

# **Project Report**

*on*

## **BLOCK-DRIVE**

*In partial fulfilment of requirements for the degree*

*of*

**BACHELOR OF TECHNOLOGY  
IN**

**COMPUTER SCIENCE & ENGINEERING**

*Submitted by:*

SOPAN PATANKAR [19100BTCMCI05558]

ASHUTOSH NAMDEV [18100BTCMCI02943]

PRATHAM MORE [19100BTCMCI05545]

KAPIL PRAJAPATI [19100BTCMCI05533]

*Under the guidance of*

PROF. ARCHANA CHOUBEY



**SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE**  
**SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**  
**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**JUL-DEC-2022**

**SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE**  
**SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**DECLARATION**

We here declare that work which is being presented in the project entitled “**Block-Drive**” in partial fulfilment of degree of **Bachelor of Technology in Computer Science & Engineering** is an authentic record of our work carried out under the supervision and guidance of **Prof. Archana Choubey Asst. Professor** of Computer Science & Engineering. The matter embodied in this project has not been submitted for the award of any other degree.

SOPAN PATANKAR

ASHUTOSH NAMDEV

PRATHAM MORE

KAPIL PRAJAPATI

Date:

**SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE**  
**SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**PROJECT APPROVAL SHEET**

The following team has done the appropriate work related to the “**Block-Drive**” in partial fulfilment for the award of **Bachelor of Technology in Computer Science & Engineering** of “SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY” and is being submitted to SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE.

**Team:**

- 1. Sopan Patankar**
- 2. Ashutosh Namdev**
- 3. Kapil Prajapati**
- 4. Pratham More**

**Internal Examiner**

**External Examiner**

Date

**SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE**  
**SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**CERTIFICATE**

This is to certify that **Mr. Sopan Patankar, Mr. Ashutosh Namdev, Mr. Kapil Prajapati and Mr. Pratham More** working in a team have satisfactorily completed the project entitled “**BLOCK-DRIVE**” under the guidance of Mr. ABC in the partial fulfilments of the degree of **Bachelor of Technology in Computer Science & Engineering** awarded by SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY affiliated to SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE during the academic year **Jul-Dec-2022**.

Prof. Archana Choubey  
**Project Guide**

Mr. Shyam Gehlot  
**Project Coordinator**

Dr. Anand Rajavat

**Director & Head,**  
**Department of Computer Science & Engineering**

## ACKNOWLEDGEMENT

We are grateful to a number of persons for their advice and support during the time of complete our project work. First and foremost, our thanks go to **Dr. Anand Rajavat** Head of the Department of Computer Science & Engineering and **Mrs. Archana Choubey** the mentor of our project for providing us valuable support and necessary help whenever required and also helping us explore new technologies by the help of their technical expertise. His direction, supervision and constructive criticism were indeed the source of inspiration for us.

We would also like to express our sincere gratitude towards our Director **Dr. Anand Rajavat** for providing us valuable support.

We are really indebted to **Mr. Shyam Gehlot**, project coordinator for helping us in each aspect of our academic's activities. We also owe our sincere thanks to all the **faculty members** of Computer Science & Engineering Department who have always been helpful.

We forward our sincere thanks to all **teaching and non-teaching staff** of Computer Science & Engineering department, SVVV Indore for providing necessary information and their kind co-operation.

We would like to thanks our parents and family members, our classmates and our friends for their motivation and their valuable suggestion during the project. Last, but not the least, we thank all those people, who have helped us directly or indirectly in accomplishing this work. It has been a privilege to study at SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE.

## **ABSTRACT**

The purpose of the project is to design a web application that deals with vehicle related business. It provides a platform to travel agencies to expand their business on online platform. The project also aims to solve unemployment problem among car drivers, our project provide job to the car drivers. This system includes various cars, so as per the customer order and comfort, we provide vehicle to customers for travelling long distance. Through online car attachment service of the website a individual can get a chance to make profit from their vehicle assets. The vision of the WheelzStake is to continuously improve the interaction between users, and help people move towards their destination.

The vehicle attaches and booking System has a great feature in the emerging market of India. The proposed system is an online system that is fully integrated. It effectively and efficiently automates manual procedures. All the users of the Website are aided by this automated method, which allows them to fill in the specifics according to their needs.

The Vehicle Attach and booking System is a very crucial wen application for vehicle businesses. We want this web application to completely be a front desk system and hence will be used by the Travel Agencies, Drivers, Car Attachers, and Customers

## LIST OF FIGURES

S.N.	Figure No.	Figure Name	Page No.
1	3.1.1	Process Model	8
2	4.1.1	Use Case Model	13
3	4.2.1	Data Flow Diagram level 0	15
4	4.2.2	Data Flow Diagram level 1	15
5	4.3	Database Design	16
6	5.1	Class diagram	18
7	5.2.1	Sequence diagram (User Registration)	18
8	5.2.2	Sequence diagram (Reservation of car)	19
9	5.2.3	Sequence diagram (User Feedback)	19
10	5.3.1	Activity Diagram (For Registration)	20
11	5.3.2	Activity Diagram (For Car Reservation)	20
12	5.3.3	Activity Diagram (For User Feedback)	21

## LIST OF TABLES

S.N.	Table No.	Table Name	Page No.
1	4.1.1.1	Register/Login	13
2	4.1.2.2	Booking	14
3	4.1.3.3	Payment	14
4	4.1.4.4	Logout	15
5	5.4.3	Shows Test case	23

<b>TABLE OF CONTENTS</b>	
	<b>Page No.</b>
<b>Declaration</b>	<b>I</b>
<b>Project Approval Sheet</b>	<b>II</b>
<b>Certificate</b>	<b>III</b>
<b>Acknowledgements</b>	<b>IV</b>
<b>Abstract</b>	<b>V</b>
<b>List of Figures</b>	<b>VI</b>
<b>List of Tables</b>	<b>VI</b>
<b>Chapter-1 Introduction</b>	<b>1</b>
<b>1.1 Introduction</b>	<b>2</b>
<b>1.2 Problem statement</b>	<b>2</b>
<b>1.3 Proposed solution</b>	<b>2</b>
<b>1.4 Objective</b>	<b>2</b>
<b>1.5 Scope</b>	<b>3</b>
<b>Chapter-2 Literature Survey</b>	<b>4</b>
<b>2.1 System Analysis</b>	<b>5</b>
<b>2.2 Problem Analysis</b>	<b>5</b>
<b>2.3 Design and Development Problem</b>	<b>5</b>
<b>2.4 Feasibility Study</b>	<b>5</b>
<b>2.4.1 Operational Feasibility</b>	<b>5</b>
<b>2.4.2 Economical Feasibility (Financial):</b>	<b>6</b>
<b>2.4.3 Technical Feasibility</b>	<b>6</b>
<b>Chapter-3 Requirements Analysis</b>	<b>7</b>
<b>3.1 Method Used for Requirement Analysis</b>	<b>8</b>
<b>3.1.1 Process Model Adopted</b>	<b>8</b>
<b>3.1.2 Description</b>	<b>8</b>
<b>3.2 Advantages and Disadvantages</b>	<b>9</b>
<b>3.3 Reasons for Use</b>	<b>9</b>



<b>3.4 Functional Requirement</b>	<b>10</b>
<b>3.5 Non-functional Requirements</b>	<b>10</b>
<b>3.6 System Specification</b>	<b>10</b>
<b>3.6.1 Software Specification</b>	<b>10</b>
<b>3.6.2 Hardware specification</b>	<b>11</b>
<b>Chapter-4</b>	<b>12</b>
<b>4.1 Software Requirement Specification</b>	<b>13</b>
<b>4.1.1 Use Case Model</b>	<b>13</b>
<b>4.1.1.1 Register/Login</b>	<b>13</b>
<b>4.1.1.2 Booking</b>	<b>14</b>
<b>4.1.1.3 Payment</b>	<b>14</b>
<b>4.1.1.4 Logout</b>	<b>15</b>
<b>4.2 Data Flow Design</b>	<b>15</b>
<b>4.2.1 Data Flow Diagram level 0</b>	<b>15</b>
<b>4.2.2 Data Flow Diagram level 1</b>	<b>15</b>
<b>4.3 Database Design</b>	<b>16</b>
<b>Chapter – 5 Implementation and Testing</b>	<b>17</b>
<b>5.1 Detailed Class-Diagram</b>	<b>18</b>
<b>5.2 Sequence diagram</b>	<b>18</b>
<b>5.2.1 Sequence diagram (User Registration)</b>	<b>18</b>
<b>5.2.2 Sequence diagram (Reservation of car)</b>	<b>19</b>
<b>5.2.3 Sequence diagram (User Feedback)</b>	<b>19</b>
<b>5.3 Activity diagrams</b>	<b>20</b>
<b>5.3.1 Activity Diagram (For Registration)</b>	<b>20</b>
<b>5.3.2 Activity Diagram (For Car Reservation)</b>	<b>21</b>
<b>5.3.3 Activity Diagram (For User Feedback)</b>	<b>21</b>
<b>5.4 Testing</b>	<b>21</b>
<b>5.4.1 Testing Objective</b>	<b>21</b>
<b>5.4.2 Testing Methods &amp; Strategies</b>	<b>22</b>
<b>5.4.3 Test Case</b>	<b>23</b>

<b>6. Chapter – Conclusion and Discussion</b>	<b>25</b>
<b>6.1 Conclusion and Future Work</b>	<b>26</b>
<b>6.2 Bibliography</b>	<b>26</b>
<b>Chapter-7 Snapshots</b>	<b>27</b>
<b>7.1 Implementation &amp; Testing</b>	<b>28</b>
<b>7.1.1 Home Page</b>	<b>28</b>
<b>7.1.2 Login Confirmation</b>	<b>28</b>
<b>7.1.3 After Login</b>	<b>29</b>
<b>7.1.4 Ride Selector</b>	<b>29</b>
<b>7.1.5 Ride Confirmation</b>	<b>30</b>
<b>7.1.6 Transaction Successful</b>	<b>30</b>
<b>7.1.7 Logout</b>	<b>31</b>

# **CHAPTER -1**

## **INTRODUCTION**

## **1.1 Introduction**

- Online Car Booking Management System is developed to manage all cab hiring work online. It is useful for car booking agency that are specialized in Hiring cabs to customers. Using this system many car-booking agency are moving ahead to become a pioneer in the vehicle rental industry by completely focusing on customers.
- Using this system, it is very easy for customer to book a car online and car-booking agency can also track their booking online. So, it is also very useful for car booking agency. It is an online system through which customers can view available cabs; register the cabs, view profile and book cabs. Mostly people use cab service for their daily transportation need. Car booking agency can also check which car is free for booking and which cars are on booking at present time.
- The objective and scope of my project Online Cab or car booking System is to record the details of various activities of user. It will simplify the task and reduce the paper work. Using this car booking management system car owner can also become partner of car booking agency by giving their car for booking.
- Online Car Booking management system is a web-based application that allows users to book a car online. From this system car rental company can manage all car bookings and customer information. User can book cars and admin can confirm the booking and cancel the booking on the basis of availability of the cars and drivers.

## **1.2 Problem statement**

- A car rental is a vehicle that may be rented for a price and utilised for a specific length of time. Getting a rental automobile makes it easier for people to travel around when they don't have access to their own vehicle or don't own one at all.
- A person who needs transportation must call a rental car company and sign a contract. This method improves client retention while also making car and employee management more straightforward.

## **1.3 Need for the proper system**

- Create a web-based system that allows consumers to register and reserve automobiles online while also allowing the firm to manage its car rental business efficiently.
- To make the process of renting an automobile easier for consumers

## **1.4 Objective**

- This project covers a wide range of topics, from business concepts to computer science, and it necessitates the completion of numerous studies in order to meet the project's objectives.
- We have created a platform which can offer the services to connect with the drivers without waiting for them for a long time.

- Although we have some platform for the same like - Ola, uber, jugnoo etc, but they put their prices quite high because of the third-party services.
- Most common problem with these services is that many time drivers accepts the ride but never show up.
- Also, we give our information on this platform which put the privacy in risk due to continuous case of data leak.

### **1.5 Scope**

- The scope of our project Online car booking System is to record the details various activities of user. It will simplify the task and reduce the paper work. Using this car booking management system car owner can also become partner of car booking agency by giving their car for booking.
- Online Car rental management system is a web-based application that allow users to book a car online.
- From this system car rental company can manage all car bookings and customer information. User can book cars and admin can confirm the booking and cancel the booking on the basis of availability of the cars and drivers.

## **CHAPTER-2**

### **LITERATURE SURVEY**

## **2.1 System Analysis**

System analysis is a thorough examination of a system's different processes and their interrelationships both within and outside the system. The key question here is – why are there so many flaws in the current system? What measures should be taken to address the problem? When a user or management begins a study of the software utilising the current system, analysis begins. Data was collected on numerous files, decision points, and transactions handled by the current system during the analysis.

For example, Data Flow Diagrams, etc. are widely utilised in the system. For the collection of important information needed to create the system, training, experience, and common sense are necessary. The system's success is primarily determined by how well the problem is identified, fully studied, and appropriately implemented via the selection of a solution. A good analytical model should include not just methods for comprehending the problem, but also the framework for solving it. As a result, it should be extensively investigated by gathering data about the system. The suggested system should next be extensively examined in light of the requirements.

System analysis is divided into four sections.

- 1) Initial research and system architecture.
- 2) Using analytic tools to do structured analysis.
- 3) Feasibility study.
- 4) Analyze the cost and benefits.

## **2.2 Problem Analysis**

We are currently creating a new system because there is no existing system at this time. There is currently no system on the market with these features and capabilities. This system is designed for a wide range of users, with a highly adaptable and adjustable solution that will ensure worldwide marketing.

## **2.3 Design and Development Problem**

- 1) There is a problem operating XAMPP.
- 2) During the development process, to debug the mistake.
- 3) To depict a connection between two or more entities.
- 4) A database table has a minor mistake.

## **2.4 Feasibility Study**

### **2.4.1 Operational Feasibility:**

Once the problem is fully recognised, a feasibility study is carried out. The goal of the research is to see if the problem is worth fixing. It is the process of analysing and evaluating a proposed project in order to evaluate if it is technically viable.

#### **2.4.2 Economical Feasibility (Financial):**

The economic feasibility of a system is used to assess the project's or system's advantages as well as the expenses involved. A method known as cost-benefit analysis is used to accomplish this. It offers both concrete and intangible benefits, such as cost savings, increased flexibility, quicker activities, and efficient database administration.

The application is on a medium scale, and it is financially possible for us to complete. This necessitates a cost-benefit analysis. As a result, there is no issue with excessive costs or cost-benefit analyses.

#### **2.4.3 Technical Feasibility:**

- 1) When developing web apps, it takes a long time.
- 2) The expense of research and analysis to establish the real-world requirement.
- 3) Implementation of the programme on the server, as well as the expense of web servers.



# **CHAPTER-3**

## **REQUIREMENTS ANALYSIS**

### 3.1 Method Used for Requirement Analysis.

#### 3.1.1 Process Model Adopted

The Agile methodology is a way to manage a project by breaking it up into several phases. It involves constant collaboration with stakeholders and continuous improvement at every stage. Once the work begins, teams' cycle through a process of planning, executing, and evaluating. Continuous collaboration is vital, both with team members and project stakeholders. It's a process for managing a project that involves constant collaboration and working in iterations.

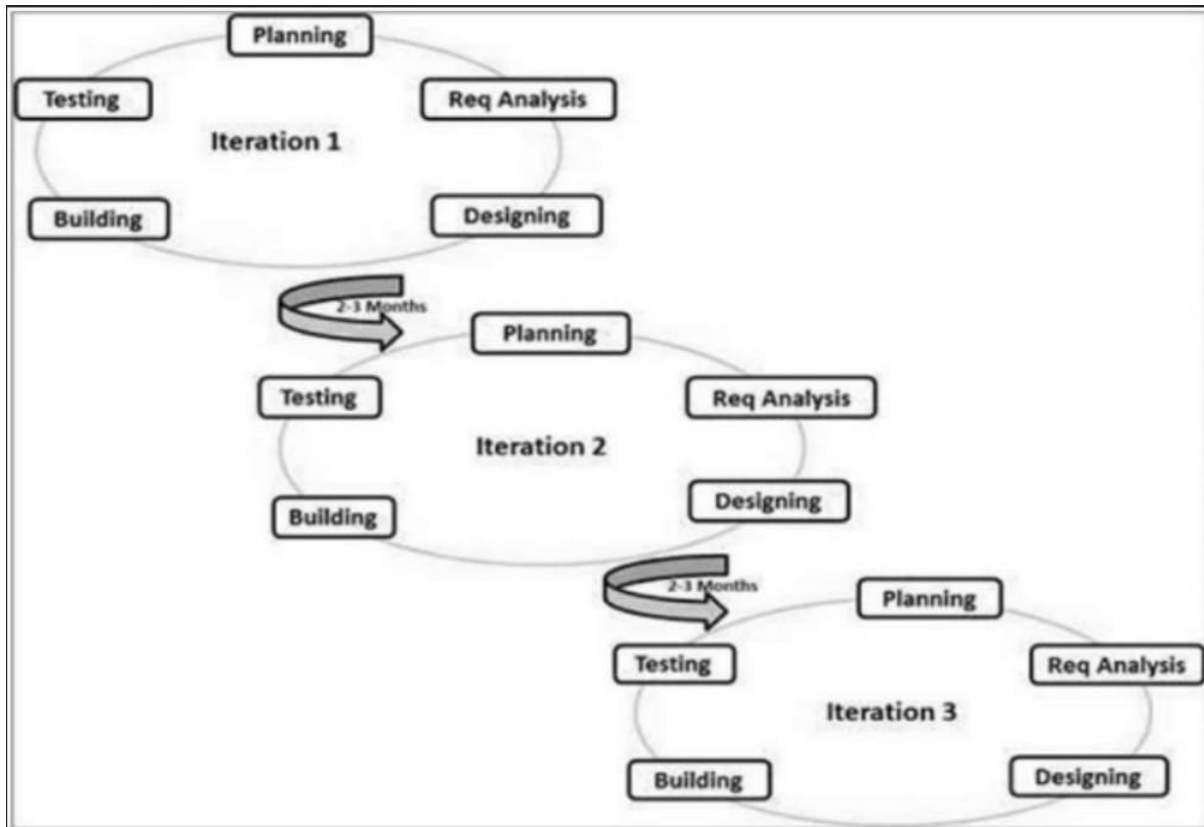


Fig 3.1.1 Process model

#### 3.1.2 Description

Agile is an iterative approach to project management and software development that helps teams deliver value to their customers faster and with fewer headaches. Instead of betting everything on a "big bang" launch, an agile team delivers work in small, but consumable, increments. Requirements, plans, and results are evaluated continuously so teams have a natural mechanism for responding to change quickly. Agile methodologies are approaches to product development that are aligned with the values and principles described in the Agile Manifesto for software development. Agile methodologies aim to deliver the right product, with incremental and frequent delivery of small chunks of functionality, through small cross-functional self-organizing teams, enabling frequent

customer feedback and course correction as needed. In doing so, Agile aims to right the challenges faced by the traditional “waterfall” approaches of delivering large products in long periods of time, during which customer requirements frequently changed, resulting in the wrong products being delivered.

### **3.2 Advantages and Disadvantages:**

#### **Advantages:**

- Customer satisfaction by rapid, continuous delivery of useful software. People and interactions are emphasized rather than process and tools. Customers, developers and testers constantly interact with each other.
- Working software is delivered frequently (weeks rather than months).
- Face-to-face conversation is the best form of communication.
- Close, daily cooperation between business people and developers.
- Continuous attention to technical excellence and good design.
- Regular adaptation to changing circumstances.
- Even late changes in requirements are welcomed

#### **Disadvantages:**

- In case of some software deliverables, especially the large ones, it is difficult to assess the effort required at the beginning of the software development life cycle.
- There is lack of emphasis on necessary designing and documentation.
- The project can easily get taken off track if the customer representative is not clear what final outcome that they want.
- Only senior programmers are capable of taking the kind of decisions required during the development process. Hence it has no place for newbie programmers, unless combined with experienced resources.

### **3.3 Reasons for Use:**

The project can be created through a series of delivery steps with each delivery steps adding a new feature to the existing product. Thus, the process model suited to the project is Agile Methodology. Firstly, In the Agile, the customer is always involved in the decision-making process which leads to greater customer retention. Secondly Agile allows managers to have better control over the project due to its transparency, feedback integration, and quality-control features. Thirdly, with increased visibility, predicting risks, and coming up with effective mitigation plans becomes easier. Fourthly, in theory, any project using an Agile methodology will never fail. Agile works in small sprints that focus on continuous delivery. Fifthly In theory, any project using an agile methodology will never fail. Agile works in small sprints that focus on continuous delivery.

### 3.4 Functional Requirement

- **Register:** The app will have a registration feature where the user will be required to enter a valid email address and password. These details will then be saved.
- **Login:** Users will be required to log in to use the application. They must enter their email address and password. These details are then authenticated against the database and the user is directed to the homepage.
- **Ride Selector and confirmation:** Users will be required to select their desired ride for going to their destination according to their convenience etc. and then they have to confirm their ride for further service.
- **Transaction Successful:** After Selecting their desired ride they have to pay the amount for their ride.

### 3.5 Non-functional Requirements

- The app will have a registration feature where the user will be required to enter a valid and unique email address and password. These details will then be saved. Users will be required to login to use the application. They must enter their email address and password
- These details are then authenticated against the database and the user is directed to the homepage

### 3.6 System Specification: -

According to our proposed idea, we require following technology requirements: -

#### 3.6.1 Software Specification: -

Android studio (v2021.1.1) (Bumblebee)

We require this tool to run our avd or android virtual device to see the output of user interface.

- Visual studio code (v1.64.2)

This is the IDE we are using for implementation of the project.

- GitHub

We are using this tool for code management and storage.

- Firebase

We are using this for the backend and connection with the android application

- Twilio

It is a useful online service to send the OTP messages on the mobile phones.

- Postman

It is software used for API testing.

The languages we have used: -

➤ React (Expo)

We will use the expo which is based on react library to target the all-main platforms i.e., IOS, android, web etc.

➤ Redux

To handle all the states throughout the application.

➤ Nodejs

The most important component for the development of the application.

➤ Solidity

We will use the solidity to write the smart contracts as per requirement in the application.

➤ Web3

To integrate the smart contracts with our application.

➤ Native Base

For the designing of the application.

### **3.6.2 Hardware specification**

- Processor: 1 gigahertz (GHz) or faster with two or more cores on a compatible 64- bit processor or system on a chip (SoC).
- RAM: 4 gigabytes (GB) or greater.
- Storage: 64 GB.
- Operating System: Windows 10, Ubuntu and Mac OS.

# **CHAPTER -4**

## **DESIGN**

## 4.1 Software Requirement Specification: -

- Android (Marshmallow)
- Memory: - Minimum 1 GB
- Geo Location (Emergency Case)
- Internet requirement: - minimum speed 2mbps
- Storage: - 200 MB

### 4.1.1 Use Case Model

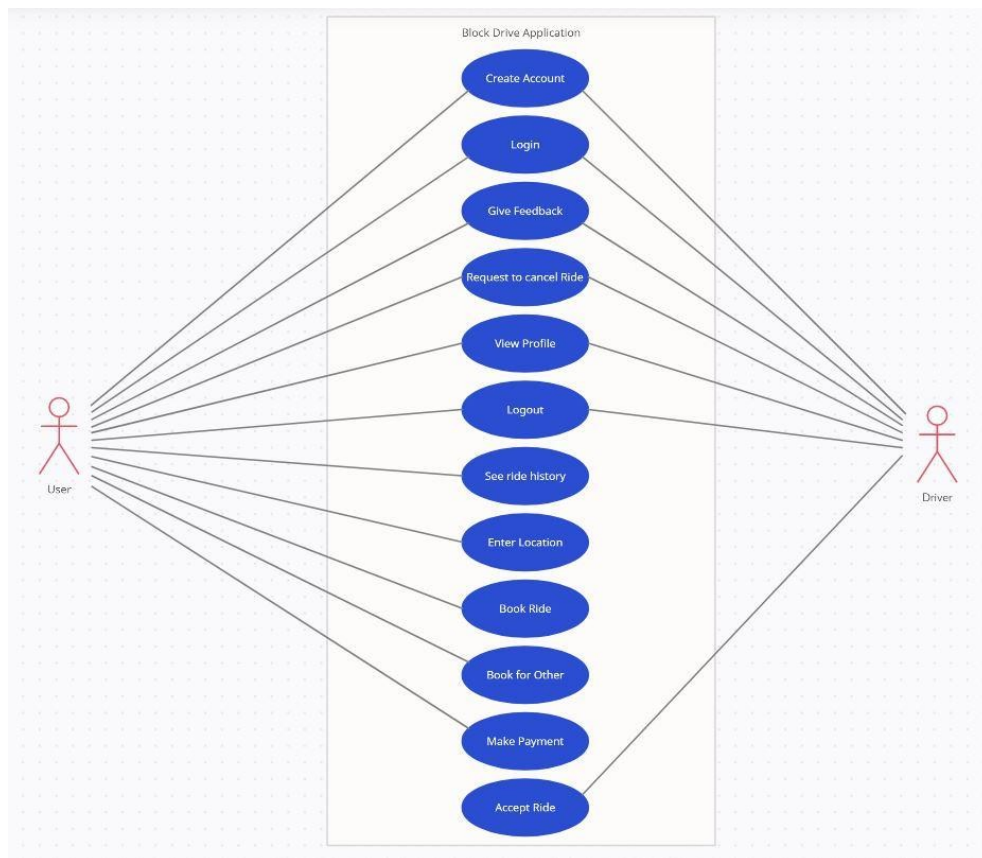


Fig 4.1.1 Use Case Model

#### 4.1.1.1 Register/Login

Use case Number 1	1
Use Case Name	Register or login
Summary	Users (Customer) needs to register to the system.
Actor	Drivers, Car Attacher

Trigger	Registration or login
Scenario	There will be a button register/Login. If user have not registered to the application, she/he will use register button and register to it. For register user need to fill all required field and click on registration button.

#### 4.1.1.2 Booking

Use case Number 2	2
Use Case Name	Booking
Summary	Customer can book their vehicles, plan their trips by contacting various agencies registered on our website
Actor	Customers
Trigger	Book Now
Scenario	Having clicked on book now button user needs to fill basic information pick up point, Destination, number of passengers etc. On the basis of this information, best travel agencies will filter out as per the requirement of user.

#### 4.1.1.3 Payment

Use case Number 4	3
Use Case Name	Payment
Summary	An Individual has option to attach one's commercial vehicle to register travel agencies of our website
Actor	Customer
Trigger	Car Booking
Scenario	Having clicked on Payment, a request will send to The server and process will complete.



#### 4.1.1.4 Logout

Use case Number 1	4
Use Case Name	log out
Summary	Users (Customer) needs to logout to the system.
Actor	Drivers, Car Attacher
Trigger	Registration or login
Scenario	There will be a button Log out. If user have completed his/her paymer she/he will use logout button and logout from his/her account.

## 4.2 Data Flow Diagram

### 4.2.1 Data Flow Diagram level 0

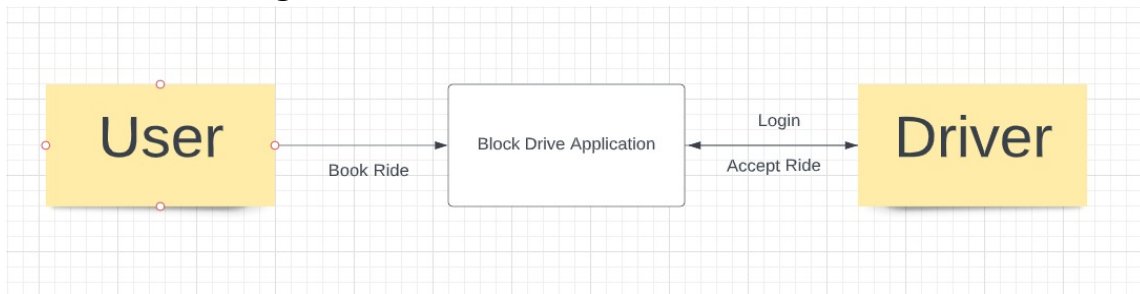


Fig 4.2.1 Data Flow Diagram level 0

### 4.2.2 Data Flow Diagram level 1

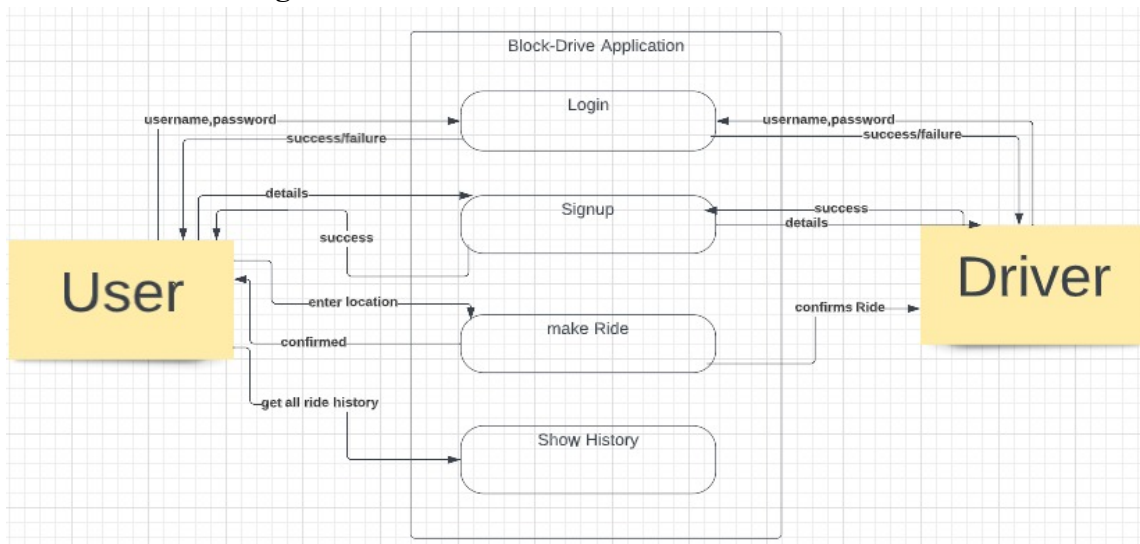
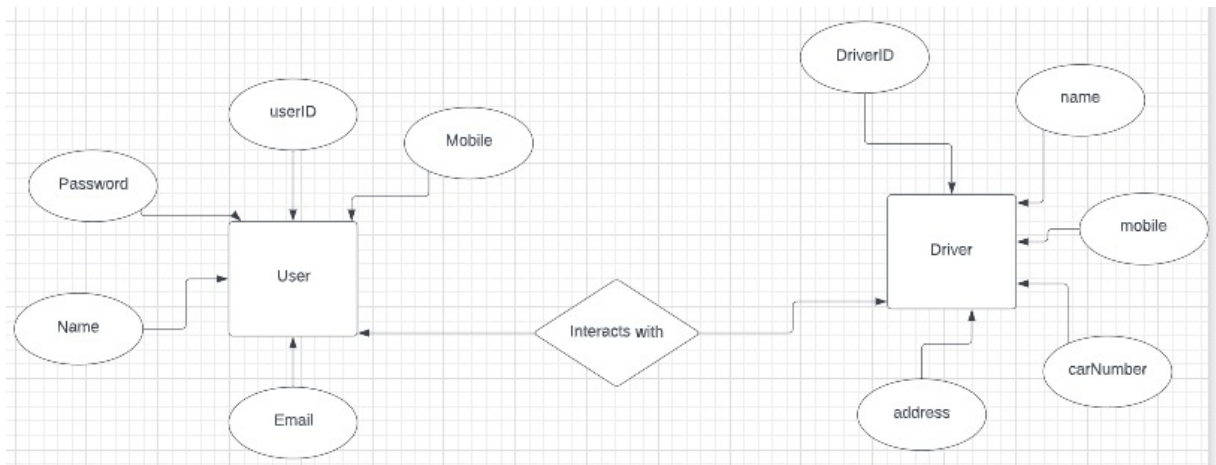


Fig 4.2.2 Data Flow Diagram level 1

### 4.3 Database Design



**Fig 4.3 Database Design**

# **CHAPTER – 5**

## **SYSTEM MODELING**

## 5.1 Detailed Class-Diagram

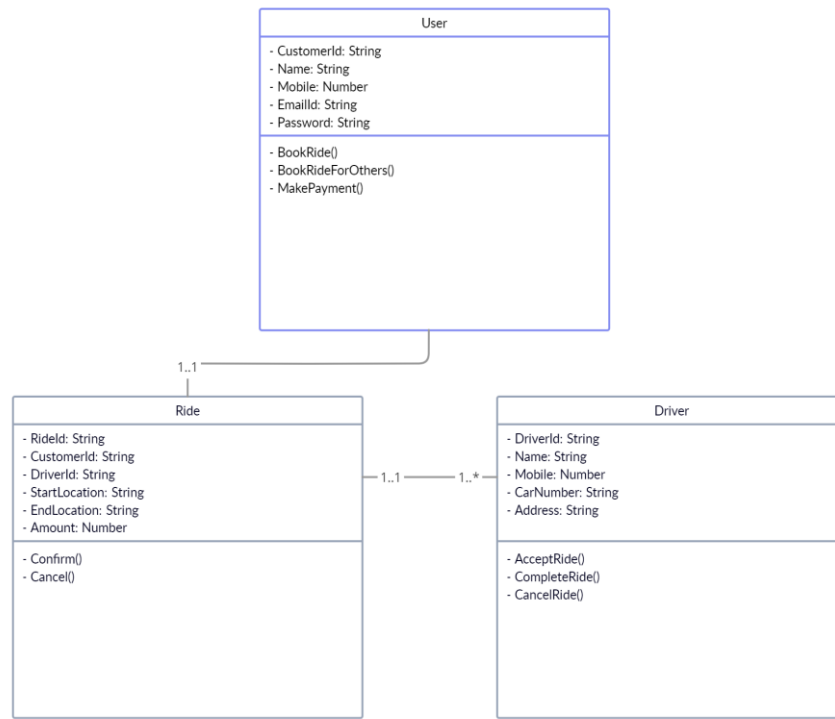


Fig 5.1.1 Class Diagram

## 5.2 Sequence diagram

### ➤ 5.2.1 User Registration

Sequential Digram :  
User Registration

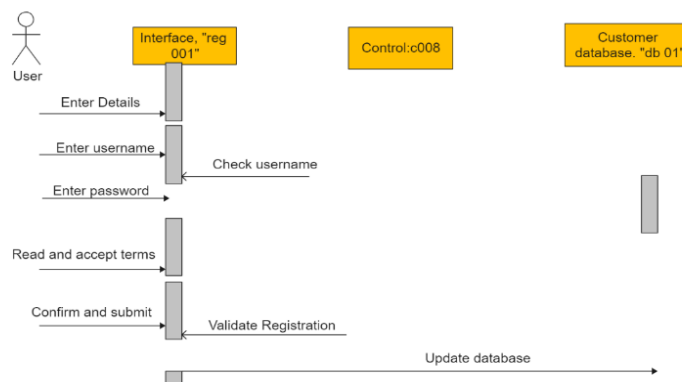


Fig 5.2.1 Sequence diagram (User Registration)

## ➤ 5.2.2 Reservation of car

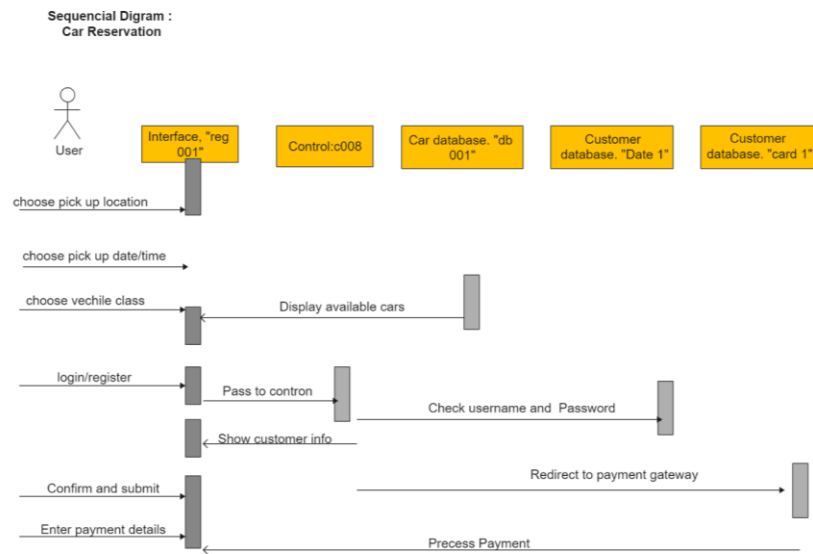


Fig 5.2.2 Sequence diagram (Reservation of car)

## ➤ 5.2.3 User Feedback

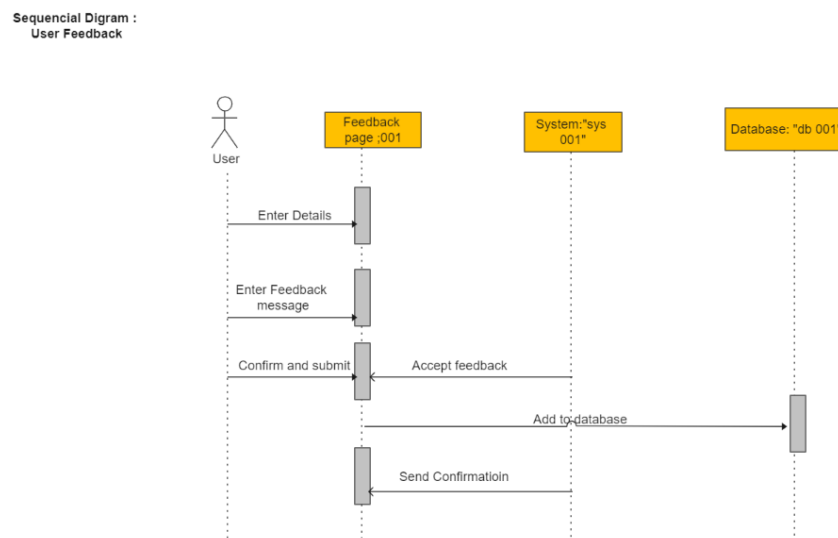


Fig 5.2.3 Sequence diagram (User Feedback)

## 5.3 Activity diagrams

### 5.3.1 Activity Diagram (For Registration)

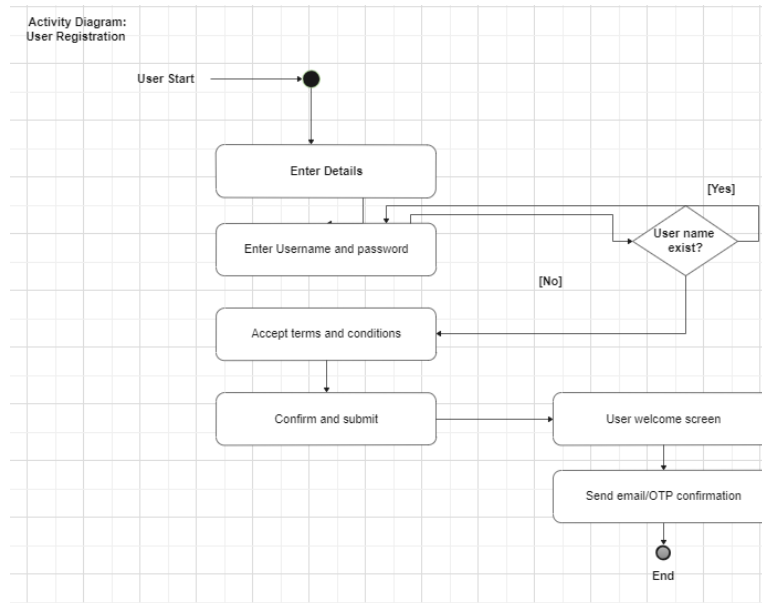


Fig 5.3.1 Activity Diagram (For Registration)

### 5.3.2 Activity Diagram (For Car Reservation)

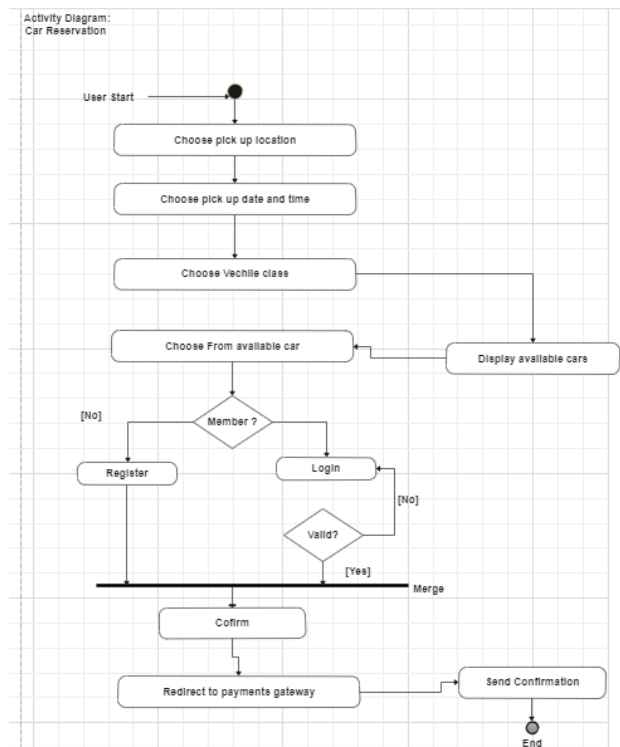
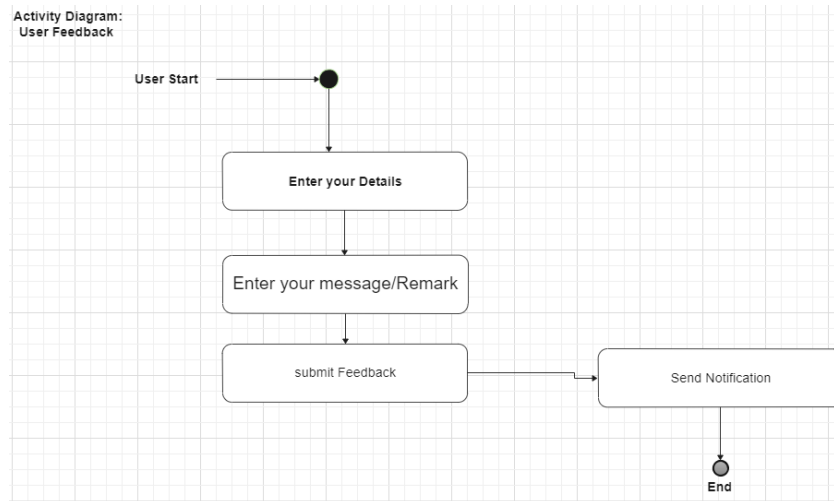


Fig 5.3.2 Activity Diagram (For Car Reservation)

### 5.3.3 Activity Diagram (For User Feedback)



**Fig 5.3.3 Activity Diagram (For User Feedback)**

## 5.4 Testing

Testing is the process of evaluating a system or its component(s) with the intent to find whether it satisfies the specified requirements or not. Testing is executing a system in order to identify any gaps, errors, or missing requirements in contrary to the actual requirements. Software testing is an activity performed to uncover errors. It is a critical element of software quality assurance and represents the ultimate review of specification, design, and coding. The purpose of software testing is to ensure whether the software functions appear to be working according to specifications and performance requirements. The software testing is an important activity carried out in order to improve the quality of software. For finding out possible errors the testing must be conducted systematically and test cases must be designed using disciplined techniques.

Testing principles:

- All tests should be traceable to customer requirements.
- Tests should be planned long before testing begins.
- Exhaustive testing is not possible.
- Testing should be conducted by an independent third party.

### 5.4.1 Testing Objective

The major testing objective is to design tests that systematically uncover types of errors with minimum time and effort. According to Glen Myers the testing objectives are:

- Testing is a process of executing a program with the intend of finding an error.
- A good test case is one that has high probability of finding an undiscovered error.

A successful test is one that uncovers and as-yet undiscovered error.

## 5.4.2 Testing Methods & Strategies

### Methods –

#### 1. Black Box Testing:

It is also called behavioural testing. This method focuses on the functional requirements of the software. Test cases are derived that fully exercise all functional requirements. Black box testing is testing software based on output requirements and without any knowledge of the internal structure or coding in the program. This testing uncovers errors like incorrect or missing functions, Interface errors performance errors, errors in data structures, initialization or termination errors.

#### 2. White Box Testing:

It is also called Structural testing or Glass box testing. This method is based on close examination of procedural details White box testing is the process of giving the input to the system and checking how the system processes that input to generate the required output. White box testing is considered as a security testing method that can be used to validate whether code implementation follows intended design, to validate implemented security functionality, and to uncover exploitable vulnerabilities.

There are 3 types of White box testing:

- Condition Testing
- Loop Testing
- Path Testing

### Strategies –

A strategy for software Testing integrates software test case design methods into a well-planned Series of steps that result in successful construction of software. Software testing strategies gives the road map for testing. A software testing strategy should be flexible enough to promote a customized testing approach at same time it must be right enough. Strategy is generally developed by project managers, software engineer and testing specialist.

There are four different software testing strategies.

1. Unit Testing: In this testing errors are detected from each software component individually. Various tests are conducted like testing of module interfaces, local data, and boundary conditions.
2. Integration Testing: In this testing interacting components are verified and interface errors are detected. Two types of integration testing are Incremental and Non-incremental. Focus of this testing is to uncover errors in design of software architecture, integrated function or operation, resource integration.
3. Acceptance/Validation testing: It is a testing conducted to ensure that software works correctly in user's working environment. It can be conducted over a period of weeks or months. Two types of acceptance testing are alpha testing and beta testing. It can be performed through a series of black box test. iv. System testing: In system testing all the system elements forming the system is tested as a whole. System testing falls within the scope of black box testing, and as such, should require no knowledge of the inner design of the code or logic System testing is actually a series of different tests whose primary purpose is to fully exercise the computer-based system.



### 5.4.3 Test Case

A test case is a document, which has a set of test data, preconditions, expected results and post condition, developed for a particular test scenario in order to verify compliance against a specific requirement.

Test Case acts as the starting point for the test execution, and after applying a set of input values; the application has a definitive outcome and leaves the system at some end point or also known as execution post condition

**Table 5.4.3 shows Test cases**

Test Case	Precondition	Test Steps	Test Data	Expected Result
Verify login with valid credentials	User should have a network connection	Open Application Enter valid email Enter valid password Click on “login” button	Email: <a href="mailto:rohit12@gmail.com">rohit12@gmail.com</a> Password: rohit123@	User should be login successfully
Verify login with invalid credentials	User should have a network connection	Open Application Enter invalid email Enter valid password Click on “login” button	Email: <a href="mailto:ro2@gmail.com">ro2@gmail.com</a> Password: rohit13@	User should not be able to login and error should be shown
Verify Sign up with valid credentials	User should have a network connection	Open Application Enter valid name Enter valid email Enter valid password Enter confirm password Click on “Signup” button	Name:Rohit Sharma Email: <a href="mailto:rohit12@gmail.com">rohit12@gmail.com</a> Password: rohit123@	User should be Signup successfully
Verify Sign up with invalid credentials	User should have a network connection	Open Application Enter valid name Enter invalid email Enter valid password Enter confirm password Click on “Signup” button	Name:Rohit Sharma Email: <a href="mailto:r12@gmail.com">r12@gmail.com</a> Password: rohit13@	User should not be able to Sign up and error should be shown
Functionality	User should have a network connection	Open Application enter location	Entered location	Nearby Driver displayed
Functionality	User should have a network connection	Open Application Give Location access	User Location	Display error if the hospital location is not displayed

Functionality	User should have a network connection	Open Application Enter valid location address details	Entered locations	Displays the cars/drivers
Functionality	User should have a network connection	Open Application Enter invalid address	Not able to find the car	No car / drivers displayed

## **CHAPTER-6**

# **CONCLUSION AND FUTURE WORK**

## 6.1 CONCLUSION AND FUTURE WORK

Our project is an effort and is applicable to reduce the unemployment problem among Vehicle drivers. The website shows the profile of trained and verified professional drivers so that they can get hired by the other user of the website like travel agencies, normal users and car Attacher.

Our website provides on-demand vehicle booking to the customer for long-distance at a reasonable cost. Our website is applicable for those who have a vehicle and want to make a profit from the same. An individual can attach their car to registered travel agencies and take booking for the same. We provide a solution for those who deal with vehicle-related business.

- Website will help travel agencies by providing them a platform for expanding their business and connecting with more than one user.
- Provide employment to vehicle drivers as their profile is shown to registered travel agencies, car Attachers, and normal users or customers.
- Vehicle Attacher can attach their car to the travel agencies of their choice so that they can get the best value of their car.
- User has benefits for booking and selecting vehicles between many Travels agenesis of their city and can enjoy trips at affordable price.

### Future Work

- In near future, we are planning to hire cars daily basis. So that client can give their car to the customer on daily basis.
- We are planning to add a new feature i.e., pay after the trip.
- We are working to increase automation in the system to increase user experience greatly.

## 6.2 Bibliography

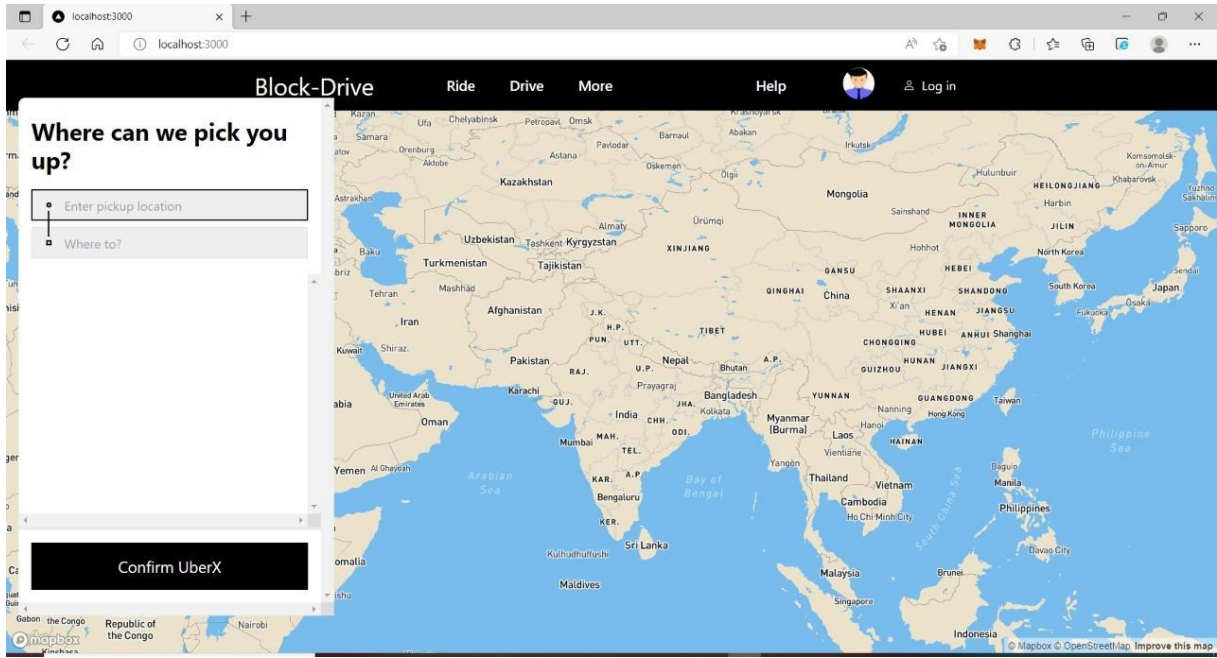
- <https://reactjsexample.com> : ReactJs examples to understand its basic uses
- <https://nextjs.org/docs/getting-started> : Next Js Documentation
- <https://expressjs.com/en/guide/routing.html> : Express Js Documentation
- <https://firebase.google.com/docs>: Firebase Documentation
- <https://nodejs.org/en/docs/> Node Js Documentation
- <https://developers.google.com/maps/documentation> : Google Maps API.

## **CHAPTER-7**

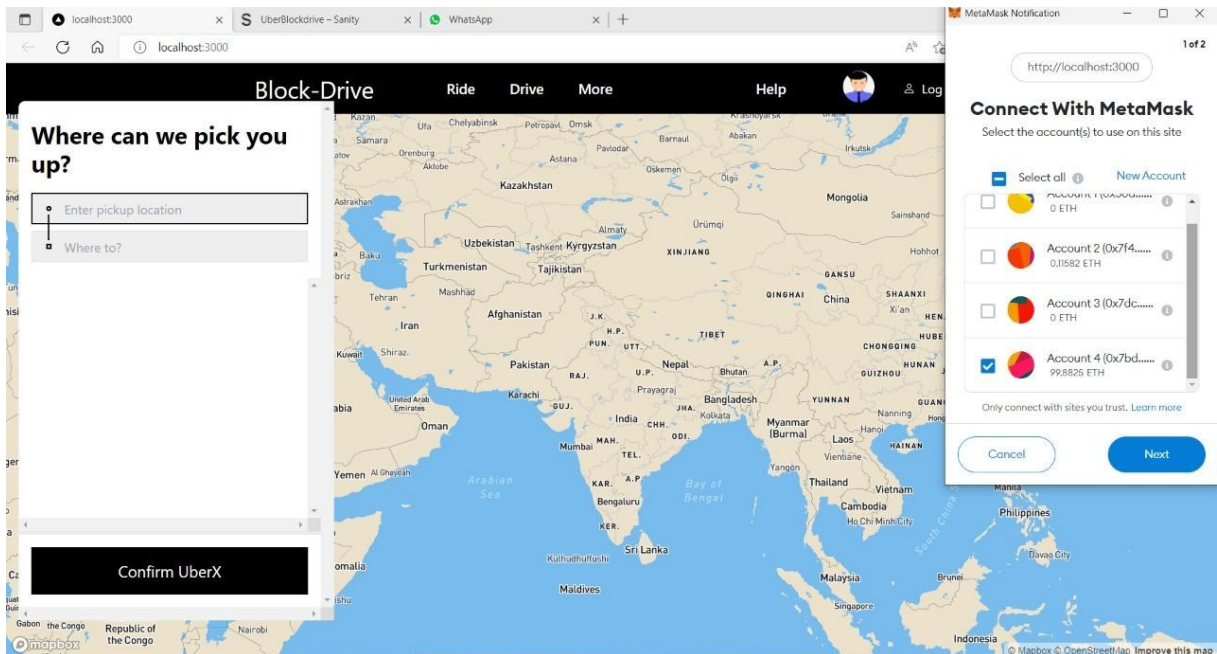
### **SNAPSHOTS**

## 7.1 Implementation & Testing (snapshots)

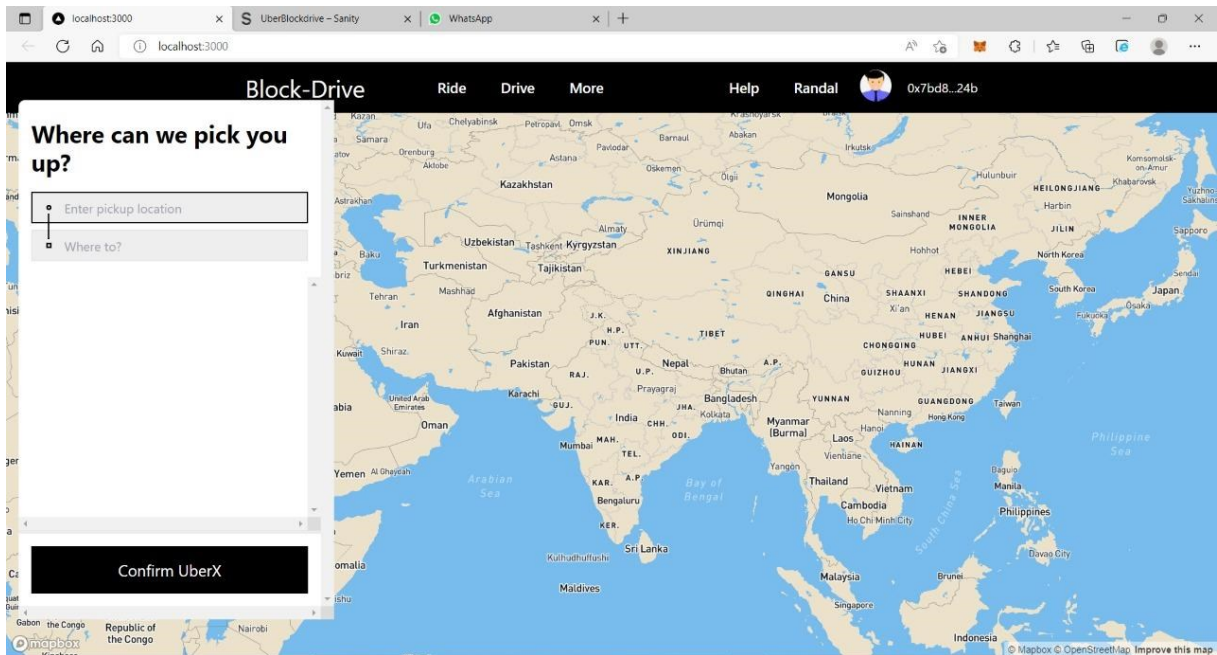
### 7.1.1 Home Page



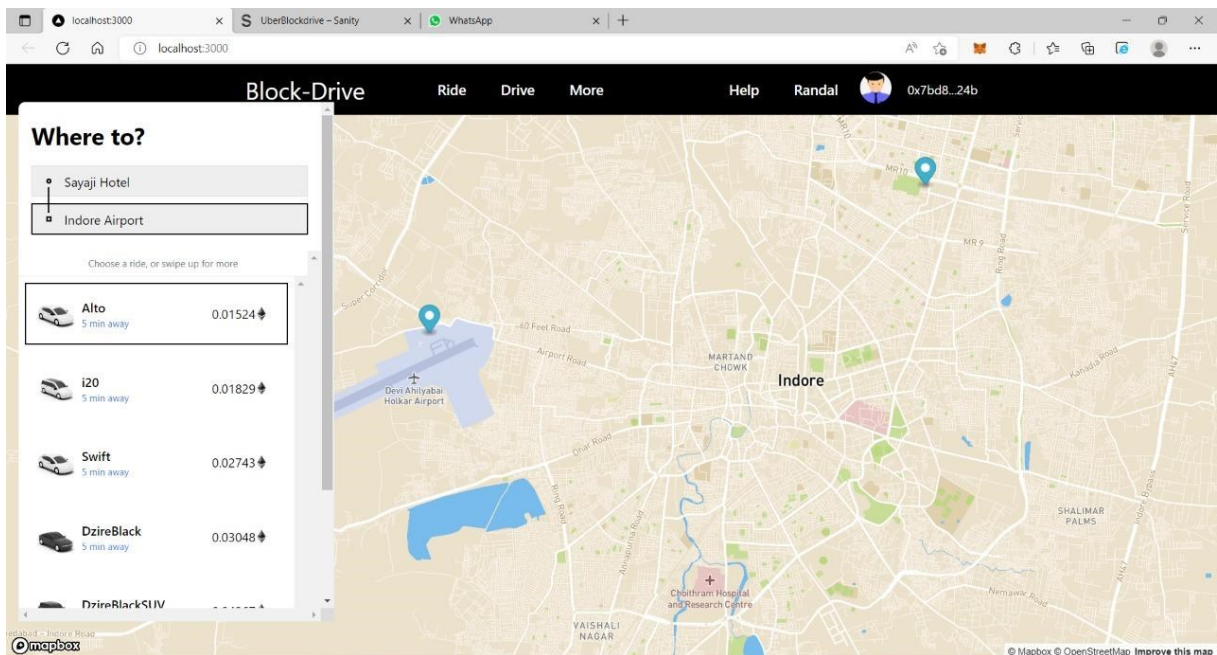
### 7.1.2 Login Confirmation



### 7.1.3 After Login

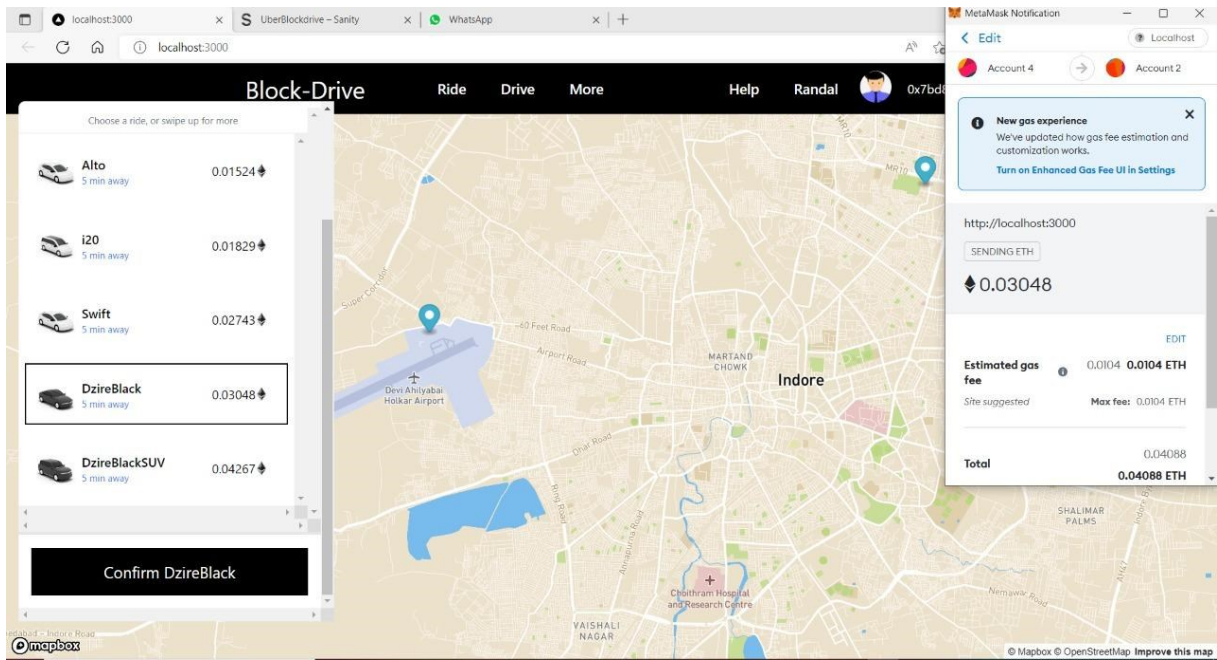


### 7.1.4 Ride Selector

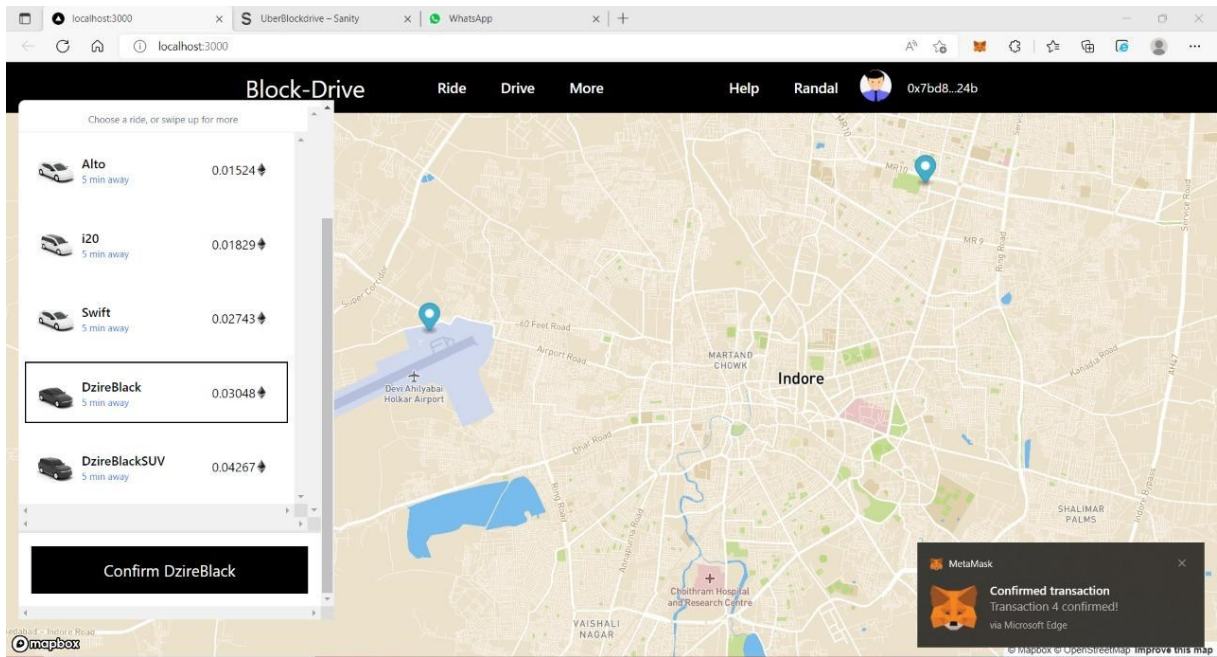




## 7.1.5 Ride Confirmation



## 7.1.6 Transaction Successful





## 7.1.7 Logout

