A
Mini Project Report On

TOTO: Auto Rickshaw Booking App

Submitted in the Second Year Even Semester IV for the Subject Internet Programming – SE IT, Division - B

from

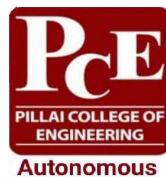INFORMATION TECHNOLOGY DEPARTMENT

By

Janhavi Soni : 451

Kinnari Vaghela : 456

Pronit Ghosh : 467

Under the guidance of our Subject Faculty: **Prof. Anjali Nair**

DEPARTMENT OF INFORMATION TECHNOLOGY ENGINEERING (UG – Sem IV, SE IT Division B)
PILLAI COLLEGE OF ENGINEERING
NEW PANVEL – 410 206
UNIVERSITY OF MUMBAI
Academic Year 2023 –2024

Pillai College of Engineering
New Panvel – 410 206

MINI PROJECT APPROVAL CERTIFICATE

This is to certify that the Mini Project work entitled **"Post your Mini Project Title here"**, have been successfully completed by the following student:

Name	Roll No.
Janhavi Soni	451
Kinnari Vaghela	456
Pronit Ghosh	467

in the Second Year Internet Programming Subject in the Even Semester IV from the Department of Information Technology, Pillai College of Engineering, New Panvel – 410 206 during the Academic Year 2023 – 2024.

_____   _____

Head of Department   **Subject Faculty**

Dr. Satishkumar Verma   **Prof. Anjali Sureshkumar Nair**

Date:

Place:

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i) Uber Auto: https://www.uber.com/in/en/ride/uber-auto/

ii) Tukxi: https://www.tukxi.in/

iii) Ola: https://www.olacabs.com/

Abstract:

With the rise of mobile technology, our daily routines have changed, especially how we get around, like using transportation. In bustling cities, urban travelers need a reliable way to book auto rickshaws quickly. That's where "TOTO: An Auto Rickshaw Booking Platform" comes in. It's designed to make booking auto rickshaws easy and efficient for city folks.

By prioritizing user satisfaction and safety, TOTO aims to tackle the challenges commonly associated with conventional auto rickshaw booking services. Through its intuitive design and comprehensive features, TOTO not only simplifies the booking process but also endeavors to elevate the overall commuting experience for its users.

In essence, this abstract provides a succinct overview of TOTO's core objectives, highlighting its functionality and the underlying technological framework. As a pioneering auto rickshaw booking platform, TOTO stands poised to redefine urban transportation, offering a seamless blend of convenience, reliability, and safety to commuters navigating through the vibrant streets of modern cities.

Chapter I – Introduction

Toto is an innovative web-based platform designed to facilitate the booking of auto rickshaws conveniently. In an era where digital solutions are transforming traditional services, Toto aims to streamline the process of booking auto rickshaws, making it more accessible and efficient for users. This platform leverages the power of the internet to provide a user-friendly interface for individuals seeking transportation via auto rickshaws.

Toto offers an alternative to the conventional method of hailing auto rickshaws on the streets or making phone calls to local drivers. By bringing the booking process online, Toto enhances convenience for users by allowing them to book rides from the comfort of their homes or workplaces, using their computers or mobile devices.

Through Toto, users can access a range of features including:

User-Friendly Interface: The website boasts an intuitive interface, making it easy for users to navigate and book auto rickshaw rides with minimal effort.

Booking System: Toto provides a seamless booking system that enables users to specify their pick-up location and destination for the ride. This ensures efficient coordination between passengers and drivers, optimizing the overall experience.

Real-Time Availability: Toto incorporates real-time data to display the availability of auto rickshaws in the vicinity of the user's location. This feature allows users to make informed decisions when booking rides, reducing wait times and enhancing convenience.

I.1) Problem Statement:

The primary problem that TOTO aims to solve is the lack of a reliable and cost-effective solution for short-distance travel in India. Existing cab booking platforms often prioritize longer rides, leading to inflated prices and extended wait times for users seeking to cover shorter distances. Additionally, Indian drivers face challenges in securing consistent bookings for short rides, impacting their earning potential and overall livelihood.

I.2) Background Study

In response to the evident need for a more efficient and user-friendly auto rickshaw booking system, we embarked on the journey of developing Toto. Our aim is to provide a seamless online platform where users can effortlessly book auto rickshaws, enhancing their commuting experience.

I.3) Aim of Project

The overarching goal of Toto is to furnish commuters with a frictionless online platform for reserving auto rickshaws, thereby augmenting convenience and accessibility within urban transportation networks. Through Toto, we aspire to bridge the gap between commuters and auto rickshaw services, offering a seamless and efficient booking experience.

Objectives:

- Enhance commuter experience: Provide a seamless and convenient platform for commuters to book Toto rickshaws.
- Improve accessibility: Enable users to easily access Toto rickshaw services through a user-friendly mobile application.
- Optimize efficiency: Streamline the process of booking Toto rickshaws, reducing waiting times and enhancing overall efficiency.
- Ensure transparency: Offer transparent pricing, route information, and driver details to build trust among users.
- Enhance safety: Implement safety features such as driver verification and real-time tracking to ensure passenger safety.
- Foster innovation: Introduce technological advancements to the traditional Toto rickshaw system, making it more efficient and user-oriented.
- Facilitate feedback: Provide a feedback mechanism for users to share their experiences and contribute to continuous improvement.
- Support sustainability: Promote eco-friendly transportation options by encouraging the use of Toto rickshaws as a sustainable mode of commuting.

Need for Toto:

The Toto rickshaw booking platform addresses the need for efficient and convenient transportation solutions in urban areas by providing users with a hassle-free way to book rides, thereby reducing dependency on traditional modes of transport and enhancing overall mobility and accessibility.
Ideal for short-distance urban commutes Provides livelihood opportunities for local drivers. Offers affordable transportation options for passengers. Enhances mobility and accessibility for commuters

Functionalities:

- User Registration and Login: Allow users to create accounts and log in securely.
- Toto Booking: Enable users to book Toto rickshaws for their desired routes and timings.
- Route Selection: Provide options for users to select their pickup and drop-off locations from a dropdown menu.
- Fare Calculation: Calculate and display the fare for the selected route based on distance and any applicable surcharges.
- Driver Information: Display information about available Toto drivers, including ratings, reviews, and contact details.
- Customer Support: Offer customer support channels such as chat support or helpline numbers for assistance with bookings or issues.

Chapter II – Literature Survey

Our development process involved extensive research and reference to existing literature and resources in the field of transportation, management and development.

[1] The research paper titled **"Study on Auto-rickshaw (Intermediate Public Transport) mode of UTS: A case study"** conducted by Bhayji Javid I. and Jayesh Juremalani explores the auto-rickshaw transportation system in Vadodara, Gujarat, India. Auto-rickshaws serve as a crucial mode of transportation in urban areas, especially in places lacking sufficient public transport infrastructure. The study focuses on understanding the social and operational characteristics of auto-rickshaw drivers in Vadodara to address various issues related to this mode of transport. Auto-rickshaws play a vital role in urban transportation where organized public transport systems are insufficient. The study area, Vadodara, is described in terms of its population, infrastructure, climate, and road network. The research involves surveys conducted among auto-rickshaw drivers to assess their operational characteristics, including route, vehicle utilization, and income. Social characteristics of auto-rickshaw drivers such as age, education level, family size, and driving experience are analyzed. Operational characteristics like average daily running distance, income, fuel consumption, waiting time, and working hours are investigated. The study reveals that a majority of auto-drivers operate on a shuttle system, contributing to congestion in the city. Issues such as inadequate fare regulations, low income, and overloading are identified and discussed. Overall, the research highlights the importance of auto-rickshaws as a mode of intermediate public transport and suggests measures to enhance their efficiency, safety, and contribution to urban mobility.

[2] **Designing The User Experience Of Auto-rickshaw Commuters In Mumbai City by Jesal Chitalia.** This thesis project focuses on addressing the issues faced by daily commuters using auto-rickshaws in Mumbai city through design improvements. The research involved a thorough analysis of the current auto-rickshaw system, followed by concept development and prototyping of an application for user testing. The aim is to create a smooth para-transit commute experience for both passengers and drivers. By applying design thinking principles, the proposed application seeks to streamline the auto-rickshaw commute, benefiting passengers, drivers, government, and local municipality bodies. The study suggests that the adoption of such an application could significantly improve the existing system by addressing around 70% of the current problems. It also highlights the potential transformative impact of the application on perceptions and practices related to auto-rickshaw commuting. However, for this application to be truly transformative, it needs to play a decisive role in shaping and sustaining perceptions and practices of users over time.

[3] The research paper named **"Auto Rickshaw Booking System"** by Guarang Malvankar, Heetali Thakur, Sheetal Walse and Prof. Devikarni Roy explores the development and implementation of an Auto Rickshaw Booking Management System aimed at addressing the flaws and challenges of the traditional auto rickshaw system, particularly in Mumbai city. The traditional system, characterized by manual booking processes and disputes between drivers and passengers, has prompted the need for a more efficient and user-friendly solution.The Auto Rickshaw Booking Management System is designed to streamline auto hiring operations online, benefiting both auto drivers and passengers. By allowing customers to book autos online and enabling auto drivers to track bookings, the system aims to reduce complaints and inconveniences for both parties while emphasizing women's safety.

Key features of the proposed system include online booking, driver registration, ride search, fare calculation, and real-time tracking. The system eliminates the need for physical auto rickshaw stands and minimizes disputes related to refusals, overcharging, and availability.Through a feasibility study, the paper highlights the potential benefits of the service, particularly in urban areas like Thane and Mumbai, where daily commuters rely on auto rickshaws for transportation. The system's implementation is expected to save time, enhance convenience, and improve the overall experience for passengers and drivers.The methodology involves user registration, login authentication, ride search, and fare calculation based on distance and time. By leveraging technology, such as Android applications and Google Maps, the system aims to provide a seamless booking experience while addressing common challenges associated with manual booking systems.In conclusion, the Auto Rickshaw Booking Management System offers a transformative solution to modernize auto rickshaw services, enhance user experience, and mitigate disputes between drivers and passengers. The proposed system has the potential to revolutionize the auto rickshaw sector by embracing technology and improving efficiency and transparency in operations.

[4] The publication titled **"Enhanced User Convenient Campus based E-Rickshaw Polling System Using Flutter"** presents the development of a mobile application for cab booking within a university campus area. The study identifies key features and requirements for the app and evaluates the technological aspects of its development. It addresses issues such as availability, safety concerns, fare disputes, traffic congestion, and environmental impact related to e-rickshaw transportation on campuses. The proposed methodology involves developing an online booking system with features like real-time availability, scheduling, online payments, feedback mechanisms, and integration with social media platforms. The use case includes user-side and driver-side interfaces, offering features like authentication, booking, notifications, ride tracking, payments, and feedback. The study suggests that the developed app effectively addresses transportation needs and could serve as a model for similar systems in other small zone areas. It highlights the importance of user-centered design and continuous improvement based on user feedback. Overall, implementing such a cab booking system in university campuses could enhance convenience, safety, and efficiency of transportation.

Chapter III – Methodology

III.1) Tools and Frameworks Used

i) PHPMyAdmin : TOTO's database management system relied on PHPMyAdmin, a widely used tool for administering MySQL databases. PHPMyAdmin facilitated the creation, management, and manipulation of the database schema, tables, and records.

ii) Visual Studio Code (VSC) : VSC served as the primary integrated development environment (IDE) for coding TOTO's frontend and backend components. With its intuitive interface and extensive plugin ecosystem, VSC provided developers with a versatile environment for writing, debugging, and testing code efficiently.

iii) Apache server : The Apache HTTP Server is a free and open-source cross-platform web server software, released under the terms of Apache License 2.0. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. Apache is the most commonly used Web server on Linux systems. Web servers are used to serve Web pages requested by client computers

iv) XAMPP : XAMPP is a stack of free and open source PHP and Perl interpreters, the MariaDB database, and the Apache HTTP Server are the primary components of Apache Friends' free and open source cross-platform web server solution stack. Cross-Platform (X), Apache (A), MariaDB (M), PHP (P), and Perl make up the acronym XAMPP (P). It is a straightforward, lightweight installation of Apache that makes setting up a local web server for testing and deployment very simple for developers.

III.2) Programming Languages Used

The implementation of TOTO involved the use of several programming languages to achieve its desired functionality:

i) HTML (Hypertext Markup Language): HTML formed the backbone of TOTO's frontend, defining the structure and layout of web pages. HTML provided the framework for presenting content to users, including forms for inputting booking details and displaying booking confirmations.

ii) CSS (Cascading Style Sheets): CSS was employed to style and customize the appearance of TOTO's web interface. CSS allowed for the application of visual enhancements, such as color schemes, fonts, and layout designs, ensuring a visually appealing and user-friendly experience.

iii) JavaScript: JavaScript played a crucial role in enhancing TOTO's interactivity and responsiveness. JavaScript enabled client-side validation of user input, dynamic updates to page content, and asynchronous communication with the server for seamless user interactions.

iv) PHP (Hypertext Preprocessor): PHP was utilized for server-side scripting, enabling dynamic content generation and interaction with the MySQL database. PHP facilitated the execution of backend logic, such as user authentication, data retrieval, and manipulation.
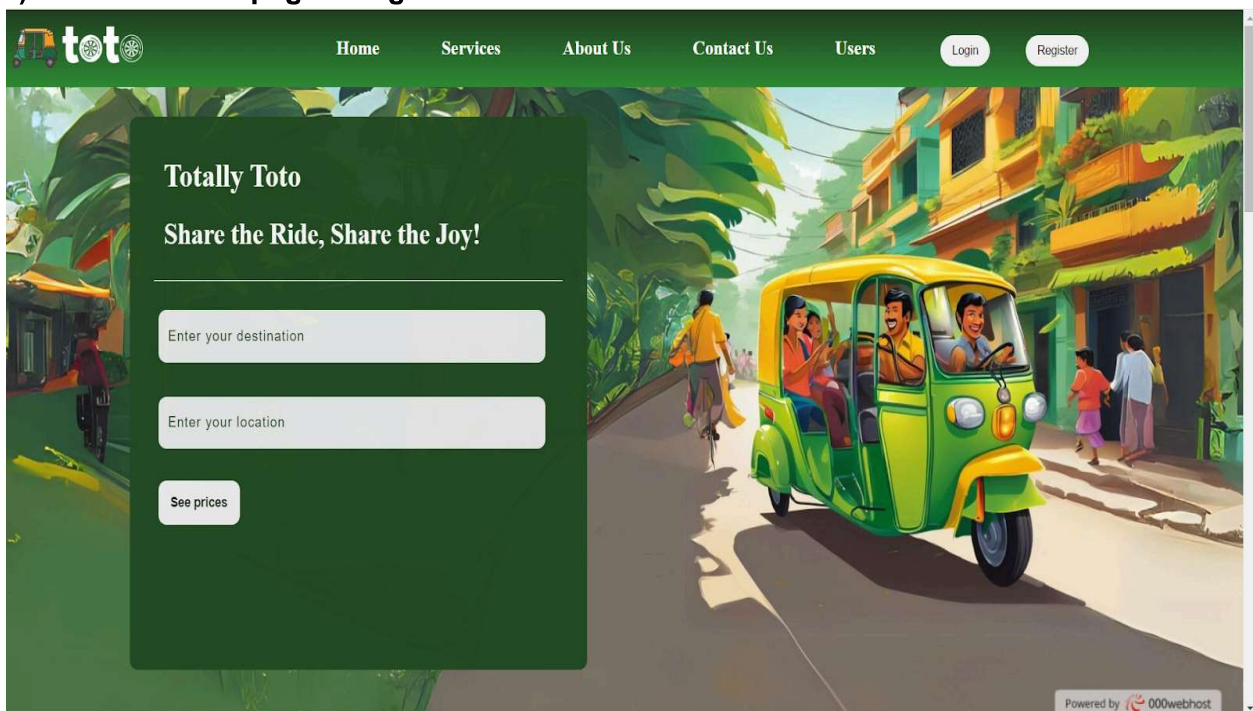
Chapter IV –Implementation Results

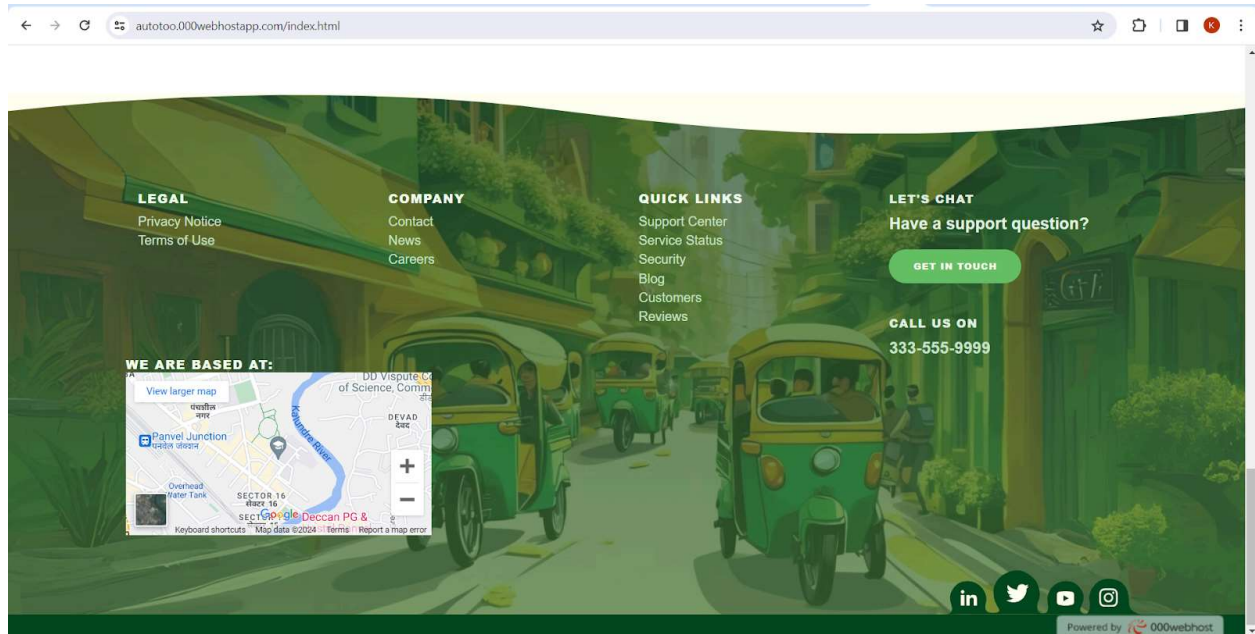## Experiment-wise results

1) Create a webpage with HTML5 tags

```html
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Toto</title>
   <link rel="stylesheet" href="styles.css">
   <script src="https://kit.fontawesome.com/5b7efaafb7.js" crossorigin="anonymous"></script>
</head>
<body>
   <section class="header">
      <nav>
         <a href="index.php"><img id="logo" src="media/web logo.png" alt=""></a>
         <div class="nav-links" id="navLinks">
            <i class="fa-solid fa-xmark" style="color: #ffffff;" onclick="hidemenu()"></i>
            <ul>
               <li><a href="index.php">Home</a></li>
               <li><a href="services.html">Services</a></li>
               <li><a href="about.html">About Us</a></li>
               <li><a href="#" id="contact-link">Contact Us</a></li>
               <li><a href="#" id="nav-users">Users</a></li>
               <a href="login.php"><button id="login">Login</button></a>
               <a href="registration.php"><button id="signup">Register</button></a>
               <!-- <a href="login.php"><button id="login">Login</button></a> -->
               <!-- <a href="registration.php"><button id="signup">Register</button></a> -->
            </ul>
         </div>
         <i class="fa-solid fa-bars" style="color: #ffffff;" onclick="showmenu()"></i>
      </nav>
      <div class="card">
         <h1>Totally Toto</h1>
         <h2>Share the Ride, Share the Joy!</h2>
         <button class="pricebtn"><a href="map.html">Book Now</a></button>
      </div>
      <!-- <div class="card">
         <h1>Totally Toto</h1>
         <h2>Share the Ride, Share the Joy!</h2>
         <input type="text" name="destination" placeholder="Enter your destination" id="destination">
         <input type="text" name="location" placeholder="Enter your location" id="location">
         <button class="pricebtn"><a href="">See prices</a></button>
      </div> -->
   </section>
</body>
</html>
```

2) Customize webpage using CSS.

3) Customize webpage using audio/video and geo location.

4) Implement media queries to make responsive webpages.

```
@media (max-width: 768px) {

    .about h1 {
        font-size: 2rem;
    }

    .about p {
        font-size: 0.9rem;
    }

    .about-info {
        flex-direction: column;
        text-align: center;
    }

    .about-img {
        width: 60%;
        height: 60%;
        margin-bottom: 1rem;
    }

    .about-info p {
        margin: 1rem 2rem;
    }

    .about-info button {
        margin: 1rem 2rem;
        width: 10rem;
    }
}
```
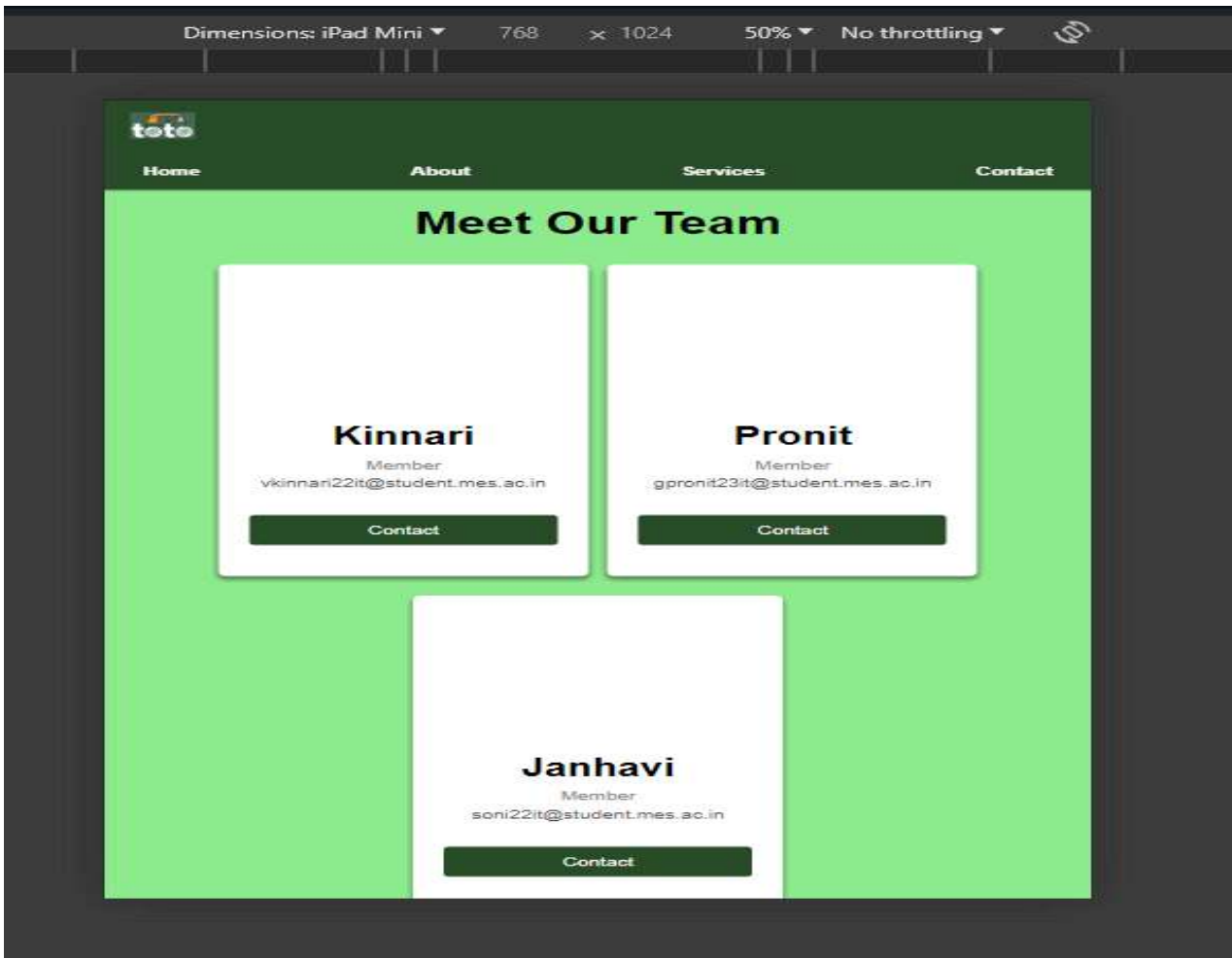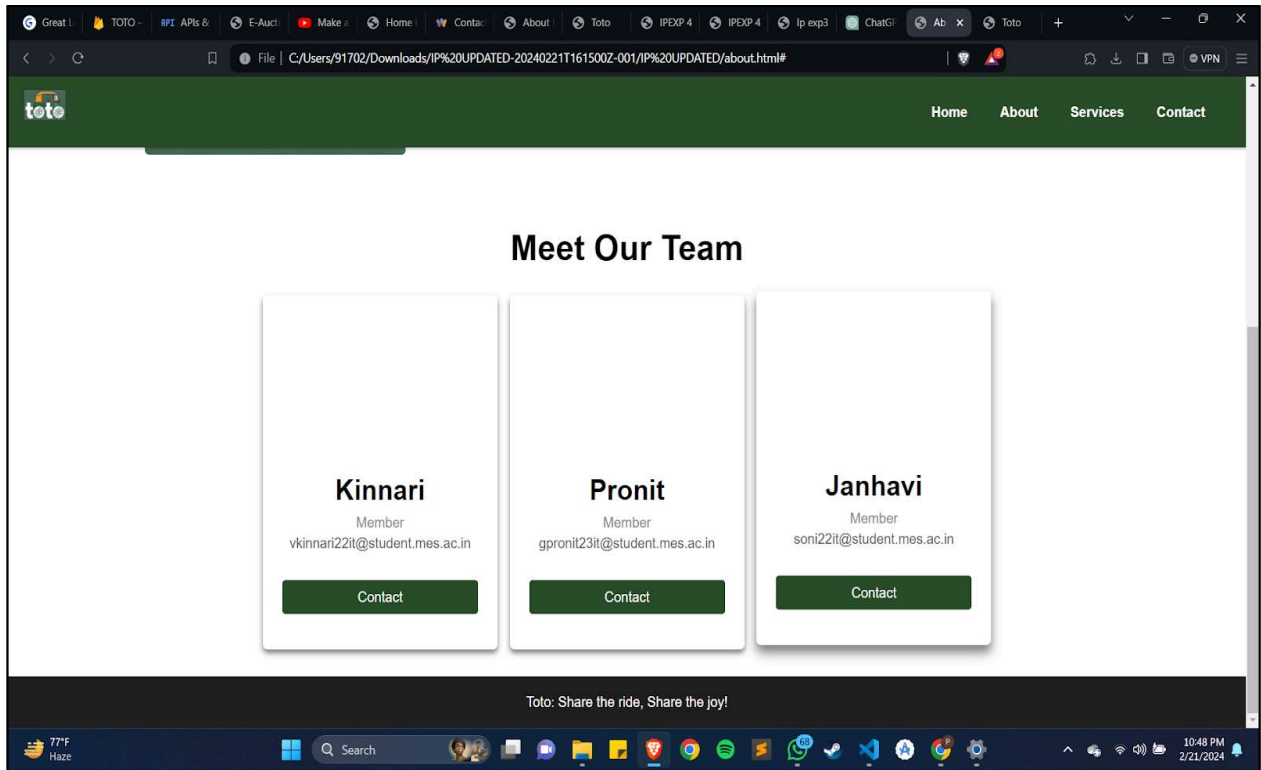
5) Implement JavaScript basics for handling events and validation.

Javascript to scroll smoothly in footer contact:

```
<script>
    document.getElementById('contact-link').addEventListener('click', function (event) {
        event.preventDefault(); // Prevent the default behavior of the link click
        document.getElementById('contact-footer').scrollIntoView({ behavior: 'smooth' }); // Scroll
to the footer
    });
  </script>
```
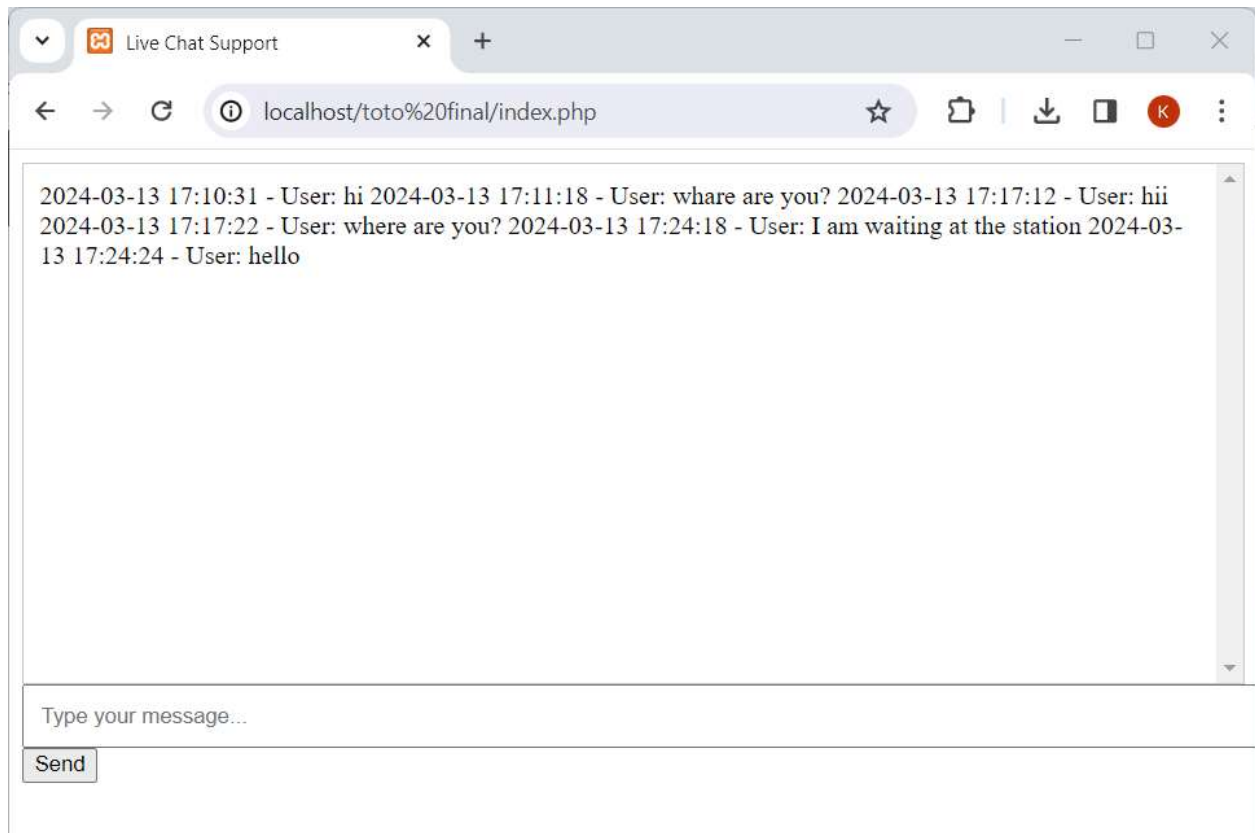
Javascript to scroll smoothly to user feedback in home page:

```
<script>
    document.getElementById('nav-users').addEventListener('click', function (event) {
        event.preventDefault(); // Prevent the default behavior of the link click
        document.getElementById('sec-users').scrollIntoView({ behavior: 'smooth' }); // Scroll to
the footer
    });
  </script>
```

6) JSON and AJAX
a. Create and parse JSON data in JavaScript.
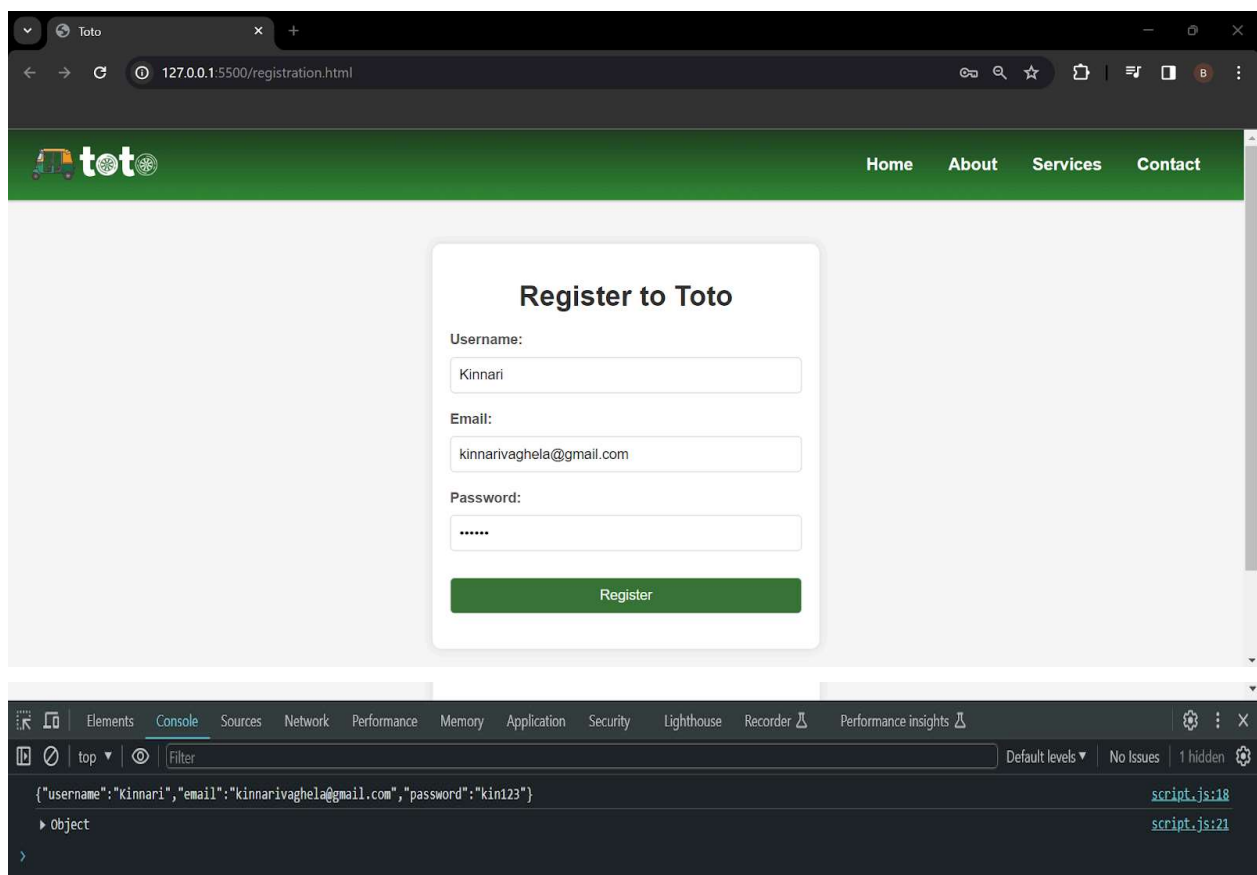
b. Implement AJAX to dynamically update content on a webpage without refreshing.
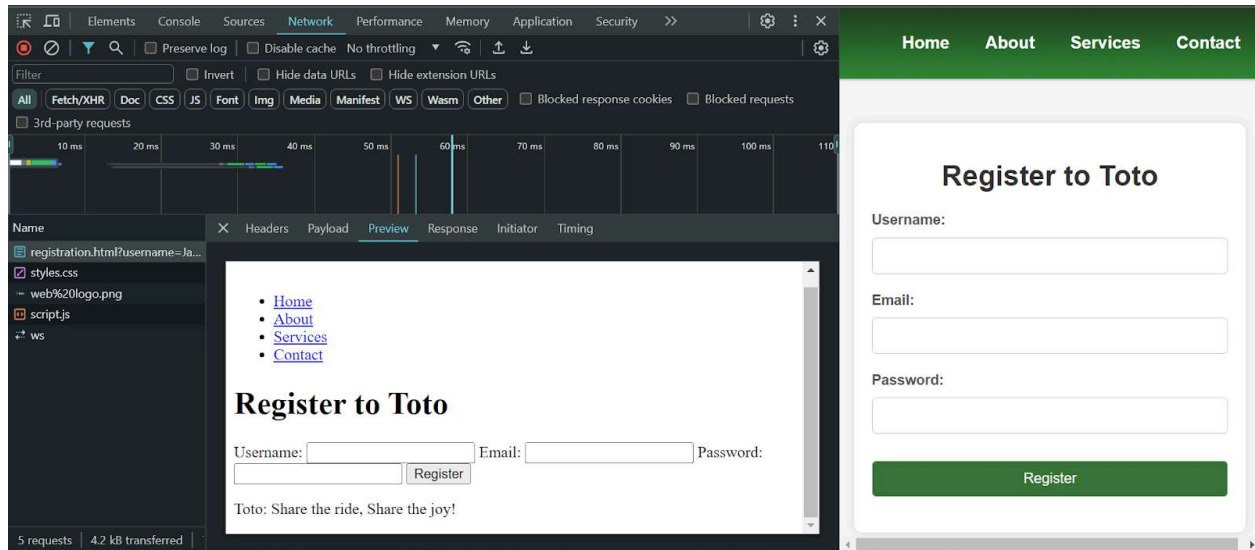
7) Integrate PHP with HTML to create dynamic web pages.

8) Establish a connection between PHP and MySQL database.

9) Implement cookies for user data persistence.

VI. Conclusion

The development of the Toto website marks a pivotal advancement in tackling the persistent challenges intertwined with urban transportation. By introducing a user-friendly platform dedicated to booking auto rickshaws, Toto endeavors to revolutionize how commuters navigate bustling cityscapes. Through its intuitive interface and robust features, Toto seeks to elevate the commuting experience for urban dwellers, offering a seamless and efficient means of securing auto rickshaw rides.

With Toto, users are empowered with a hassle-free booking process that streamlines their transportation needs. The website's intuitive design allows users to effortlessly navigate through the booking process, from specifying their pick-up location to confirming their ride. Real-time updates and notifications ensure users stay informed about their ride status, enhancing transparency and peace of mind throughout their journey.

Moreover, Toto's commitment to user satisfaction extends beyond mere booking functionality. The website incorporates features aimed at enhancing safety and reliability, such as driver ratings and reviews, empowering users to make informed decisions when selecting their ride.

Future Scope:

1. Expansion to other cities and regions: Scaling the service beyond its initial launch city to cater to a broader audience and meet the demand for efficient auto rickshaw booking services in various urban areas.

2. Integration of additional features: Continuously enhancing the platform by integrating new functionalities such as real-time tracking, driver ratings and reviews, fare estimation, multiple payment options, and language support to improve user experience and satisfaction.

3. Partnerships and collaborations: Forming strategic partnerships with local authorities, transportation agencies, auto rickshaw unions, and other stakeholders to foster cooperation, streamline operations, and ensure regulatory compliance.

4. Sustainability initiatives: Implementing eco-friendly practices within the platform, such as promoting electric or hybrid auto rickshaws, optimizing route planning to reduce carbon emissions, and supporting green initiatives to contribute positively to the environment.

5. Enhanced accessibility: Making the platform more accessible to a diverse user base by incorporating features for individuals with disabilities, ensuring compatibility with assistive technologies, and providing inclusive services for all users.

6. Data-driven insights: Leveraging data analytics and machine learning algorithms to gather valuable insights into user behavior, demand patterns, traffic trends, and operational efficiency, enabling informed decision-making and targeted service improvements.

7. Community engagement: Engaging with users and the local community through outreach programs, feedback mechanisms, and participatory decision-making processes to foster trust, transparency, and active involvement in shaping the future direction of the service.

VII.References

A Case Study of the Auto-rickshaw Sector in Mumbai" (Emma Shlaes, Akshay Mani, Embarq, India)

Study on Auto-rickshaw (Intermediate Public Transport) mode of UTS: A case study

Designing The User Experience Of Auto-rickshaw Commuters In Mumbai City by Jesal Chitalia

Auto Rickshaw Booking System by Guarang Malvankar, Heetali Thakur, Sheetal Walse and Prof. Devikarni Roy

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