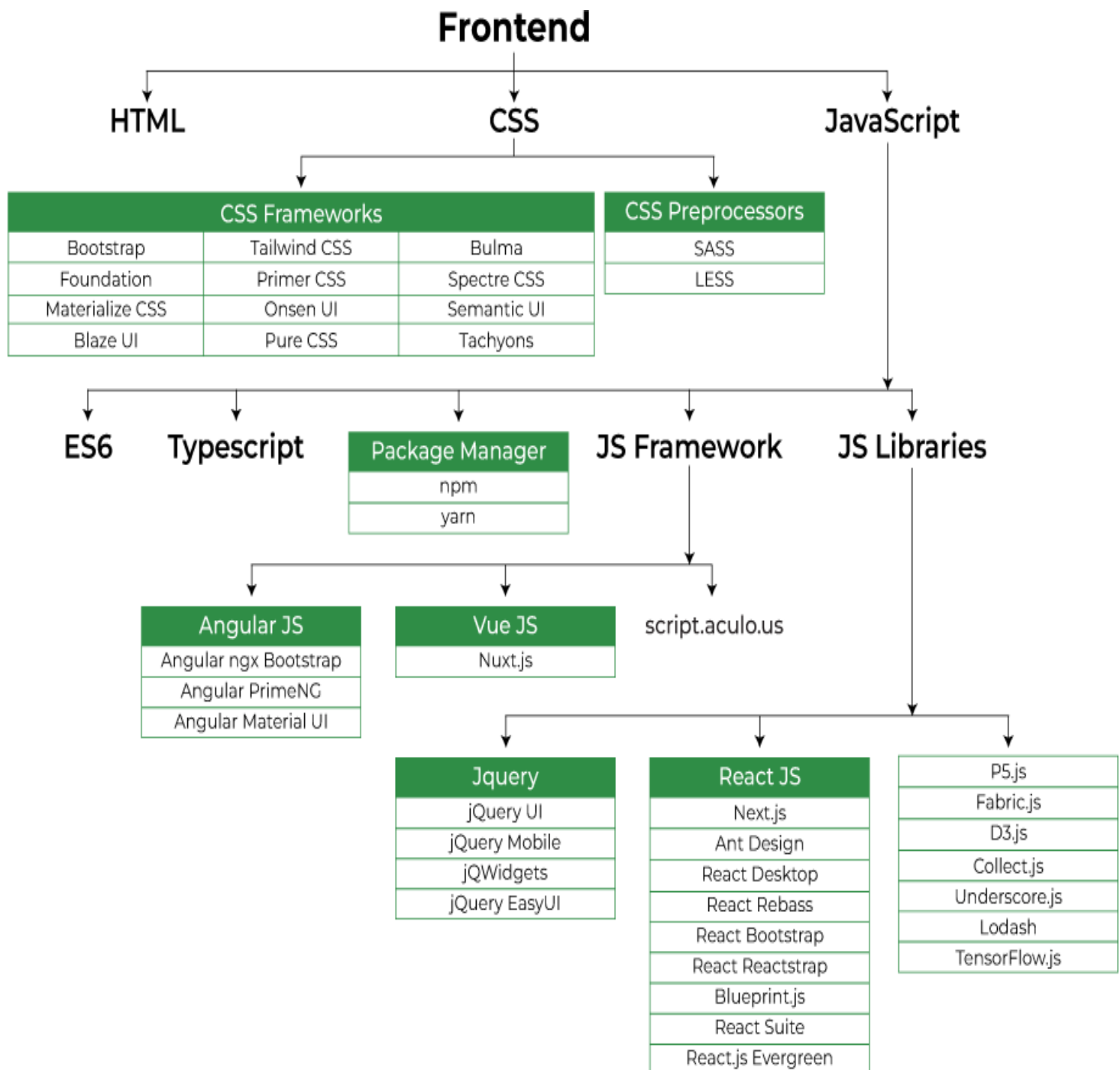
The Document Object Model (DOM) represents the structure of an HTML document. JavaScript provides the ability to manipulate this DOM, allowing developers to dynamically change the content, structure, and style of web pages based on user interactions or other events.

### 3. Handling Asynchronous Events:

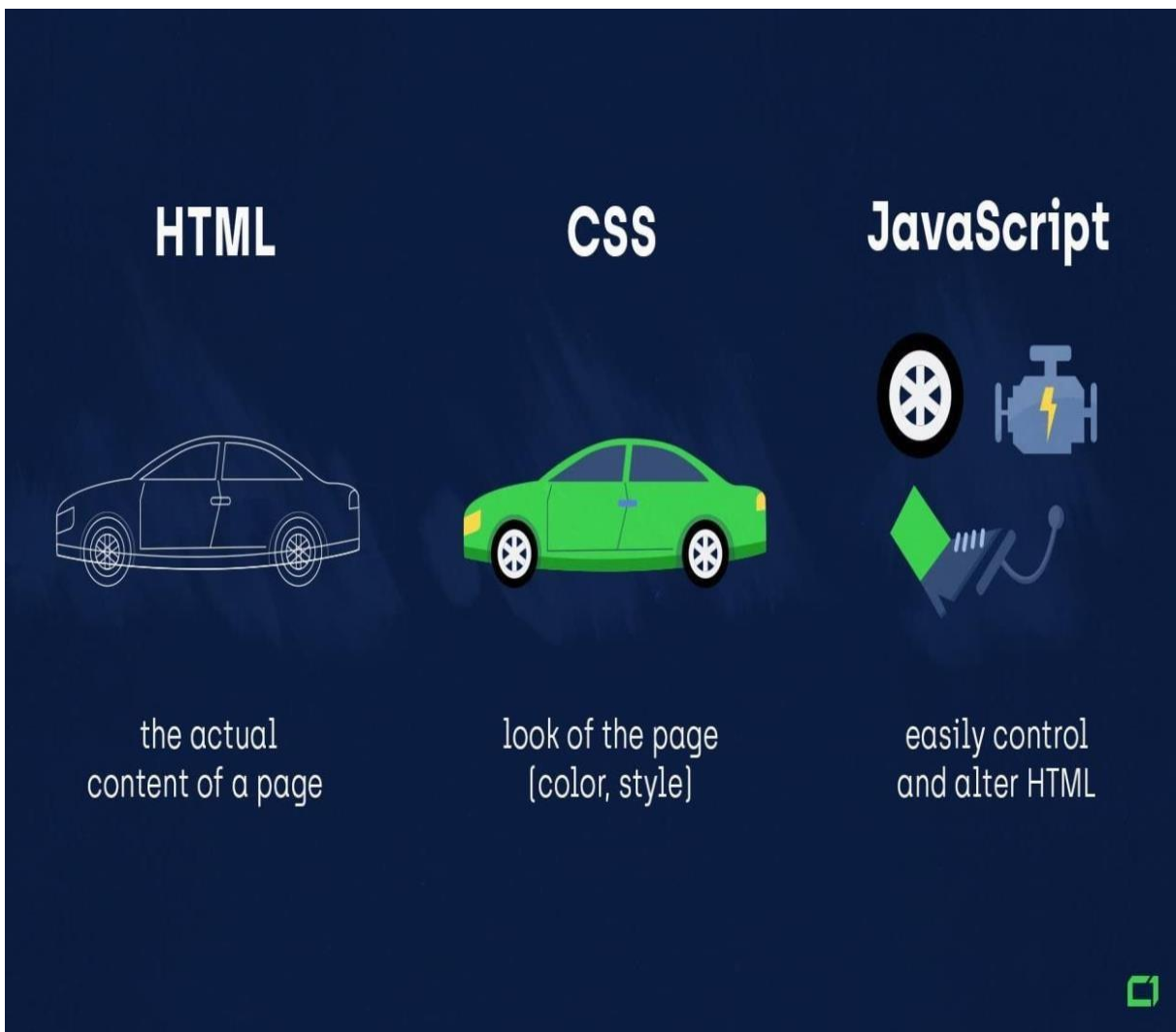
JavaScript is particularly useful for handling asynchronous tasks, such as fetching data from servers without having to reload the entire page. This is commonly done using AJAX (Asynchronous JavaScript and XML) or more modern techniques like the Fetch API or Axios to interact with APIs and update the page content dynamically.



## Front-end development road map



The below picture shows difference between HTML, CSS, and JavaScript



## Chapter 4

### INTERNSHIP PROJECT

#### 4.1 Introduction:

The Temperature Converter HTML/CSS project is a simple yet practical web application that allows users to convert temperatures between different units, such as Celsius, Fahrenheit, and Kelvin. This project serves as a handy tool for quickly converting temperatures without the need for manual calculations.

Features:

1. **User-friendly Interface:** The project boasts an intuitive and user-friendly interface, making it easy for users to navigate and input temperature values.
2. **Conversion Options:** Users can select from various temperature units including Celsius, Fahrenheit, and Kelvin. The converter dynamically updates the converted values as users input different temperatures.
3. **Real-time Conversion:** The conversion process occurs in real-time, providing instant feedback to users as they input temperature values or switch between units.
4. **Responsive Design:** The project is designed with responsiveness in mind, ensuring compatibility across different devices and screen sizes, including desktops, laptops, tablets, and smartphones.
5. **Styling with CSS:** The project utilizes Cascading Style Sheets (CSS) to enhance the visual appeal of the temperature converter, offering a polished and modern look.

Overall, the Temperature Converter HTML/CSS project is a practical and educational endeavor that combines simplicity with functionality, making it a valuable asset for both developers and end-users alike.

#### Background:

The background of the Temperature Converter HTML/CSS project can stem from various motivations or needs:

1. **Educational Purposes:** The project might have been initiated as a learning exercise for individuals seeking to enhance their skills in web development. Creating a temperature converter provides an excellent opportunity to practice HTML, CSS, and potentially JavaScript, as well as to understand the concepts behind temperature conversions.
2. **Practical Utility:** The need for a simple and accessible tool for temperature conversion could have driven the development of this project. Such a converter can be useful for students, professionals, or anyone needing to quickly convert temperatures between different units for various purposes, such as academic studies, scientific research, or everyday tasks.

3. **Portfolio Building:** For aspiring web developers or designers, building projects like the Temperature Converter can serve as valuable additions to their portfolios. It demonstrates their proficiency in frontend technologies like HTML and CSS, as well as their ability to create functional and visually appealing web applications.

4. **Community Contribution:** The project might have been developed with the intention of contributing to the open-source community. By making the code publicly available, developers can share their work with others, encourage collaboration, and allow for further improvement or customization by the community.

5. **Personal Interest or Challenge:** Sometimes, developers undertake projects simply out of personal interest or as a challenge to themselves. Creating a temperature converter could have been a fun and engaging endeavor to explore and experiment with frontend web development techniques.

Overall, the background of the Temperature Converter HTML/CSS project likely involves a combination of educational, practical, and personal motivations, driven by the desire to create a useful and visually appealing tool for temperature conversion.

## 4.2Objective:

The objective of the Temperature Converter HTML/CSS project can be summarized as follows:

1. **Provide Functionality:** The primary goal is to create a web-based tool that allows users to convert temperatures between different units (e.g., Celsius, Fahrenheit, Kelvin) easily and accurately. The project aims to offer a seamless and intuitive user experience, enabling users to input temperatures and obtain the converted values effortlessly.

2. **Enhance User Experience:** The project seeks to provide a user-friendly interface that simplifies the temperature conversion process. This involves designing an intuitive layout, implementing real-time conversion updates, and ensuring responsiveness across various devices and screen sizes. By prioritizing user experience, the project aims to make temperature conversion accessible and efficient for users.

3. **Demonstrate Technical Skills:** For developers involved in creating the project, the objective may include showcasing their proficiency in frontend web development technologies such as HTML and CSS. Through the implementation of clean and well-structured code, adherence to best practices, and attention to detail in design and functionality, developers aim to demonstrate their technical abilities and expertise.

4. **Educational Purpose:** The project may also serve as an educational resource for individuals learning web development. By providing a practical example of building a web application from scratch, complete with HTML structure, CSS styling, and potentially basic JavaScript functionality, the objective is to help learners understand key concepts and techniques in frontend development.

5. **Encourage Collaboration and Contribution:** Depending on the project's nature, another objective might be to foster collaboration and contribution within the developer community. By making the project open-source and inviting others to review, contribute enhancements, or report issues, the objective is to create a collaborative environment where developers can learn from each other and collectively improve the project.

## 4.3Project Structure:

The project structure of the Temperature Converter HTML/CSS project typically consists of the following components:

1. **HTML File:** This file defines the structure and content of the web page. It includes elements such as input fields for entering temperature values, dropdown menus for selecting temperature units, buttons for initiating conversions, and areas to display the converted results. The HTML file serves as the backbone of the project, organizing the various elements that make up the user interface.
2. **CSS File:** The CSS file contains styling rules and declarations that define the visual appearance of the temperature converter. This includes properties such as colors, fonts, margins, paddings, borders, and layout arrangements. CSS is used to enhance the aesthetics of the project, ensuring a visually appealing and cohesive design that aligns with the project's objectives and target audience.
3. **Images :** If the project incorporates any graphical elements such as icons, logos, or background images, these would be stored in a separate directory within the project structure. Images can be used to enhance the visual appeal of the temperature converter and contribute to the overall user experience.
4. **JavaScript :** While the primary functionality of the temperature converter can be achieved using HTML and CSS alone, JavaScript may be employed to add dynamic behavior or additional features to the project. For example, JavaScript can be used to perform real-time temperature conversions as users input values, validate user inputs, handle events such as button clicks or dropdown selections, or implement advanced functionalities like unit conversion formulas.

Overall, the project structure of the Temperature Converter HTML/CSS project is organized and well-defined, with separate files and directories for HTML, CSS, JavaScript, images, documentation, and potentially other assets, facilitating easy maintenance, collaboration, and further development.

## SNAPSHOTS

Temperature Converter

Celsius:

Fahrenheit:

Kelvin:

## Temperature Converter

Celsius:

Fahrenheit:

Kelvin:

## Temperature Converter

Celsius:

Fahrenheit:

Kelvin:



## CONCLUSION

In conclusion, front-end web development stands as a vital pillar in the ever-evolving landscape of digital experiences. Through meticulous design implementation and the utilization of HTML, CSS, and JavaScript, front-end developers craft immersive and user-centric interfaces that captivate and engage audiences across diverse devices and platforms. The amalgamation of responsive design principles, emerging technologies like PWAs and SPAs, and a relentless focus on performance optimization ensures that front-end developers deliver seamless and intuitive experiences that transcend traditional web boundaries.

Moreover, the continuous evolution of front-end frameworks and libraries empowers developers to innovate and iterate, pushing the boundaries of what's possible in web development. With a keen eye on accessibility and inclusivity, front-end developers strive to create experiences that are not only visually stunning but also usable by individuals of all abilities.

As the digital landscape continues to evolve, front-end developers must remain agile, adaptable, and proactive in embracing emerging trends and technologies. By fostering a culture of continuous learning and collaboration, front-end development will continue to shape the future of the web, enabling richer, more immersive, and more accessible experiences for users worldwide.

