

Project Report

of

WheelShare Carpooling Platform

submitted in partial fulfilment of the requirements for the award of the degree of

Bachelor of Technology(B.Tech)

in

Computer Engineering

by

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under the guidance of

Ms. SHILPI



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DECLARATION

I hereby declare that the project work entitled "**Wheel Share**" submitted to **J.C Bose University of Science and Technology, YMCA, Faridabad**, is a record of an original work done by us under the guidance of **Ms. Shilpi**, Professor in Computer Science and Engineering, J.C. Bose University of Science and Technology (YMCA), Faridabad.

This project is submitted in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Computer Engineering.

Suraj Shrivastava

(Name of student)

Nov 2023

CERTIFICATE

This is to certify that **Suraj Shrivastava (22001050026)** of J.C. BOSE UNIVERSITY OF SCIENCE AND TECHNOLOGY (JCBUST), YMCA has successfully completed the project work titled **Wheel Share** in partial fulfilment of the requirement for the completion of the UG course.

This project report is the record of authentic work carried out by them during the period from **Sep 2023** to **Nov 2023**. He had worked under my guidance.

Signature:

Mentor Name: Ms. Shilpi

CHAPTER 1 : INTRODUCTION

1.1 Introduction: Revolutionizing Commuting with Wheel Share

In an era characterized by rapid urbanization and escalating environmental concerns, the paradigm of traditional commuting is ripe for transformation. The "Wheel Share" project emerges as a beacon of innovation, aspiring to redefine the landscape of daily travel. This report encapsulates the journey and endeavors undertaken to develop a dynamic, user-centric platform designed to facilitate sustainable and cost-effective ride-sharing. As we delve into the intricacies of this initiative, the reader will gain insight into the objectives, methodologies, and aspirations that underpin "Wheel Share" — a digital venture poised to revolutionize the way communities engage with transportation.

1.11 Project Overview

"Wheel Share" is a web-based platform designed to facilitate seamless ride-sharing, providing users with an accessible and eco-friendly alternative to conventional transportation. This project aims to address challenges associated with increasing traffic congestion, rising fuel costs, and environmental concerns by fostering a community-driven approach to commuting.

1.12 Project Objectives

- **Promoting Sustainable Commuting Practices** : Encourage the adoption of eco-friendly transportation methods by fostering a culture of carpooling, thereby contributing to the reduction of carbon emissions and promoting environmental sustainability.
- **Optimizing Resource Utilization** : Reduce the number of vehicles on the road by maximizing the occupancy of cars, leading to a more efficient use of transportation resources and a decrease in traffic congestion.
- **Enhancing Community Connectivity** : Foster a sense of community by connecting individuals with similar commuting routes, encouraging social interaction, and shared responsibility.
- **Providing Cost-Effective Transportation Solutions** : Offer users a platform to save on transportation costs by sharing rides, promoting a more economical and sustainable approach to daily commuting.

1.2 Basic Terminology

This section explores the technologies which were used in this project. This section describes all the basic terminology used in the project report. These terms form the core of the project, before moving forward to project details, these terms are to be well understood.

1.11 Technologies used in project :

- **HTML (Hypertext Markup Language)** : HTML is the fundamental language used in web development to structure and organize content on a webpage. Employing a system of tags enclosed in angle brackets, HTML defines various elements like headings, paragraphs, images, links, and lists. This markup language establishes the skeleton of a webpage, dictating how information is hierarchically arranged and presented.
- **CSS (Cascading Style Sheets)** : CSS is a styling language crucial for enhancing the visual appeal of HTML elements. It operates by creating style rules that specify the presentation aspects of a webpage, such as colors, fonts, spacing, and layout. By providing a clear separation between content (HTML) and presentation (CSS), developers can efficiently design and maintain consistent and visually appealing web pages across different devices and screen sizes.
- **JavaScript** : JavaScript is a dynamic scripting language used for client-side web development. It adds interactivity to web pages by allowing developers to create dynamic content, handle events, and manipulate data. JavaScript is crucial for building responsive and engaging user interfaces, making it a fundamental component of modern web development.
- **Google Maps API** : Google Maps API is a toolkit provided by Google for developers to integrate interactive maps and location-based services into their applications. It offers features like mapping, geolocation, and directions, enhancing user experiences in various applications. Developers can leverage this API to create customized mapping solutions, making location-aware functionalities accessible and user-friendly.

CHAPTER 2 : DESCRIPTION AND METHODOLOGY

2.1 Project Description

Wheel Share, at its core, is a web-based platform designed to revolutionize commuting through sustainable ride-sharing. This section provides an in-depth description of the project, outlining its objectives, key features, and the overarching vision to redefine the way individuals approach daily travel. The primary objectives of Wheel Share include promoting sustainable commuting practices, optimizing resource utilization, enhancing community connectivity, and providing cost-effective transportation solutions. These objectives guide the development and implementation of features that align with the project's core mission. Each feature is strategically designed to contribute to the overarching goals of Wheel Share, fostering a user-friendly and environmentally conscious ride-sharing community.

2.2 Methodology

2.2.1 Approach

The project initiation involved a comprehensive requirement analysis phase, where the essential features and functionalities were identified based on user needs and market trends. This laid the foundation for the subsequent stages of development.

The system design phase focused on formulating a robust architecture, integrating user interfaces with secure backend functionalities. Special attention was given to creating a scalable and adaptable system that could evolve with user requirements.

2.2.2 Techniques Used

User Experience Design (UX/UI) :

User-centric design principles and intuitive UX/UI techniques were incorporated to enhance the overall user experience. This involved iterative testing and refinement to create a visually appealing and user-friendly interface.

Full-Stack Web Development :

The development employed modern web development technologies, including HTML5, CSS3, and JavaScript, for creating an interactive and responsive user interface. This approach ensures a seamless experience across different devices.

Implementation Strategy :

A flexible and agile development methodology was adopted, emphasizing iterative development cycles and continuous feedback loops. This approach allowed for rapid adjustments based on emerging user needs and technological advancements.

Phases of Project Execution

- **Planning and Requirement Analysis:** A flexible and agile development methodology was adopted, emphasizing iterative development cycles and continuous feedback loops. This approach allowed for rapid adjustments based on emerging user needs and technological advancements.
- **Development:** Set up the project, implement the frontend using HTML, CSS, and JavaScript, and integrate backend systems for user authentication, order processing, and data storage.
- **Testing:** Conduct comprehensive testing, including unit testing for components, cross-browser testing, and user workflow testing to ensure a bug-free and responsive website.
- **Deployment :** Choose a hosting platform, deploy the website, set up databases, and configure server settings. Implement secure payment gateways and ensure data transmission security.
- **Launch and Post-Launch Activities:** Execute the marketing strategy, launch the website, and gather user feedback for further improvements. Monitor performance, address any issues, and document the project for future maintenance.

CHAPTER 3 : HARDWARE AND SOFTWARE REQUIREMENTS

Hardware and software requirements of any project must be satisfied so that the virtual environment can be set up on any machine to run the project. So in this section, the software and the hardware requirements are discussed completely.

Hardware Requirements:

- **Processor (CPU):**
 - Dual-core processor (e.g., Intel Core i3 or equivalent)
- **Random Access Memory (RAM):**
 - 4 GB
- **Storage:**
 - Minimum 10 GB of available storage space
- **Graphics:**
 - Basic integrated graphics

Software Requirements:

- **Operating System:**
 - Compatible with Windows, macOS, and Linux
 - Browser compatibility with Chrome, Firefox, and Safari
- **Web Browser:**
 - Google Chrome (recommended)
 - Safari (for Apple devices)
- **Network:**
 - Stable internet connection with sufficient bandwidth

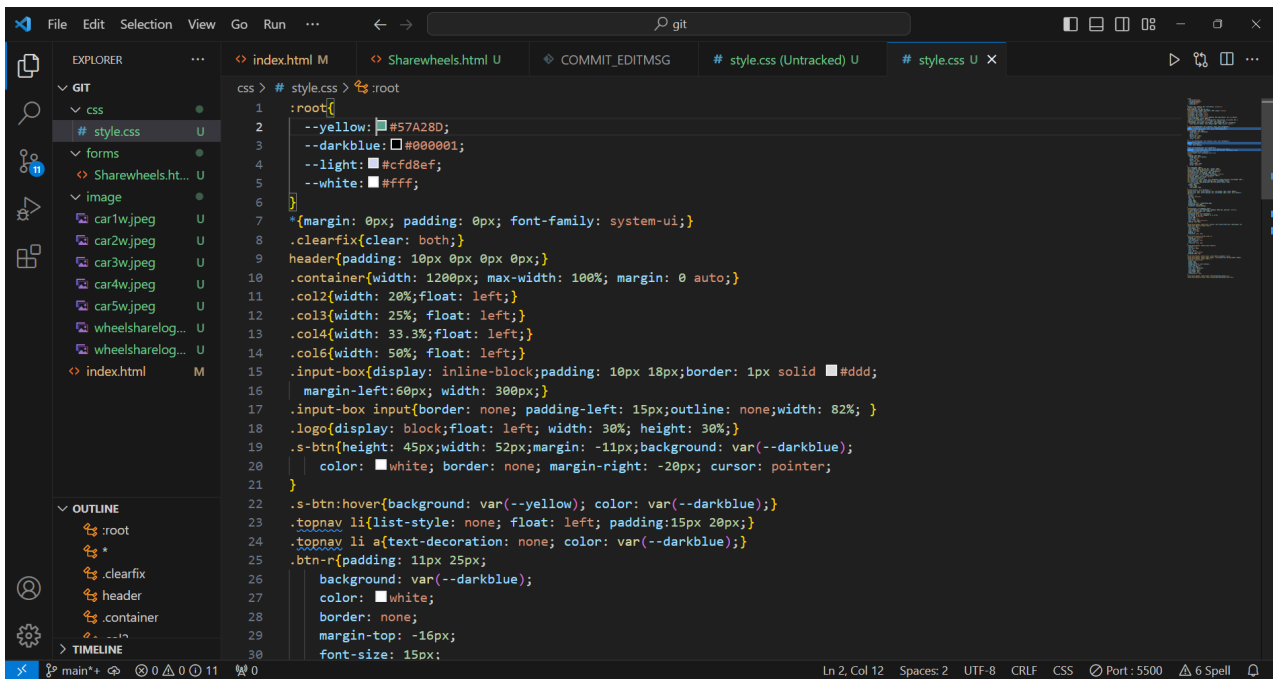
CHAPTER 4: RESULTS (SCREENSHOTS/ OUTPUT)

![Screenshot of VS Code editor showing the implementation of HTML for the WheelShare application. The Explorer panel on the left shows the file structure with folders for css, forms, image, and index.html. The Outline panel shows the HTML structure with head, title, link, and body. The main editor shows the index.html file with the following code: <pre>4 <title>WheelShare: We ride on wheels.</title>
5 <link rel=](image/wheelsharelogo2.png)

Implementation of HTML

![Screenshot of VS Code editor showing the implementation of HTML for the WheelShare application. The Explorer panel on the left shows the file structure with folders for css, forms, image, and index.html. The Outline panel shows the HTML structure with head, title, link, and body. The main editor shows the index.html file with the following code: <pre>140
141 <section class=](https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d447986.853145337!2d76
143 </section>
144
145 <footer class=)

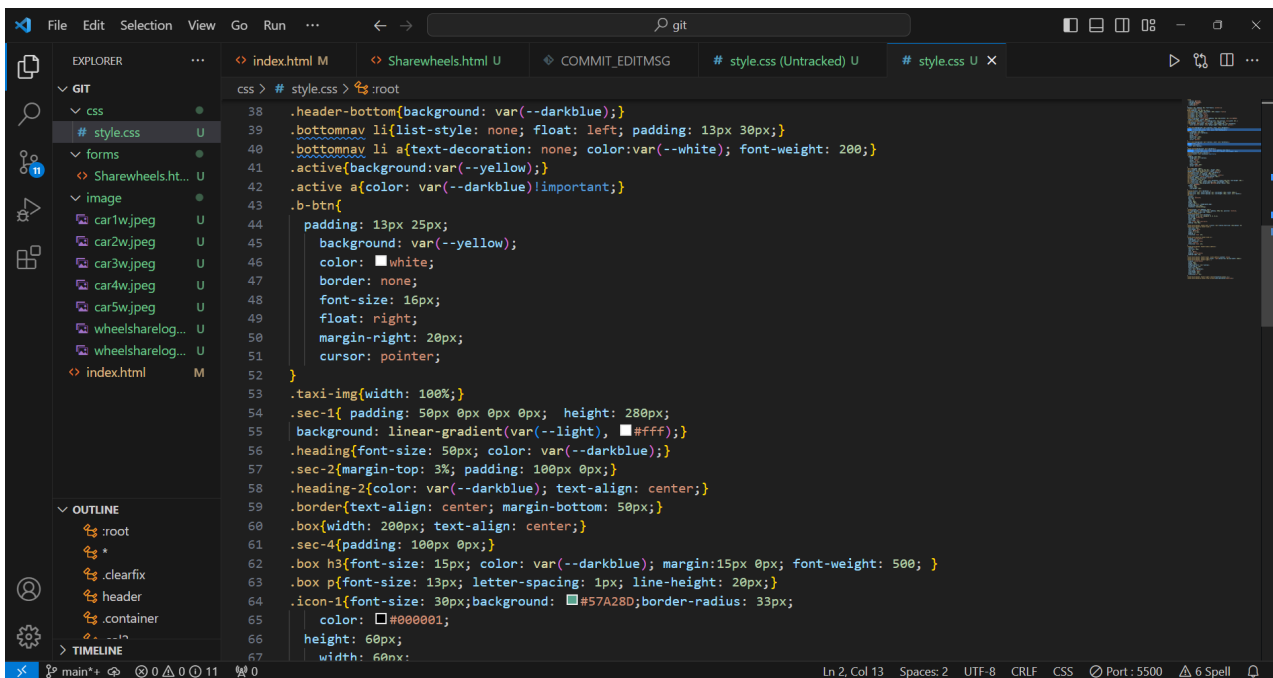
Implementation of Google API in HTML



The screenshot shows the Visual Studio Code editor with the 'style.css' file open. The code defines a root container with a flex layout, a header with a logo and navigation buttons, and a main content area with a grid of columns. The code is as follows:

```
css > # style.css > :root
1  :root{
2      --yellow: #57A28D;
3      --darkblue: #000001;
4      --light: #cfd8ef;
5      --white: #fff;
6  }
7  *{margin: 0px; padding: 0px; font-family: system-ui;}
8  .clearfix{clear: both;}
9  header{padding: 10px 0px 0px 0px;}
10 .container{width: 1200px; max-width: 100%; margin: 0 auto;}
11 .col2{width: 20%;float: left;}
12 .col3{width: 25%; float: left;}
13 .col4{width: 33.3%;float: left;}
14 .col6{width: 50%; float: left;}
15 .input-box{display: inline-block;padding: 10px 18px;border: 1px solid #ddd;
16     margin-left:60px; width: 300px;}
17 .input-box input{border: none; padding-left: 15px;outline: none;width: 82%; }
18 .logo{display: block;float: left; width: 30%; height: 30%;}
19 .s-btn{height: 45px;width: 52px;margin: -11px;background: var(--darkblue);
20     color: #white; border: none; margin-right: -20px; cursor: pointer;
21 }
22 .s-btn:hover{background: var(--yellow); color: var(--darkblue);}
23 .topnav li{list-style: none; float: left; padding:15px 20px;}
24 .topnav li a{text-decoration: none; color: var(--darkblue);}
25 .btn-r{padding: 11px 25px;
26     background: var(--darkblue);
27     color: #white;
28     border: none;
29     margin-top: -16px;
30     font-size: 15px;
```

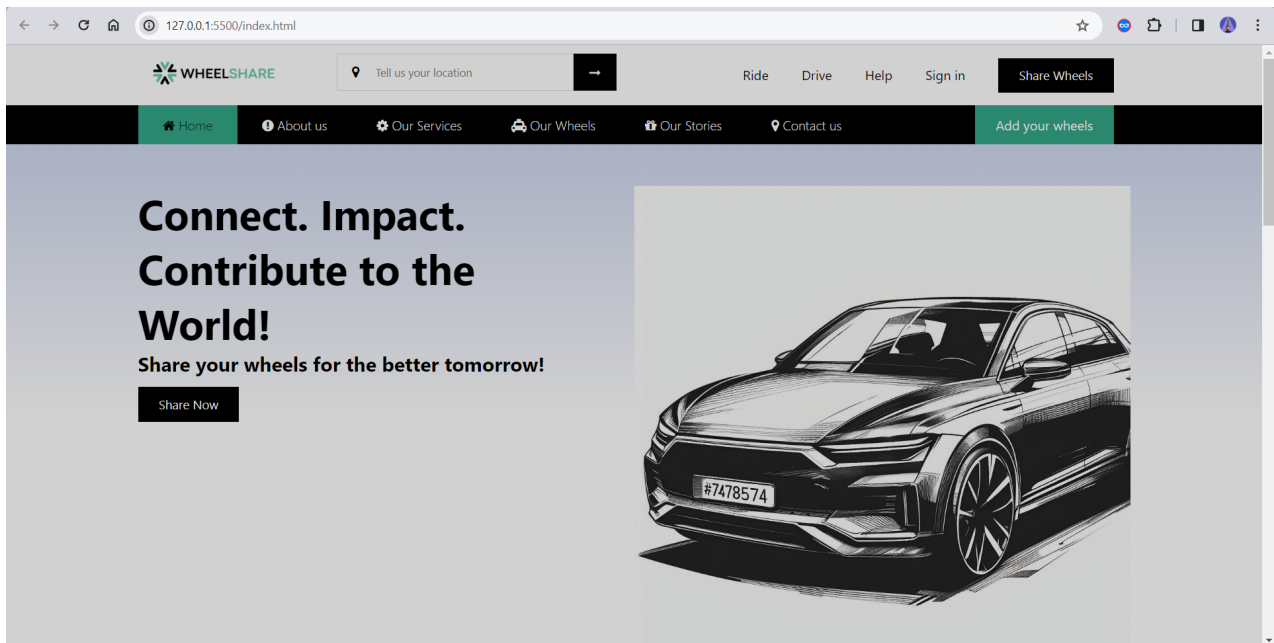
Implementation of CSS



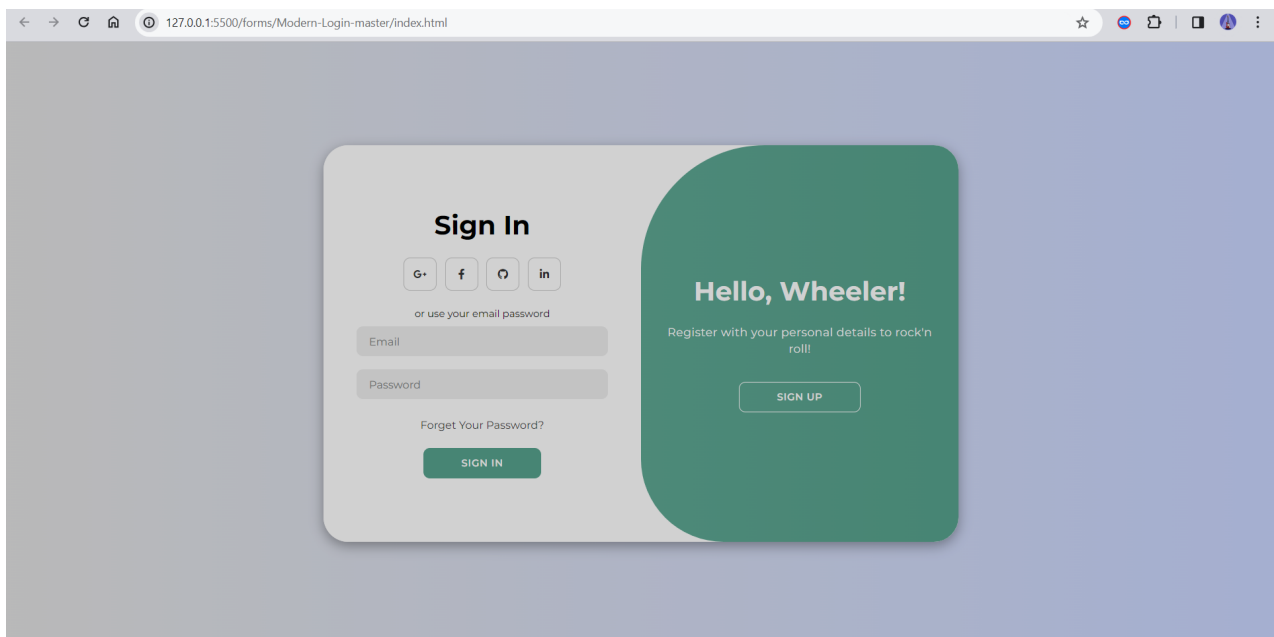
The screenshot shows the Visual Studio Code editor with the 'style.css' file open. The code continues from the previous screenshot, defining styles for the main content area, including a grid of columns, a section with a heading and text, and a footer. The code is as follows:

```
css > # style.css > :root
38 .header-bottom{background: var(--darkblue);}
39 .bottomnav li{list-style: none; float: left; padding: 13px 30px;}
40 .bottomnav li a{text-decoration: none; color:var(--white); font-weight: 200;}
41 .active{background:var(--yellow);}
42 .active a{color: var(--darkblue)!important;}
43 .b-btn{
44     padding: 13px 25px;
45     background: var(--yellow);
46     color: #white;
47     border: none;
48     font-size: 16px;
49     float: right;
50     margin-right: 20px;
51     cursor: pointer;
52 }
53 .taxi-img{width: 100%;}
54 .sec-1{ padding: 50px 0px 0px 0px; height: 280px;
55     background: linear-gradient(var(--light), #fff);}
56 .heading{font-size: 50px; color: var(--darkblue);}
57 .sec-2{margin-top: 3%; padding: 100px 0px;}
58 .heading-2{color: var(--darkblue); text-align: center;}
59 .border{text-align: center; margin-bottom: 50px;}
60 .box{width: 200px; text-align: center;}
61 .sec-4{padding: 100px 0px;}
62 .box h3{font-size: 15px; color: var(--darkblue); margin:15px 0px; font-weight: 500; }
63 .box p{font-size: 13px; letter-spacing: 1px; line-height: 20px;}
64 .icon-1{font-size: 30px;background: #57A28D;border-radius: 33px;
65     color: #000001;
66     height: 60px;
67     width: 60px;
```

Implementation of CSS



Final Home Page of Website



Sign in page

CHAPTER 5 : CONCLUSION

In conclusion, the "Wheel Share" project represents a transformative approach to sustainable commuting. Through robust planning, agile development, and a commitment to user-centric design, we've crafted a platform that not only meets transportation needs but also fosters community connectivity and eco-friendly practices.

The journey has been marked by collaboration, innovation, and the resilience of the project team. As we look ahead, the scalable and adaptable nature of "Wheel Share" positions it as a dynamic solution ready to evolve with user needs and societal shifts. This conclusion is not an endpoint but a launchpad for a future where sustainable transportation is accessible to all. I am also thankful to my mentor and supervisor for their efforts in the learning process.

In summary, "Wheel Share" represents the convergence of technology, community, and sustainability, offering a glimpse into a more connected and eco-conscious tomorrow.

BRIEF PROFILE OF STUDENT

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