Project Synopsis

on

Hi Drive

Submitted as a part of course curriculum for

Bachelor of Technology

in

Computer Science

Submitted by
Anmol Patel (2000290120027)
Aman Verma (2000290120021)
Akshat Singh (2000290120018)

Under the Supervision of
Amit Kumar Singh Sanger
Assistant Professor

KIET Group of Institutions, Ghaziabad Department of Computer Science
Dr. A.P.J. Abdul Kalam Technical University
2023-2024

DECLARATION

We hereby declare that this submission is our work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgement has been made in the text.

Signature of Students

Name: Anmol Patel
Roll No.: 2000290120027

Signature of Students

Name: Aman Verma
Roll No.: 2000290120021

Signature of Students

Name: Akshat Singh
Roll No.: 2000290120018

Date: 9 March 2024

CERTIFICATE

This is to certify that Project Report entitled "**Hi Drive**" which is submitted by **Anmol Patel, Aman Verma, Akshat Singh** in partial fulfilment of the requirement for the award of degree B. Tech. in Department of Computer Science of Dr A.P.J. Abdul Kalam Technical University, Lucknow is a record of the candidates own work carried out by them under my supervision. The matter embodied in this report is original and has not been submitted for the award of any other degree.

Date: 9 March 2024

Supervisor Signature
Amit Kumar Singh Sanger
  (Assistant Professor)

ACKNOWLEDGEMENT

It gives us a great sense of pleasure to present the synopsis of the B. Tech Major Project undertaken during B.Tech. Fourth Year. We owe a special debt of gratitude to Amit Kumar Singh Sanger Assistant Professor, Department of Computer Science, KIET Group of Institutions, Delhi- NCR, Ghaziabad, for his constant support and guidance throughout the course of our work. His sincerity, thoroughness and perseverance have been a constant source of inspiration for us. It is only his/her cognizant efforts that our endeavours have seen the light of the day.

We also take the opportunity to acknowledge the contribution of Dr. Ajay Kumar Shrivastava, Head of the Department of Computer Science, KIET Group of Institutions, Delhi- NCR, Ghaziabad, for his full support and assistance during the development of the project. We also do not like to miss the opportunity to acknowledge the contribution of all the faculty members of the department for their kind assistance and cooperation during the development of our project.

Last but not the least, we acknowledge our friends for their contribution to the completion of the project.

Signature of Students

Name: Anmol Patel
Roll No.: 2000290120027

Signature of Students

Name: Aman Verma
Roll No.: 2000290120021

Signature of Students

Name: Akshat Singh
Roll No.: 2000290120018

Date: 9 March 2024

ABSTRACT

Now days in India driver booking system is getting very popular and Most of the people want an ease of travelling using drivers. Instead of asking for auto rickshaw and taxis. Since there are lots of applications available for driver booking but they use centralized approach to maintain data. But if any failure in centralized server will cause whole system to go down. Our approach is to design a driver booking system using server-based approach and also to maintain safety of passengers. And the driving patterns of driver using accelerometer. In this study, we design and implement the intelligent server-based driver system for serving passengers using local information. The implementation and analysis of proposed approach are carried out by using an android-based web service-based system framework. Simulation results manifest that our approach is able to encounter the shortcomings of the existing system

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

In recent years, technology has significantly advanced across various industries, playing a crucial role in human commerce. In the realm of commerce, numerous applications and websites have emerged on the internet, simplifying our lives. Among these innovations, there are several platforms that offer on-demand driver services to customers whenever they require them, such as Drive4U, Hire4drive: Car Drivers and Cabs, Swift partners, and Hop-on demand driver. While these applications provide convenient and high-quality services to customers, there remain certain issues in the current system. The current system is not transparent in how it handles customer interactions. Problems include difficulty in locating the customer and the customer's inability to track the driver's location and estimated arrival time. These issues can result in various challenges for the customer.

PROBLEM STATEMENT

The aim of this project is to develop a web application for booking drivers for any purpose[1]. The designed system consists of:
• A client web application for customers.
• A web application for drivers.
• A server with a database.

OBJECTIVE
• Maintain driver's database.
• Make driver list available to user from the nearest area.
• Self-registration for drivers and users.

SCOPE OF PROJECT

In the current system, people often have trouble finding drivers for their own cars, so they end up renting a car for their travels. To solve this problem, we're creating an app called "Hi Drive" This app will allow customers who own a car but can't drive it themselves to easily find and hire drivers nearby. It's a convenient method for them to secure a driver whenever they require one.

CHAPTER 2

LITERATURE REVIEW

1. **Sandeep Gupta, Attaullah Buriro, Bruno Crispo "DriverAuth: Behavioral biometric-based driver authentication mechanism for on-demand ride and ridesharing infrastructure."**

   A behavioral-biometric-based authentication [1] scheme in the context of ondemand ride and the rideshare services. The approach can be extremely useful to verify drivers remotely. This scheme can be extended to verify the intended riders as well the scheme is unobtrusive as verification is performed in the background and is invisible to the driver. The scheme has shown resistance to mimicry attacks as the invisible person-specific behavioral modalities. Owing to space limitations, they will report the detailed methodology and the results of an extended empirical evaluation in a future paper. they will also explore the impact of its extension in terms of more modalities and they will evaluate them in terms of their accuracy, performance, and usability

2. **Kacem Abida, Rainer Stahlmann, Florian Netter, and Carlo Ratti "Driving Behavior Analysis through CAN Bus Data in an Uncontrolled Environment."**

   Driving behavior analysis has been studied from a new point of view, that bridges the gap between driving behavior studies through uncontrolled experiments leveraging only the GPS signal and studies exploiting CAN bus data through very controlled experiments. This work proposes a methodology for delineating similarities among drivers using data collected in a completely uncontrolled experiment, through a clustering algorithm performed on seven different features of eight signals recorded by CAN bus sensors, with a distributional approach.

3. **Hemanth Kumar and K. Sentamilselvan "Customer Satisfaction towards Call Taxi Services A study with reference to Chennai."**

   There is stringent competition in the organized cab services industry therefore organization need to motivate consumers through coupons. The innovative behavior of consumers helps to download mobile apps and further motivates them to redeem coupons while booking cabs. The results of this study are consistent with earlier research studies because it is found that price conscious consumers are likely to redeem coupons. The modern consumers are innovative and at the same time they are price sensitive therefore coupon redemption helps for customer retention. [3] The brand image also plays a vital

4. Dr. Ruchi Shukla, Dr. Ashish Chandra & Ms. Himanshu Jain "OLA VS UBER: The Battle of Dominance."

India's major attractiveness lies in its market size and increased purchasing power resulting in uplifting lifestyles. On the other hand, Indian consumers are smart, very demanding and highly price-sensitive with no brand loyalty; managing such market is not an easy task. Companies need to constantly be on their toes and keep designing new packages and offers to allure the customers for long which at times result in a lot of cash burn.

5. Dr. P. Kishore Kumar1, Dr. N. Ramesh Kumar2 "A Study on Factors Influencing the Consumers in Selection of Cab Services."

The customer satisfaction about the call taxi services, the factors they give importance in selection of the service provider, tariff, comfort, convenience, service quality and customer care rendered [5]. The finding depicts the exact replica of the customer's mindset and level of satisfaction towards the service providers operating the call taxi in the Chennai market. Appropriate suggestions were provided considering the facts and feasibility, if the market players take these outcomes into account and act, its sure to create fullest satisfaction rather delight the customers and expand the market base. This will also help the service providers full fill the customer expectation that fetches the good will and develop their brand image in the market.

CHAPTER 3

PROPOSED METHODOLOGY

Proposed system tracks the location and speed of car. Also maintains the driver's database and keep track of customer's feedback. It gives the conditional offers to the driver as well as customer. Our system will mainly focus on booking driver and providing safety to our customers

SYSTEM ANALYSIS
A. EXISTING SYSTEM:
System analysis is like taking a close look at how things work in a system and figuring out what problems there are and how to fix them.
Let see how it work:
1. transactions. We use tools like diagrams and talk to people to gather this information.
2. Tools and Skills: Doing this job well requires training, experience, and common sense.

We use tools like Data Flow Diagrams and conduct interviews to understand the system better.[2]

3. Solving Problems: The success of this whole process depends on clearly defining the problems, thoroughly investigating them, and then choosing the right solutions. A good analysis should not only show what's wrong but also how to fix it.

4. Categories of System Analysis: We can divide system analysis into four parts:

-Planning and initial investigation.

-Gathering information Using tools for structured analysis.

In simpler terms, imagine that in the current system, you have to go to a cab office and stand in a long line to book a cab. Sometimes, it takes a lot of time, and sometimes you can't get a cab because of where you are or how the driver behaves. We want to make a better system that solves these problems.

B. PROPOSED SYSTEM

In our new system, you can easily book a driver from the comfort of your home by entering some information in an online web application. Once you start your journey with the driver, when it's over, you can pay conveniently with cash, card, or net banking. Our system does more than that too. It keeps an eye on where the car is and how fast it's going. It also keeps a record of all the drivers and listens to what customers say about their rides.[2] It even offers special deals to drivers and customers based on certain conditions. Our system mainly focuses on two things: booking a driver and making sure our customers are safe. We keep your details and order information so we can keep track of everything. We have set rules that help us do things automatically, which reduces the need for manual work and calculations.

Here are some good things about our system:

• It's easy to use.

• It's fast.

• It saves time and effort.

• You can search for drivers that are nearby.

Algorithm

TOKEN BASED AUTHORIZATION

JSON Web Token, or JWT, is a compact, self-contained data structure used for securely transmitting information between parties in a web application. JWTs are employed to authenticate and authorize users in web applications, allowing them to access certain resources or perform specific actions based on their identity. JWTs consist of three sections: a header, a payload, and a signature. The header defines the algorithm and token type, the payload contains user-related information, and the signature ensures the token's integrity. the client stores the JWT and includes it in subsequent requests to protected resources. The server, upon receiving the token, verifies its signature and checks if the user has the necessary permissions to access the resource.
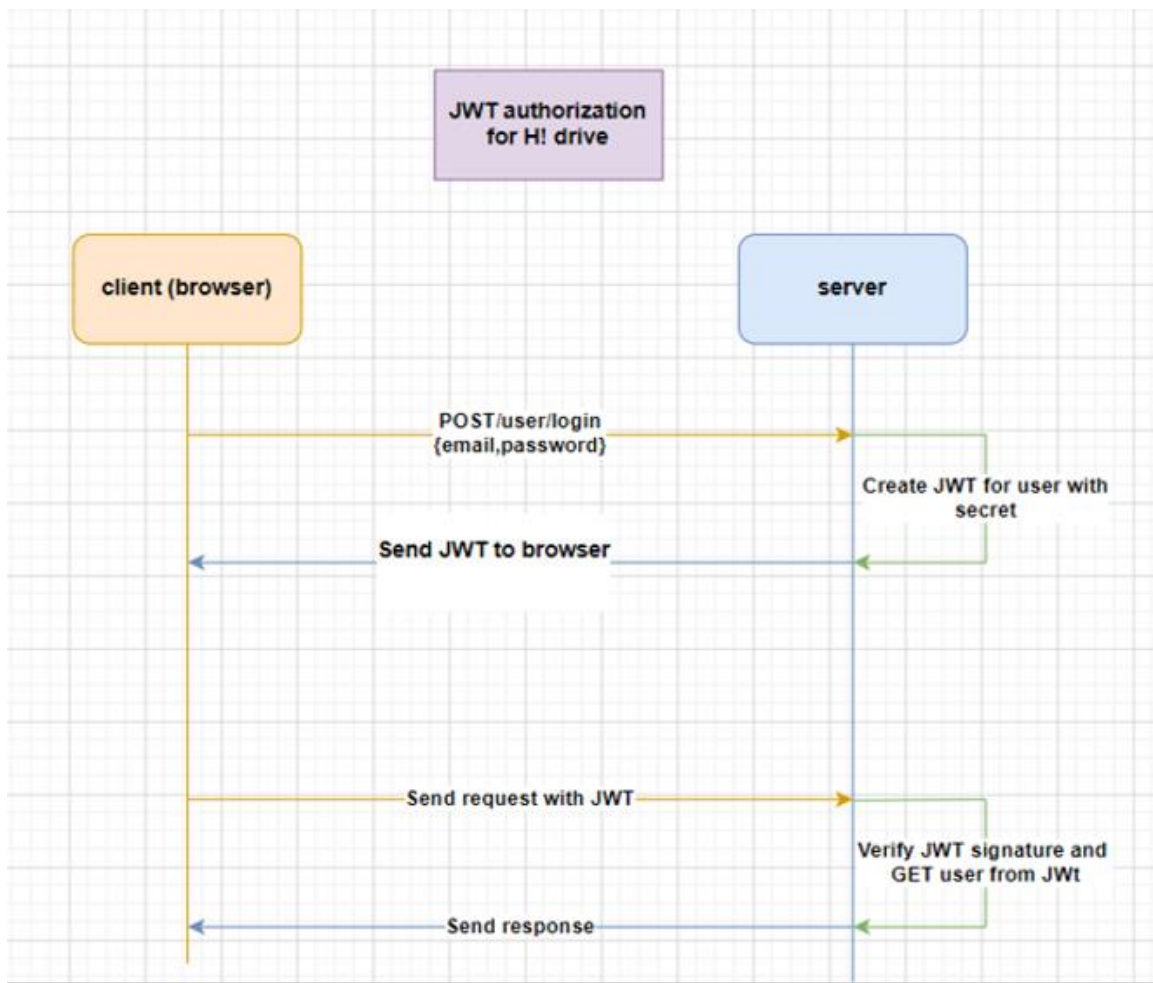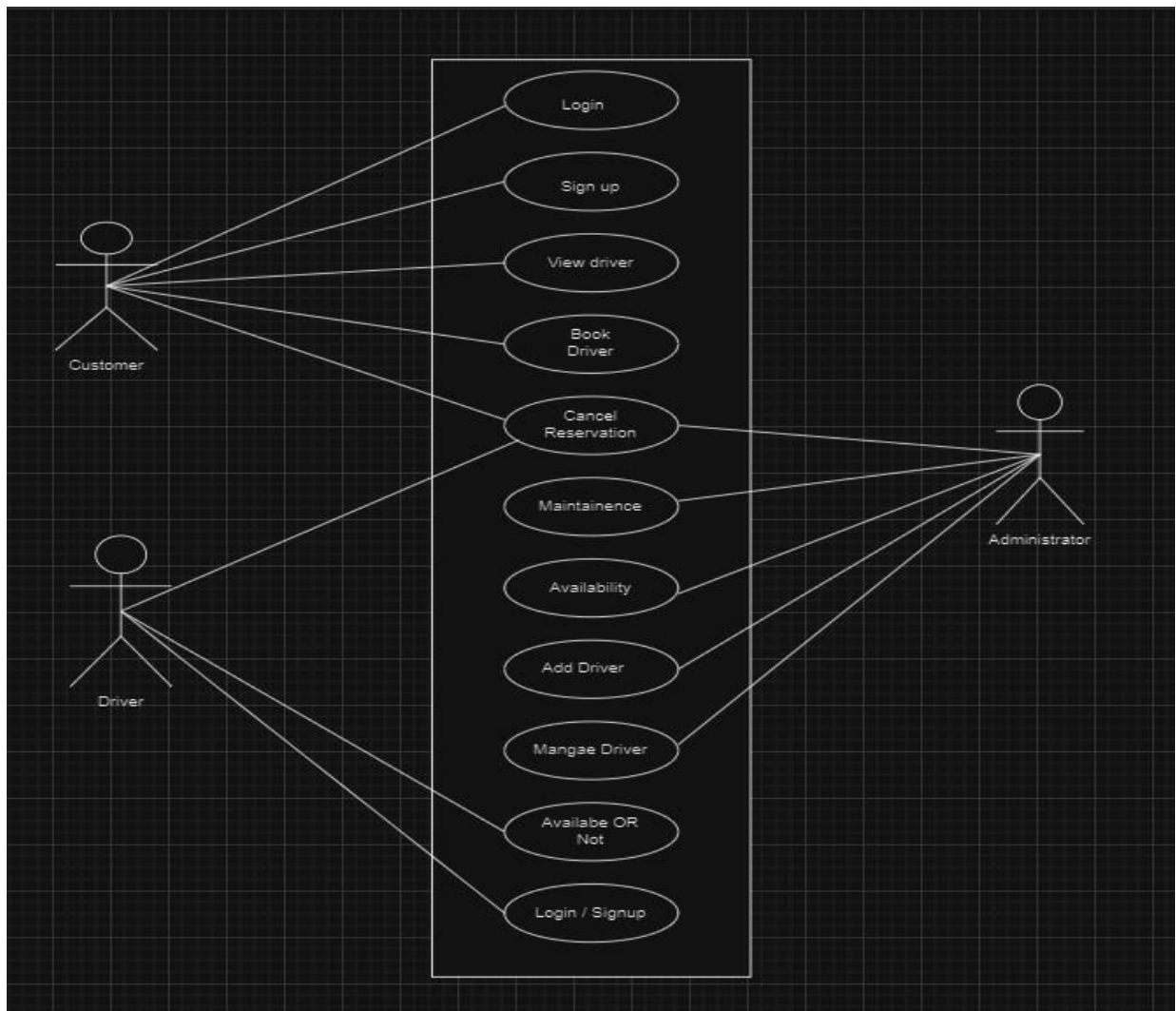
CHAPTER 4

TECHNOLOGY USED

1. Front-end:
   - HTML
   - CSS
   - JavaScript
   - React JS
2. Backend:
   - REST framework
   - Node JS
   - Express JS
   - JWT authorization
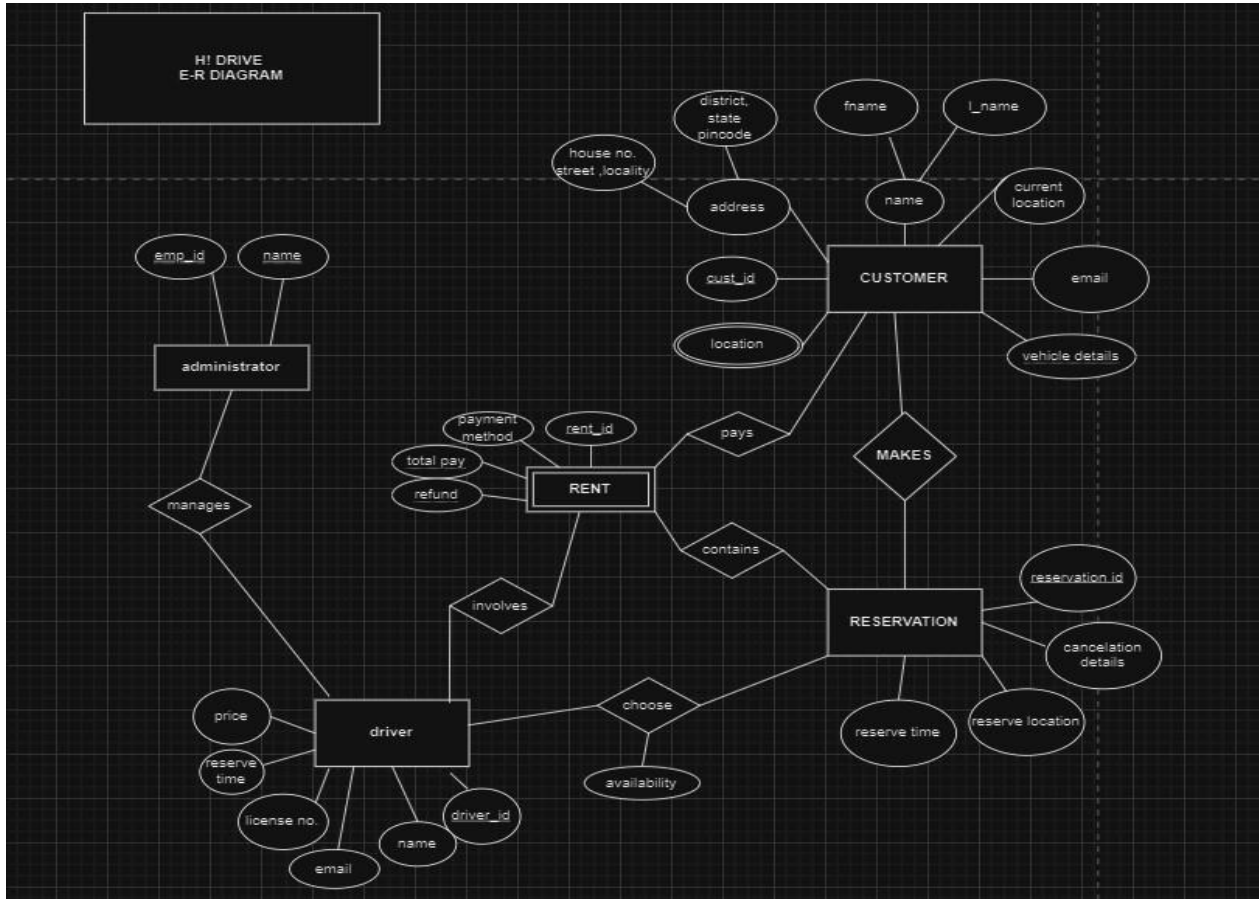3. Docker & Mongo Database

CHAPTER 5

DIAGRAMS

DFD Diagram

WORK FLOW

H! DRIVE
E-R DIAGRAM

CHAPTER 6

CONCLUSION

The driver hiring web application offers several clear benefits to both customer and drivers. Employers can streamline their hiring process, reduce administrative overhead, and access a larger pool of qualified drivers. Drivers, on the other hand, benefit from increased job opportunities, improved working conditions, and better pay rates. The platform's ability to match drivers with compatible employers enhances job satisfaction and overall efficiency in the industry. And, it is essential to acknowledge potential challenges in the development and adoption of such a system. Ensuring the security and privacy of user data, addressing potential biases in driver selection, and adapting to changing regulations and technological advancements are among the key challenges.

REFERENCES

1. DriveMyCar Android Application-IRE Journals
   https://www.irejournals.com/formatedpaper/1702686.pdf

2. Online Driver Booking Service - IJRES https://www.ijres.org/papers/Volume-9/Issue-7/Series-13/F09072427.pdf

3. https://book.olacabs.com/rental-cabs

4. www.driveu.in/Driver/Pune

5. www.089drivers.com/