ON ROAD VEHICLE BREAKDOWN HELP ASSISTANCE

Application Development Report Submitted
In partial fulfillment of the requirements for the award of the degree of

Bachelor of Technology
In
Information Technology

By

R. NAMRATHA 22N31A12F2

R.BANTHILAL 22N31A12F1

Y.NISHANTH 22N31A12K1

Under the esteemed guidance of

MRS.T.SHILPA

ASSISTANT PROFESSOR

Department of Information Technology

Malla Reddy College of Engineering and Technology

(Autonomous Institution-UGC, Govt. of India)

(Affiliated to JNTUH, Hyderabad, Approved by AICTE, NBA&NAAC with 'A' Grade)
Maisammaguda, Kompally, Dhulapally, Secunderabad – 500100
Website: www.mrcet.ac.in

Malla Reddy College of Engineering and Technology

(Autonomous Institution-UGC, Govt. of India)

(Affiliated to JNTUH, Hyderabad, Approved by AICTE, NBA&NAAC with 'A' Grade)
Maisammaguda, Kompally, Dhulapally, Secunderabad – 500100
Website: www.mrcet.ac.in

CERTIFICATE

This is to certify that this is the bonafide record of the Application Development -1 entitled **"ON ROAD VEHICLE BREAKDOWN HELP ASSISTANCE".** submitted by R.NAMRATHA(22N31A12F2) , R.BANTHILAL (22N31A12F1) and Y.NISHANTH(22N31A12K1) of B. Tech in the partial fulfillment of the requirements for the degree of Bachelor of Technology in Information Technology, Department of IT during the year 2024-2025.

Internal Guide

MRS.T.SHILPA
ASSISTANT PROFESSOR

Head of the Department

DR.G.SHARADHA
PROFESSOR

External Examiner

ABSTRACT

When a vehicle breaks down on the road, getting help quickly is crucial for safety and reducing delays. This document explains how on-road vehicle breakdown assistance works to help drivers in trouble. The assistance is provided, like emergency teams, roadside help. The use of technology, such as GPS for tracking and communication tools, makes these services faster and more effective. On Road Vehicle Breakdown Help Assistance website is going to be a good solution for the people who seek help in the remote locations with mechanical issues of their vehicle. Users of the On Road Vehicle Breakdown Help Assistance Website will be the registered public and they will be getting connected with the particular mechanic through the trustworthy application system. In an existing system there are users who have their own mechanic database which is very minimal. And also they have no idea if their vehicles are broke down or had any mechanical issue in remote locations or any long distant locations from their known mechanic shops.Here, the users of On Road Vehicle Breakdown Help Assistance website , The system can search for list of mechanic at any location or the nearby locations which will help them in an unexpected situations raised by the mechanical issues of their vehicles.

TABLE OF CONTENTS

1. INTRODUCTION

1.1PURPOSE AND OBJECTIVES

Vehicle breakdowns can be really frustrating and happen when we least expect them. Our project, "On-Road Vehicle Breakdown Help Assistance," looks at how to handle these situations better. We'll explore common problems like flat tires and dead batteries, and see how current help services work. Our goal is to find new and improved ways to make roadside assistance faster and more effective. Through our research and analysis, we hope to provide practical insights and strategies that can help drivers manage breakdowns with greater ease and confidence.

1.2.EXISTING AND PROPOSED SYSTEM

EXISTING SYSTEM:

Currently, roadside assistance services offer essential help for drivers facing breakdowns. These services include tow trucks for transporting vehicles to repair shops,flat tire changes, fuel delivery for out-of-gas situations and many more .While effective, the existing system can face challenges such as variable response times, limited service coverage in remote areas, and delays due to the need for dispatch and resource availability. By examining existing services and their limitations, we aim to propose innovative solutions that can enhance the efficiency and effectiveness of breakdown support.

PROPOSED SYSTEM:-

Our proposed system aims to enhance roadside assistance by integrating advanced technology and improving service efficiency. We suggest developing a website that allows drivers to request help quickly, track the arrival of assistance in real time, and provide detailed vehicle diagnostics.Additionally, improvements such as faster response times, remote diagnostics, and on-the-spot minor repairs could significantly enhance the convenience and effectiveness of roadside support, addressing the limitations of the current system and providing a more seamless experience for drivers.

2. APPLICATION DESCRIPTION

2.1 HARDWARE REQUIREMENTS:-

Processor: Intel i5

RAM: 8 GB minimum

Storage: SSD with at least 256 GB

2.1 SOFTWARE REQUIREMENTS:-

IDE : Visual Studio

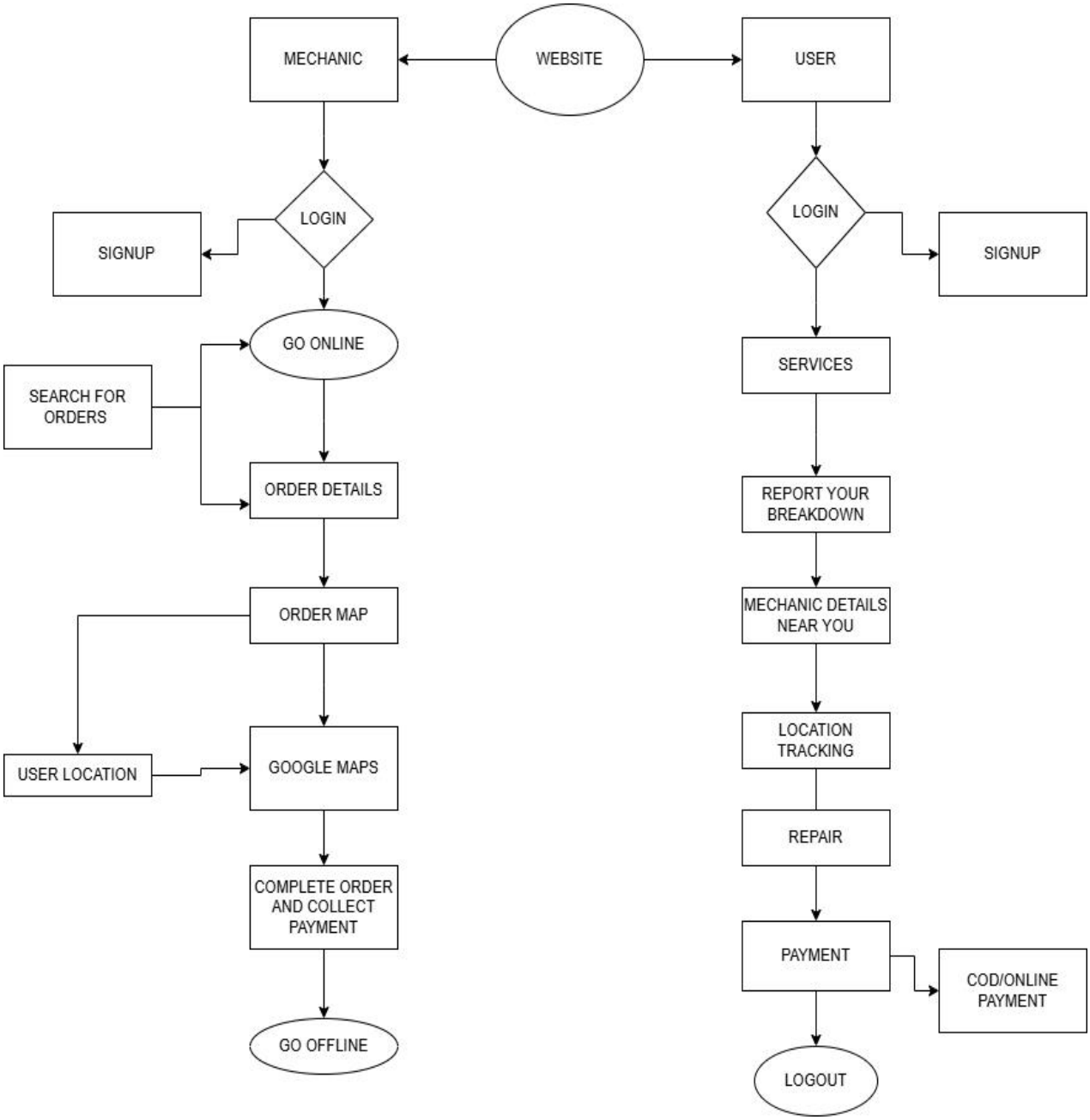
Database : MongoDB

Operating System : Windows

Scripting Languages: HTML, CSS, and JavaScript

2.2METHODOLOGY

System Architecture



MODULES

USER (DRIVER) MODULE

The User Module manages all user-related activities, ensuring a secure and personalized experience. It handles user profiles, including personal details, contact information, and service history. Through this module, users can securely log in with OTP verification, request assistance, and choose the type of service they need. The module provides real-time tracking and notifications to keep users updated on mechanic status and arrival. It also maintains a record of past services and allows users to leave ratings and reviews, enhancing the overall reliability and user experience of the system.

MECHANIC MODULE

The Mechanic Module manages all information related to mechanics, including their profiles, real-time location, availability status, and service types (e.g., tire repair, fuel delivery). It allows the app to search for nearby mechanics, display their details, and track their location. The module also records user ratings and reviews for quality assurance, helping users choose reliable mechanics based on past performance.

3. SOURCE CODE

INDEX.HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Roadside Assistance - Login</title>
    <style>
        body {
            margin: 0;
            padding: 0;
            background-color: #222;
            color: #fff;
            font-family: Arial, sans-serif;
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
        }

        .container {
            display: flex;
            width: 1500px; /* Adjust width as needed */
            height: 500px; /* Increased height */
            overflow: hidden;
        }

        .left {
            flex: 1.5;
```

```
    position: relative;
}

.left img {
    width: 100%;
    height: 100%;
    object-fit: cover; /* Ensures the image covers the entire area */
}

.right {
    flex: 1;
    background-color: #222;
    padding: 40px; /* Increased padding */
    display: flex;
    flex-direction: column;
    justify-content: center;
    align-items: flex-start; /* Align items to the left */
    text-align: left; /* Align text to the left */
}

h1 {
    font-size: 36px; /* Increased font size for heading */
    margin-bottom: 20px;
    text-align: center; /* Center the heading */
    width: 100%; /* Make the heading take full width */
}

h2 {
    font-size: 24px; /* Increased font size for subheadings */
    margin: 10px 0;
    text-align: center; /* Center the subheadings */
```

```
    width: 100%; /* Make the subheadings take full width */
}

p {
    font-size: 18px; /* Increased font size for paragraphs */
    margin-bottom: 30px; /* Adjusted margin for better spacing */
}

.button-container {
    display: flex; /* Use flexbox to align buttons */
    justify-content: flex-end; /* Align buttons to the right */
    width: 100%; /* Make the container full width */
}

.right button {
    background-color: #28a745;
    color: white;
    padding: 15px; /* Increased padding for buttons */
    width: 30%; /* Adjust width for each button */
    border: none;
    border-radius: 5px;
    cursor: pointer;
    font-size: 18px; /* Increased font size for buttons */
    margin: 10px 1%; /* Margin around buttons */
}

.right button:hover {
    background-color: #218838;
}

.right a {
```

```
            color: #28a745;
            text-decoration: none;
        }

        .right a:hover {
            text-decoration: underline;
        }
    </style>
</head>
<body>
    <div class="container">
        <!-- Left Side with Full Image -->
        <div class="left">
            <img src="https://www.icicilombard.com/docs/default-source/assets/health/marketing/images/rsa-car-insurance3.png" alt="Roadside Assistance Image">
        </div>

        <!-- Right Side with Heading, Subheadings, and Buttons -->
        <div class="right">
            <h1>ON ROAD VEHICLE BREAKDOWN HELP ASSISTANCE</h1>
            <h2>From Breakdown to Back on Track!</h2>
            <h2>Fast, reliable roadside assistance wherever you are. One click and we'll be there in no time!</h2>
            <div class="button-container">
                <button onclick="window.location.href='login.html'">Login</button>
                <button onclick="window.location.href='mechanic_login.html'">Mechanic Login</button>
<!-- New Mechanic Login Button -->
                <button onclick="window.location.href='mechanic_signup.html'">Signup</button>
            </div>
        </div>
    </div>
```

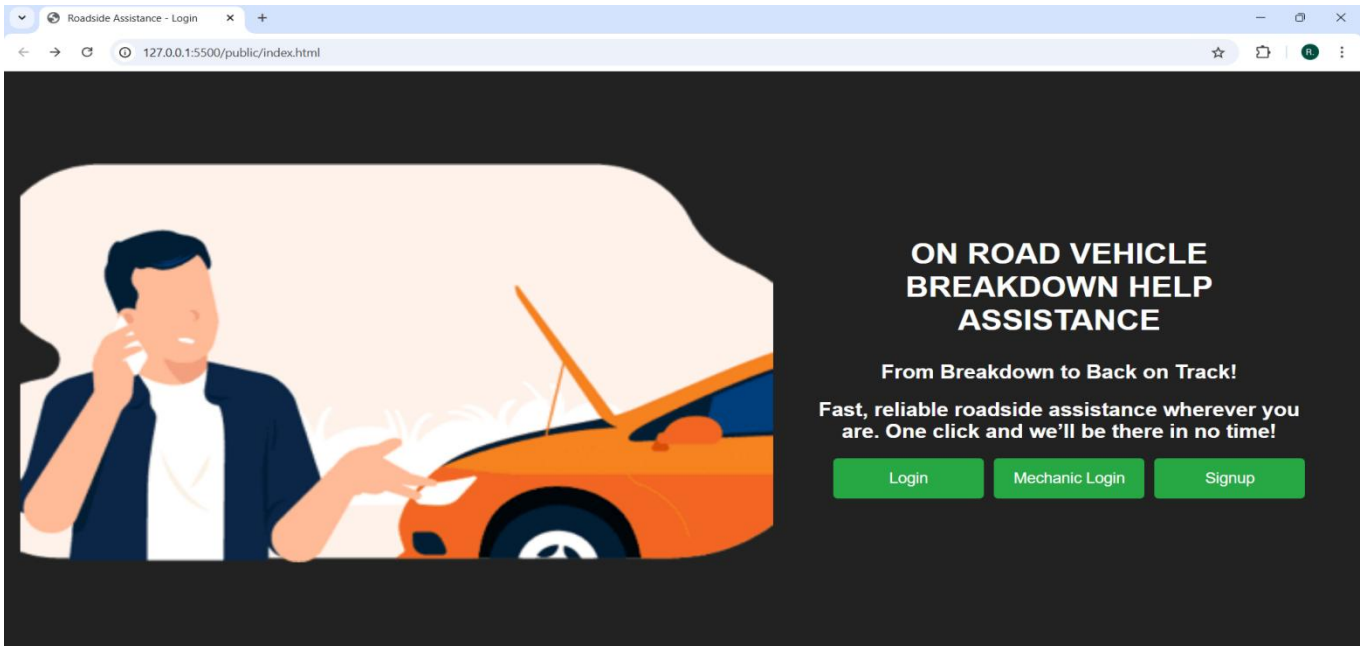
```
</body>
</html>
```

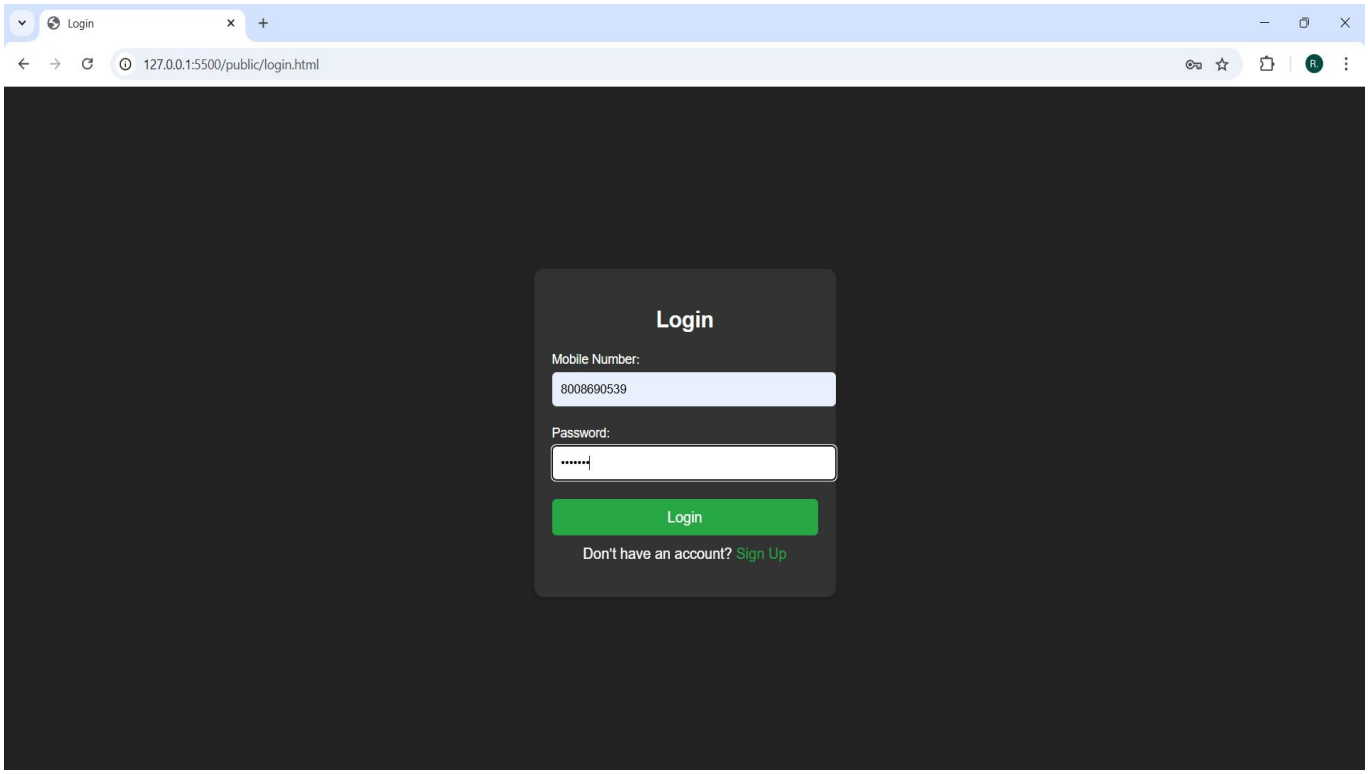
SERVER.JS

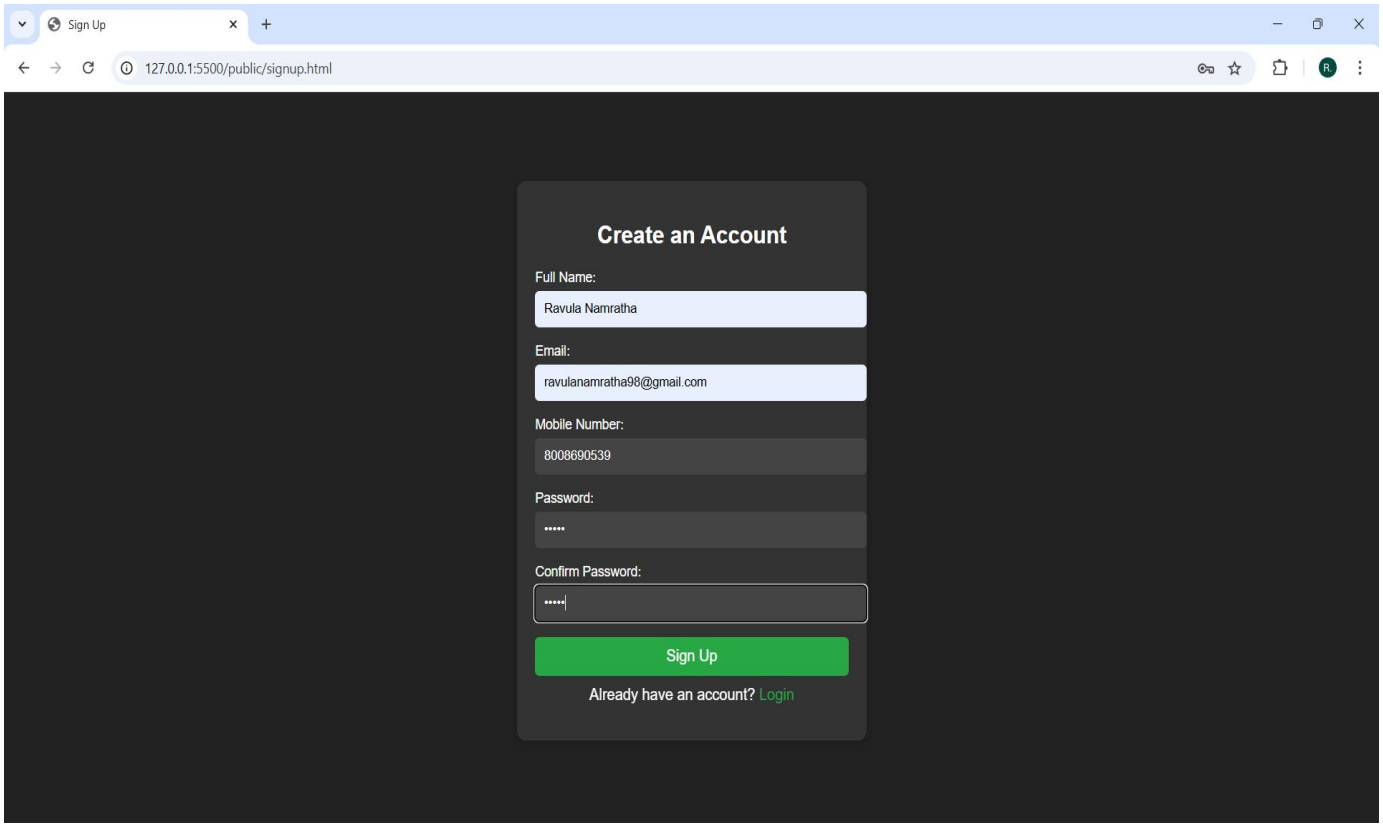
```
const express = require('express');
const connectDB = require('./config/db');
const path = require('path');
const fs = require('fs');
const app = express();

// Connect to MongoDB
connectDB();

// Middleware to parse JSON bodies
app.use(express.json());

// Log public directory contents for debugging
console.log('Public Directory Contents:', fs.readdirSync(path.join(__dirname, 'public')));

// Routes
app.use('/auth', require('./routes/auth'));
app.use('/mechanic', require('./routes/mechanic'));

// Serve static files from the 'public' directory
app.use(express.static(path.join(__dirname, 'public')));

// Force redirect to login.html when accessing '/'
app.get('/', (req, res) => {
    const filePath = path.join(__dirname, 'public', 'login.html');

    // Check if the file exists
```

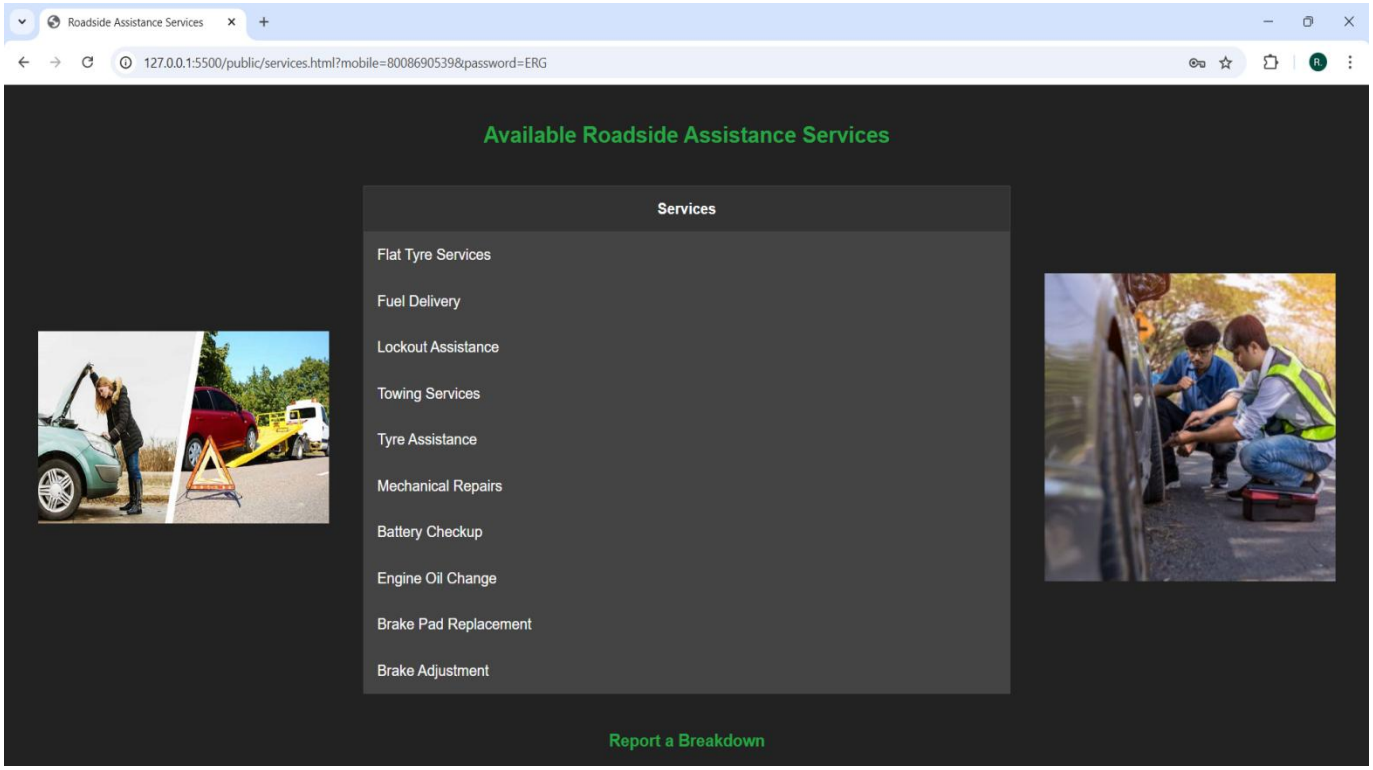
```
    if (fs.existsSync(filePath)) {
        res.sendFile(filePath);
    } else {
        res.status(404).send('login.html not found');
    }
});

// Port setup
const PORT = process.env.PORT || 5000;
app.listen(PORT, () => {
    console.log(`Server running on port ${PORT}`);
});
```

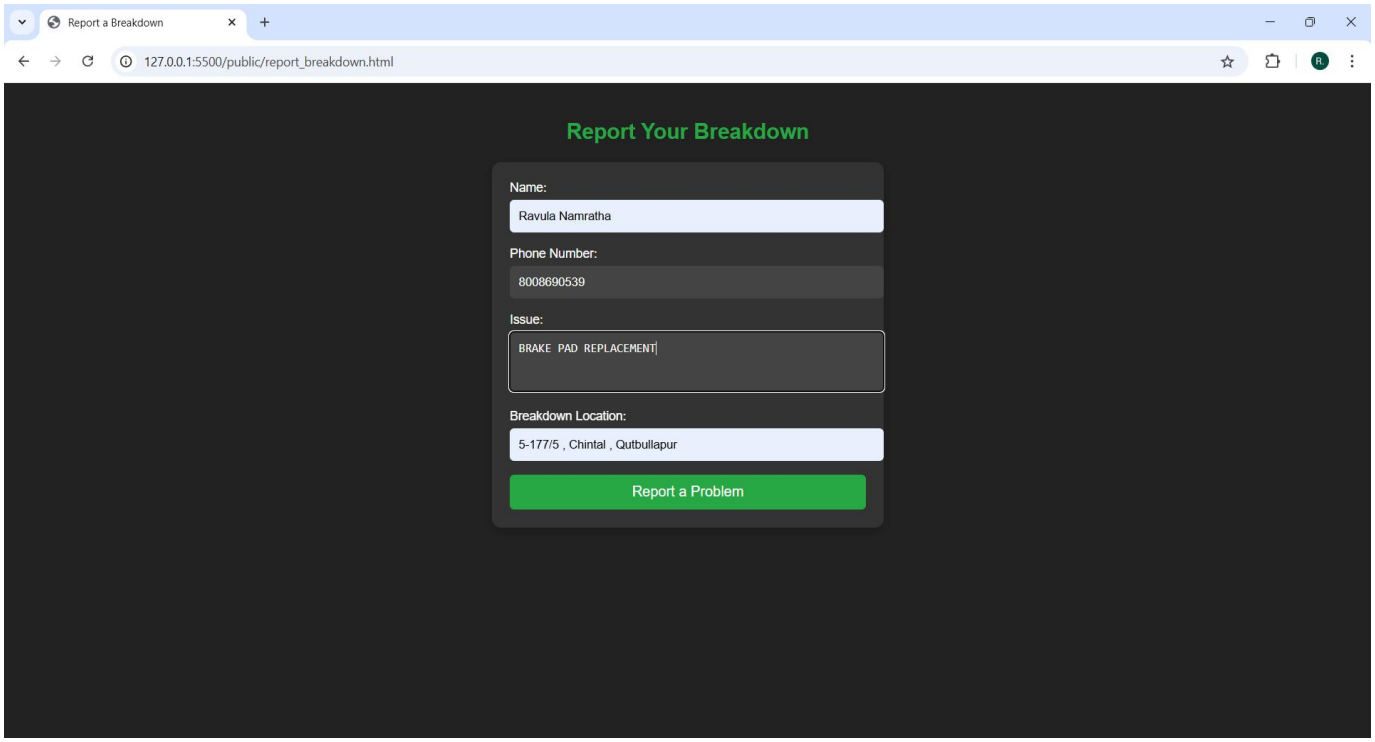
4.RESULT

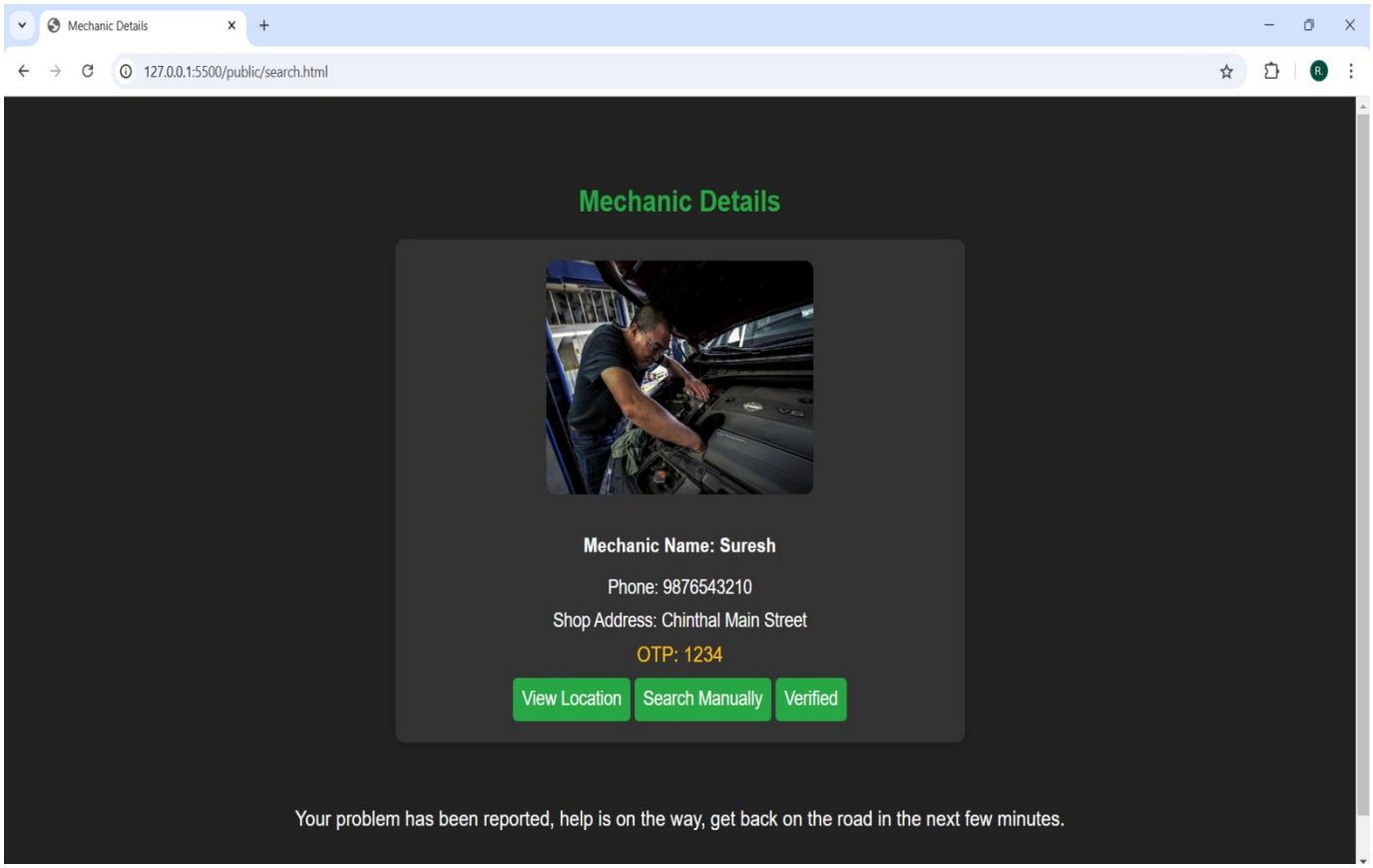

Roadside Assistance - Login
127.0.0.1:5500/public/index.html
ON ROAD VEHICLE BREAKDOWN HELP ASSISTANCE
From Breakdown to Back on Track!
Fast, reliable roadside assistance wherever you are. One click and we'll be there in no time!
Login
Mechanic Login
Signup

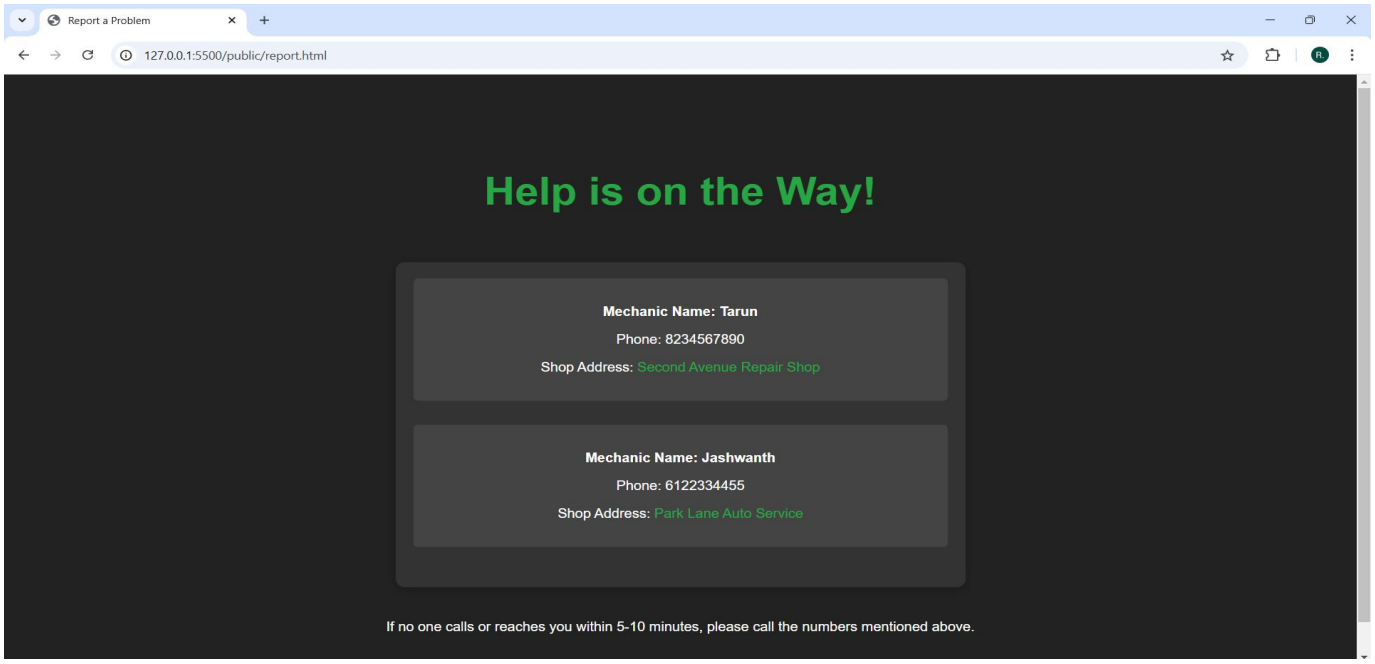

Login
127.0.0.1:5500/public/login.html
Login
Mobile Number:
8008690539
Password:
Login
Don't have an account? Sign Up

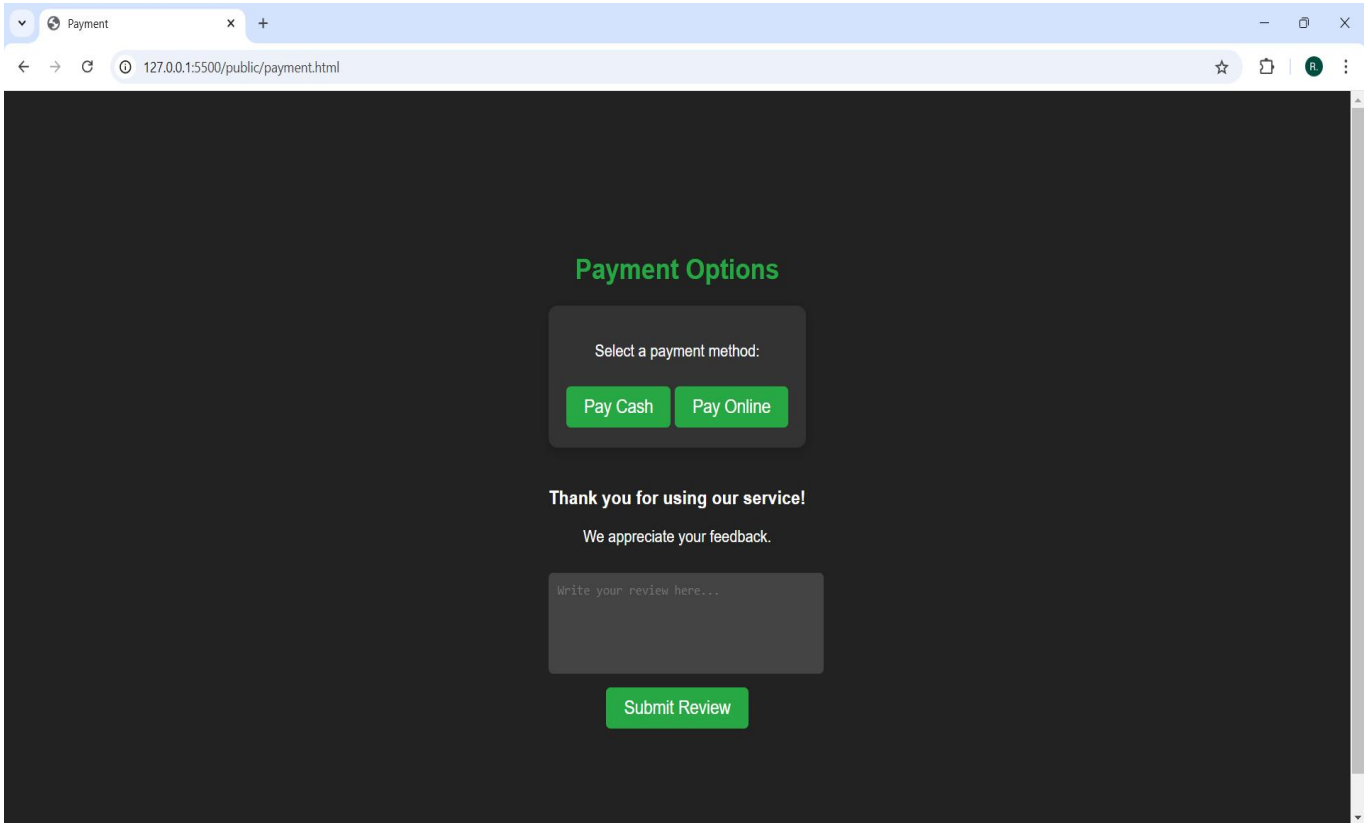

Sign Up
127.0.0.1:5500/public/signup.html
Create an Account
Full Name:
Ravula Namratha
Email:
ravulanamratha98@gmail.com
Mobile Number:
8008690539
Password:
Confirm Password:
Sign Up
Already have an account? Login

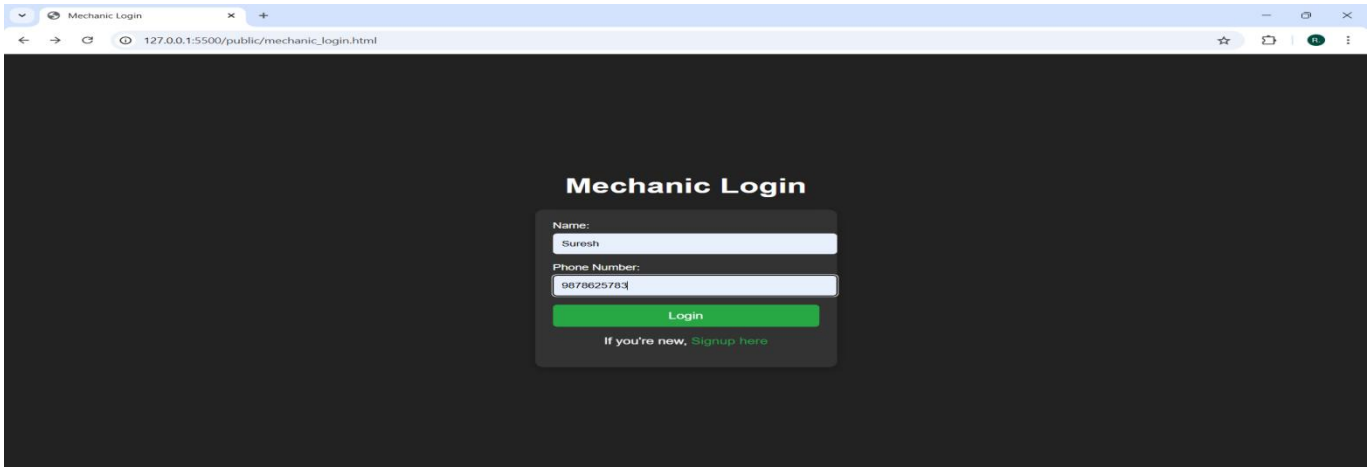

Roadside Assistance Services
127.0.0.1:5500/public/services.html?mobile=8008690539&password=ERG
Available Roadside Assistance Services
Services
Flat Tyre Services
Fuel Delivery
Lockout Assistance
Towing Services
Tyre Assistance
Mechanical Repairs
Battery Checkup
Engine Oil Change
Brake Pad Replacement
Brake Adjustment
Report a Breakdown

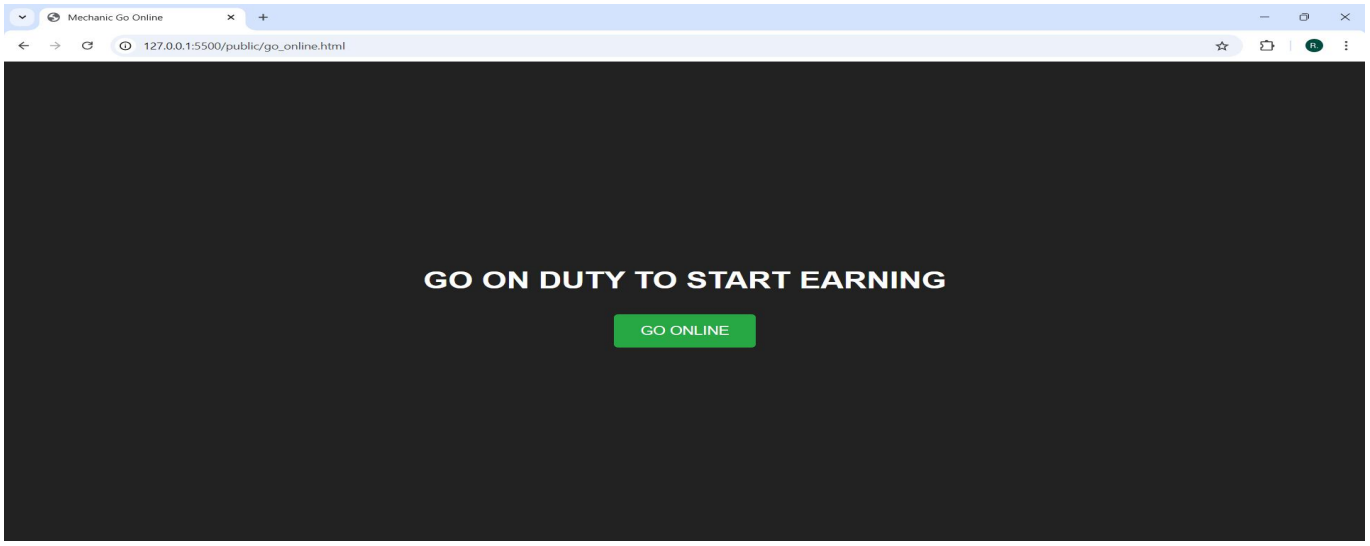

Report a Breakdown
127.0.0.1:5500/public/report_breakdown.html
Report Your Breakdown
Name:
Ravula Namratha
Phone Number:
8008690539
Issue:
BRAKE PAD REPLACEMENT
Breakdown Location:
5-177/5 , Chintal , Qutbullapur
Report a Problem

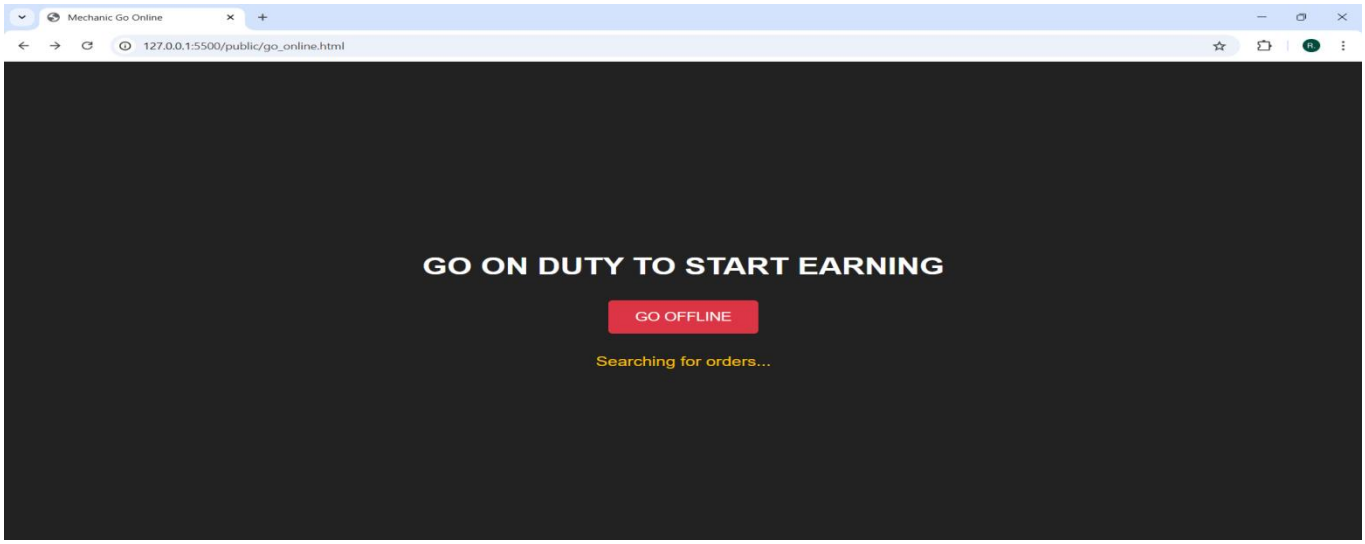

Mechanic Details
127.0.0.1:5500/public/search.html
Mechanic Details
Mechanic Name: Suresh
Phone: 9876543210
Shop Address: Chinthal Main Street
OTP: 1234
View Location
Search Manually
Verified
Your problem has been reported, help is on the way, get back on the road in the next few minutes.

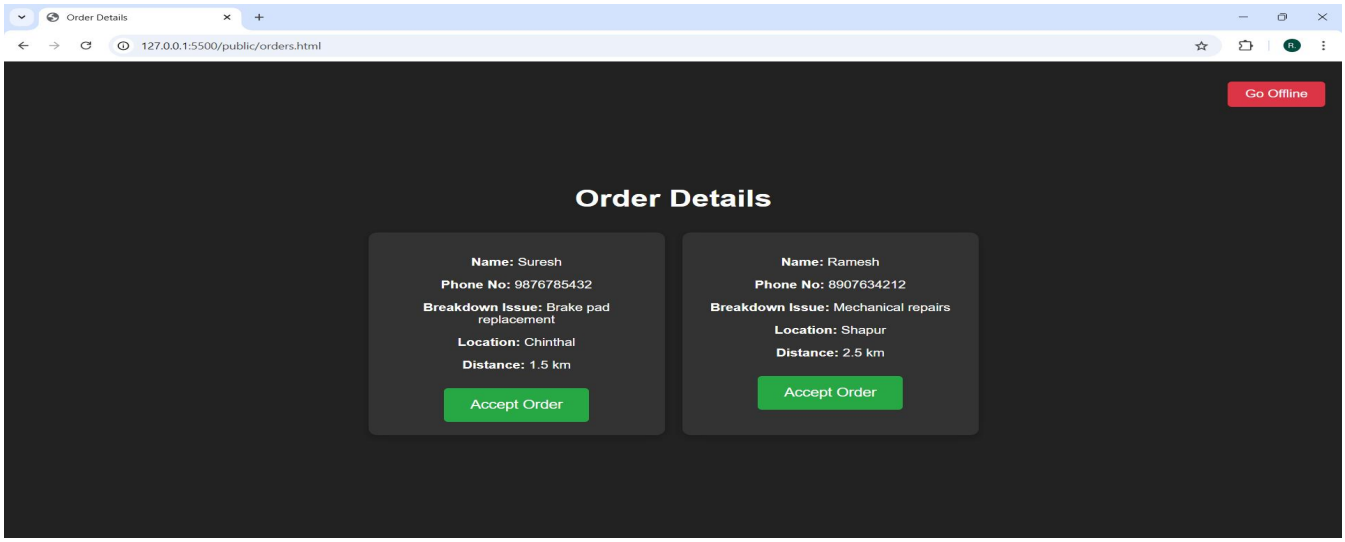

Report a Problem
127.0.0.1:5500/public/report.html
Help is on the Way!
Mechanic Name: Tarun
Phone: 8234567890
Shop Address: Second Avenue Repair Shop
Mechanic Name: Jashwanth
Phone: 6122334455
Shop Address: Park Lane Auto Service
If no one calls or reaches you within 5-10 minutes, please call the numbers mentioned above.

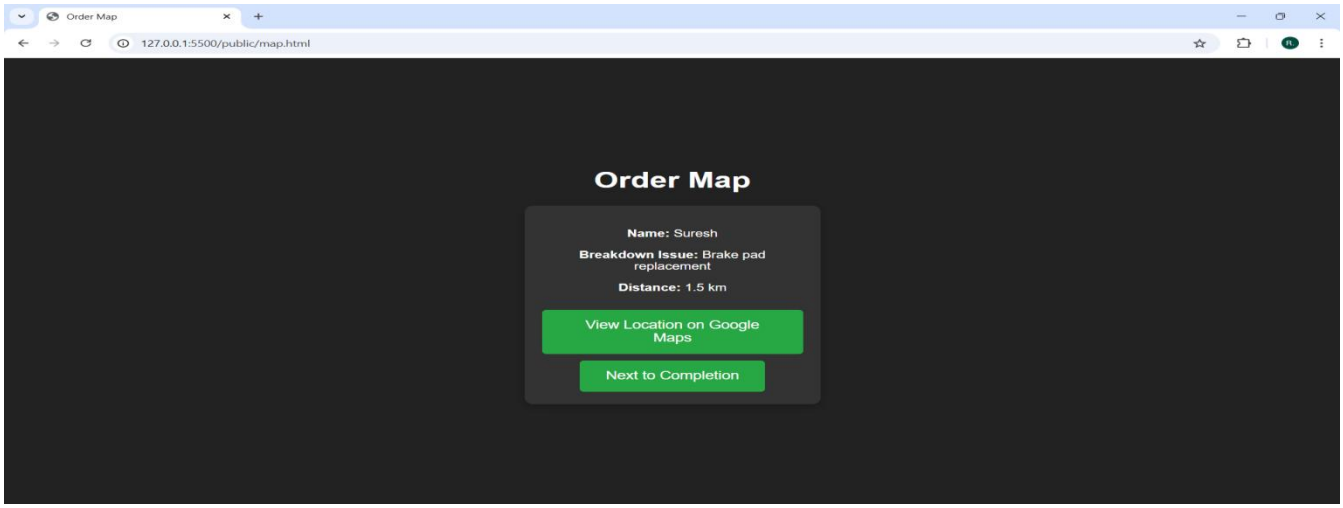

Payment
127.0.0.1:5500/public/payment.html
Payment Options
Select a payment method:
Pay Cash
Pay Online
Thank you for using our service!
We appreciate your feedback.
Write your review here...
Submit Review

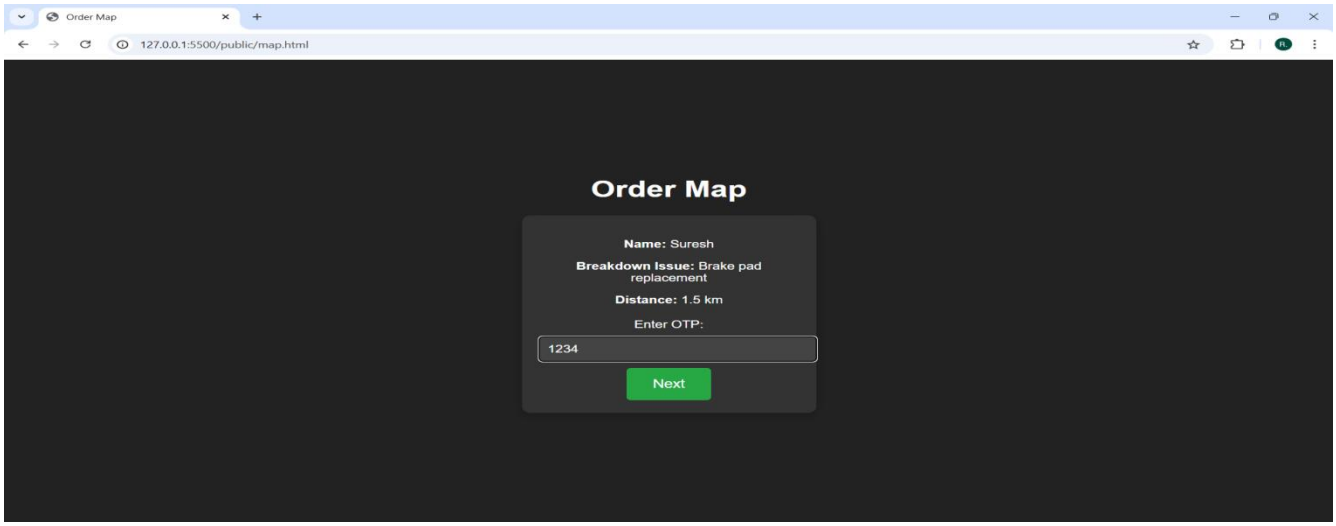

Mechanic Login
127.0.0.1:5500/public/mechanic_login.html
Mechanic Login
Name:
Suresh
Phone Number:
9878625783
Login
If you're new, Signup here

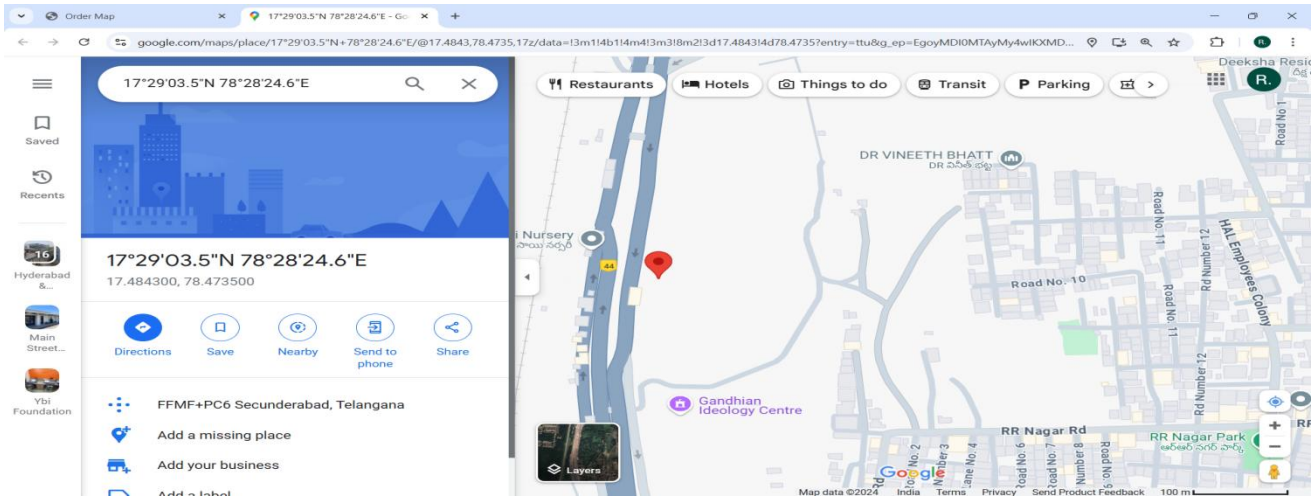

Mechanic Go Online
127.0.0.1:5500/public/go_online.html
GO ON DUTY TO START EARNING
GO ONLINE

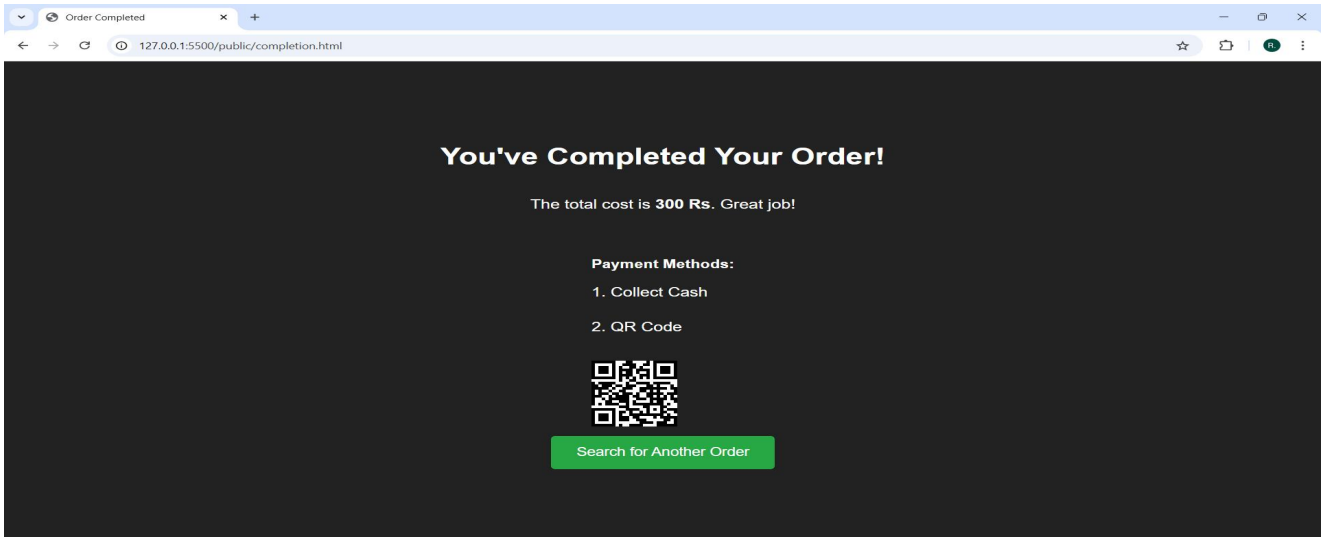

Mechanic Go Online
127.0.0.1:5500/public/go_online.html
GO ON DUTY TO START EARNING
GO OFFLINE
Searching for orders...

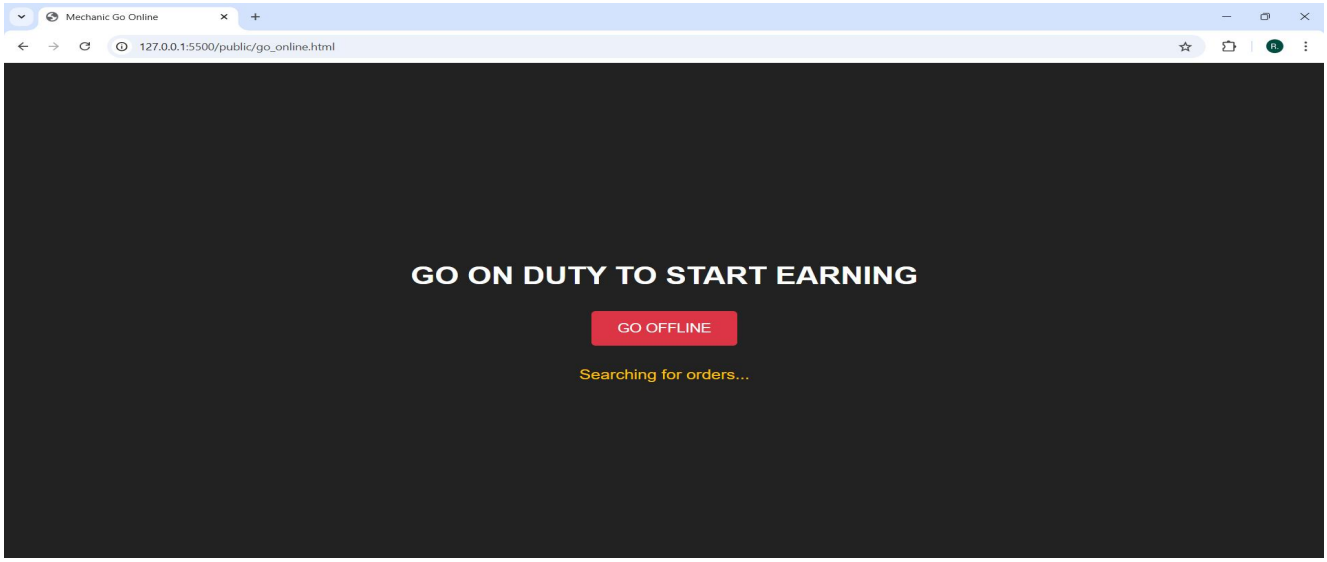

Order Details
127.0.0.1:5500/public/orders.html
Go Offline
Order Details
Name: Suresh
Phone No: 9876785432
Breakdown Issue: Brake pad replacement
Location: Chinthal
Distance: 1.5 km
Accept Order
Name: Ramesh
Phone No: 8907634212
Breakdown Issue: Mechanical repairs
Location: Shapur
Distance: 2.5 km
Accept Order


Order Map
127.0.0.1:5500/public/map.html
Order Map
Name: Suresh
Breakdown Issue: Brake pad replacement
Distance: 1.5 km
View Location on Google Maps
Next to Completion


Order Map
127.0.0.1:5500/public/map.html
Order Map
Name: Suresh
Breakdown Issue: Brake pad replacement
Distance: 1.5 km
Enter OTP:
1234
Next


Order Map
17°29'03.5"N 78°28'24.6"E
google.com/maps/place/17°29'03.5"N+78°28'24.6"E/@17.4843,78.4735,17z/data=!3m1!4b1!4m4!3m3!8m2!3d17.4843!4d78.4735?entry=ttu&g_ep=EgoyMDI0MTAyMy4wIKXMD...
17°29'03.5"N 78°28'24.6"E
17.484300, 78.473500
Directions
Save
Nearby
Send to phone
Share
FFMF+PC6 Secunderabad, Telangana
Add a missing place
Add your business
Saved
Recents
Restaurants
Hotels
Things to do
Transit
Parking
DR VINEETH BHATT
Road No. 10
Road No. 11
Road No. 12
HAL Employees Colony
Gandhian Ideology Centre
RR Nagar Rd
RR Nagar Park
Layers
Map data ©2024
India
Terms
Privacy
Send Product Feedback
100 m


Order Completed
127.0.0.1:5500/public/completion.html
You've Completed Your Order!
The total cost is 300 Rs. Great job!
Payment Methods:
1. Collect Cash
2. QR Code
Search for Another Order


Mechanic Go Online
127.0.0.1:5500/public/go_online.html
GO ON DUTY TO START EARNING
GO OFFLINE
Searching for orders...

5.CONCLUSION & ENHANCEMENTS

CONCLUSION

The on-road vehicle breakdown help assistance website provides a streamlined solution for vehicle owners facing unexpected breakdowns. With its user-friendly interface, the website enables users to quickly report issues, verify their identity through OTP, and access real-time assistance via a nearby mechanic. Integrated features like Google Maps navigation, service details, and cash on delivery for services ensure a reliable and convenient experience. This digital platform enhances roadside assistance accessibility, enabling users to get back on track efficiently and with peace of mind.

FUTURE ENHANCEMENTS

Future enhancements for the on-road vehicle breakdown help assistance website could include real-time tracking, allowing users to see the mechanic's location on a map as they approach. Implementing a user review and rating system would build trust and help maintain service quality. Introducing a subscription model could benefit frequent users, offering discounts and priority services. To reach a wider audience, multi-language support would be valuable, alongside expanded payment options like digital wallets, UPI, and cards. Additionally, automated emergency notifications could be integrated to keep users updated through SMS or app alerts.

BIBLIOGRAPHY

https://github.com/marifoglu/On-Road-Vehicle-Breakdown-Help-Assistant

https://github.com/kunalmishraa/On-Road-Vehicle-Breakdown-Help-Assistant