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Kovai Spot Bus - Bus Recommendation System

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Abstract: ***Kovai spot bus is a real time project which is useful for the people who is the facing problems with the current manual work of bus searching.***
Kovai spot bus system contains all bus with their route details. The main purpose of this software is to reduce the manual errors involved in the travel process and make it convenient for the people to manage their bus details. This project has been made simpler and interactive.
This is an android application used to find out the bus number from one place to another place. User need to give the details of source and destination.
Accordingly, it will display the details of the bus number which is going in that route. It is a time saving application to user. User can easily get the information of the bus number of a particular route. It will also be very helpful for those people who are new to the city.
In this application user can view the bus location will update the location of a bus on server frequently. The Coordinates of the location will be sent to the server, and the server will send the current location of the bus to people.
Keywords: Java, Mobile Application, Eclipse, Microsoft Visual Studio, Cassini Dev, SQL Server Management, GPS (Global PositioningSystem)

I. INTRODUCTION

Kovai spot bus is a mobile application that informs bus schedules and their route details for public people. This application reduces the manual errors involved in travel process and make it convenient to the people. User need to give the details of source and destination accordingly it will display the bus number and routes. Users are able to search the arrival of buses with accurate information. This application reduces the waiting time of people for the buses and improving overall public transportation efficiency. It will also be very helpful for those people who are new to the city. In this application user can view the bus location will update the location of a bus on server frequently. The Coordinates of the location will be sent to the server, and the server will send the current location of the bus to people.

II. LITERATURE SURVEY

A. Amrita P Unnithan, Asiya Abu, Sumo Mariyam Mathew, Simi

The bus corporations provide bus timetables on the websites, but such bus timetables are usually static and provide only very limited information to the user. This project focuses to solve problems facing every people in the public transportation system.

B. Shubham Jain

In this system, GPS tracking application which would be able to track school buses more accurately and efficiently than present bus-tracking systems.

C. M. A. Hannan, A.M. Mustapha, A.Hussain and H. Basri

In this system, radio frequency identification (RFID) and integrated sensing technologies such as global positioning system (GPS), general packet radio service (GPRS) and geographic information system (GIS) are used to monitor the movement of a bus.

D. Manini Kumbhar, Meghana Survase, Pratibha Salunk

The application allow the users to search the bus which they want through bus numbers and will show the live location of the bus

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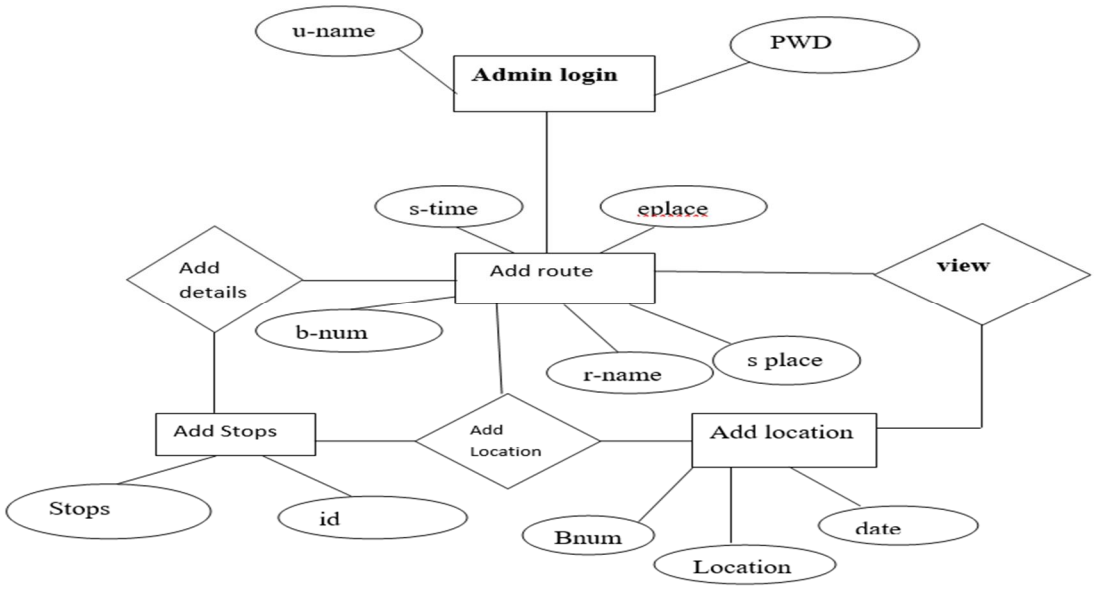


Figure.1: Er-Diagram for Kovai Spot Bus

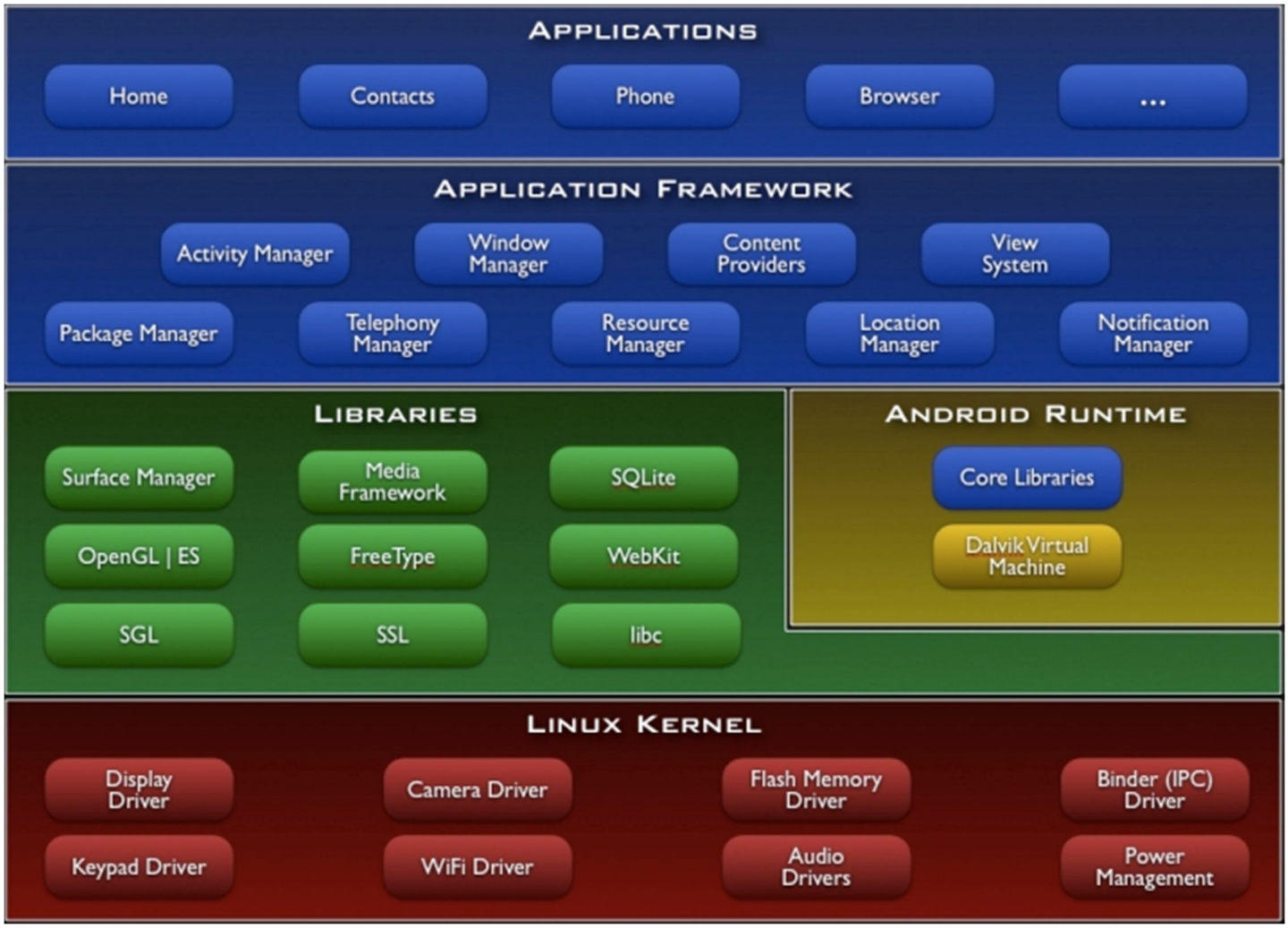


Figure.2: Android Architecture for Kovai Spot Bus

III. PROPOSED SYSTEM

Kovai spot bus application that we have developed will work android application. This is the major advantage this particular application we have developed our project it has a database of its own which makes it independent of internet, and it displays the bus numbers on its own. This makes finding of the bus numbers easy, fast and efficient. This system presents an adaptive location information sharing system that allows for a user to know the exact location of a bus. So, the people no need to wait for a long to catch the bus. In this system, the vehicle location is updated to the web server. The web service receives the location information of a vehicle continuously. That information is updated in the database.

1) Admin authentication module has been used for admin. Admin can enter the route details. Admin need to login with valid login credentials. Admin can add bus with route details.

2) Route information module specifies the bus number, route name, starting place, time, ending place of all the buses added by admin.

3) Seach route module users can select sources and destinations using the mobile app. This information getting from the database. it's used for user searching routes. This module contains results getting from the user selecting source and destination. its shows the result bus details like bus no, route, and time getting information from database.

4) Vehicle location update module, the bus current location is fetched from the Global Positioning System (GPS) which is fixed in the vehicle. The GPS provides the current location of a vehicle. The vehicle location information is updated to the web server through the web service. The vehicle location passed to the web service along with the start, end point and time. That information is stored in the database.

5) While the people need the current location of a specific bus, the user can view the vehicle information using their mobile device. The vehicle number as the request which is passed to the web service and the web service fetches the current location of a requested vehicle and sends it to the user mobile device.

IV. METHODOLOGY

The waterfall model is a sequential software development process that consists of several phases. Each phase must becompleted before moving on to the next phase. The following is an overview of how the waterfall model can be applied to the development of a Kovai spot bus for searching the buses:

1) *Define the Requirements:* The first step in developing a bus searching app is to define the requirements of the app. This involves identifying the features and functionalities that the app should offer, such as real-time bus schedules, route planning, personalized suggestions, payment integration, and more.

2) *User Research:* Conducting user research is essential to understand the target audience's needs and preferences. This involves conducting surveys, focus groups, and interviews to gather insights into the users' travel patterns, pain points, and expectations from a bus searching app.

3) *Design and Prototyping:* Once the requirements and user research are defined, the next step is to create the app's design and prototype. This involves creating wireframes and user interfaces that reflect the app's features and functionalities.

4) *Development:* After the design and prototyping phase, the app's development phase begins. This involves coding the app's front-end and back-end, integrating APIs for real-time information, and testing the app's functionalities to ensure that they work seamlessly.

5) *Testing and quality Assurance:* Once the app's development is complete, it is essential to test the app's functionalities thoroughly. This involves testing the app for usability, performance, security, and compatibility with various mobile devices.

6) *Deployment and Maintenance:* After testing and quality assurance, the app is ready for deployment. The app can be published on various app stores, such as Google Play and the App Store. Once the app is launched, it is essential to monitor and maintain the app's performance, update it regularly with new features and bug fixes.

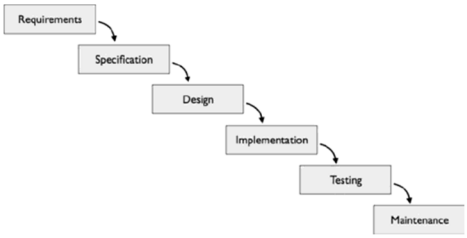


Figure.3: Waterfall Model

V. ARCHITECTURE DIAGRAM

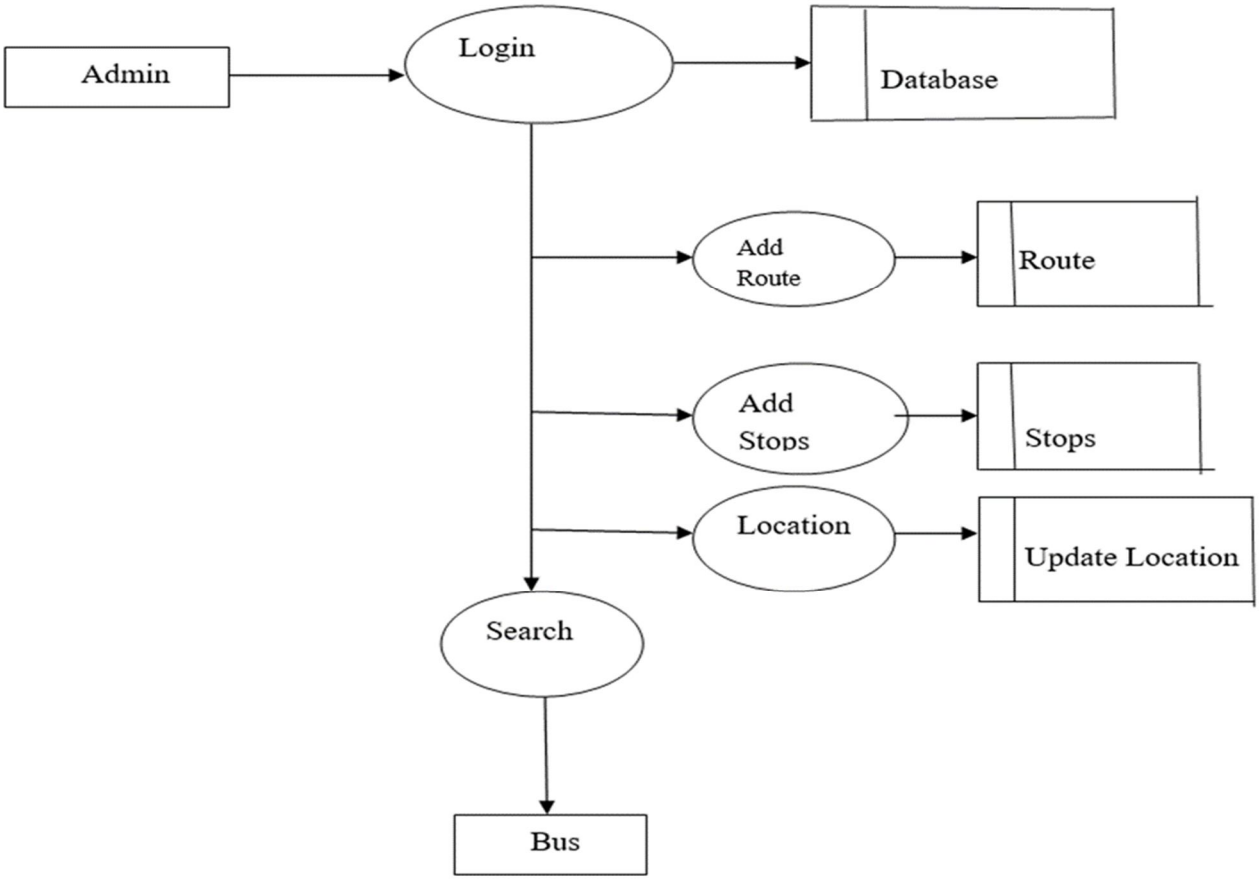
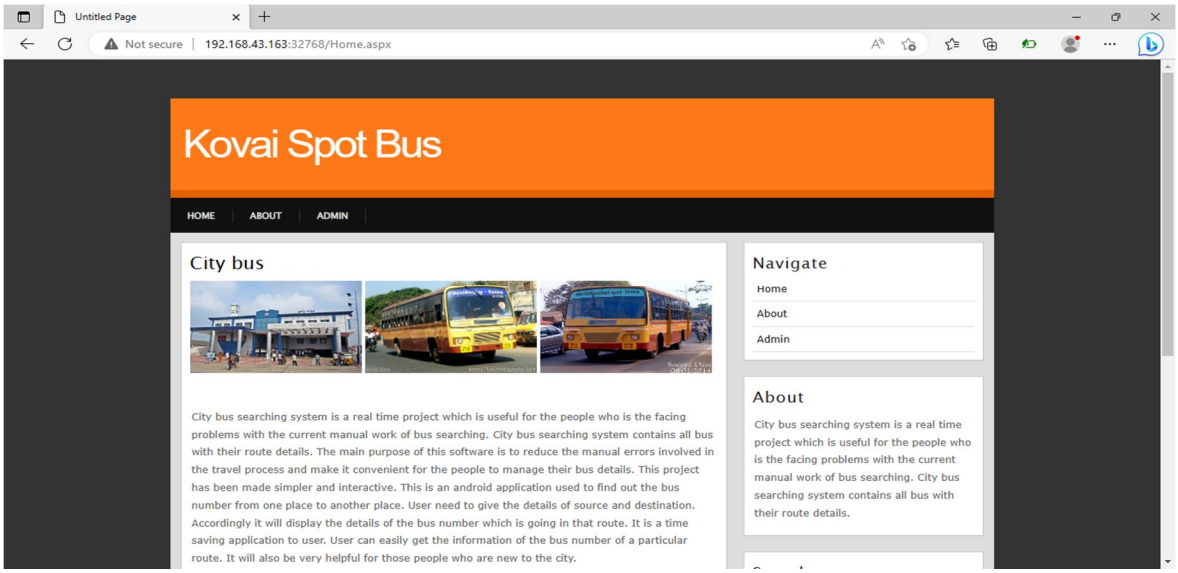
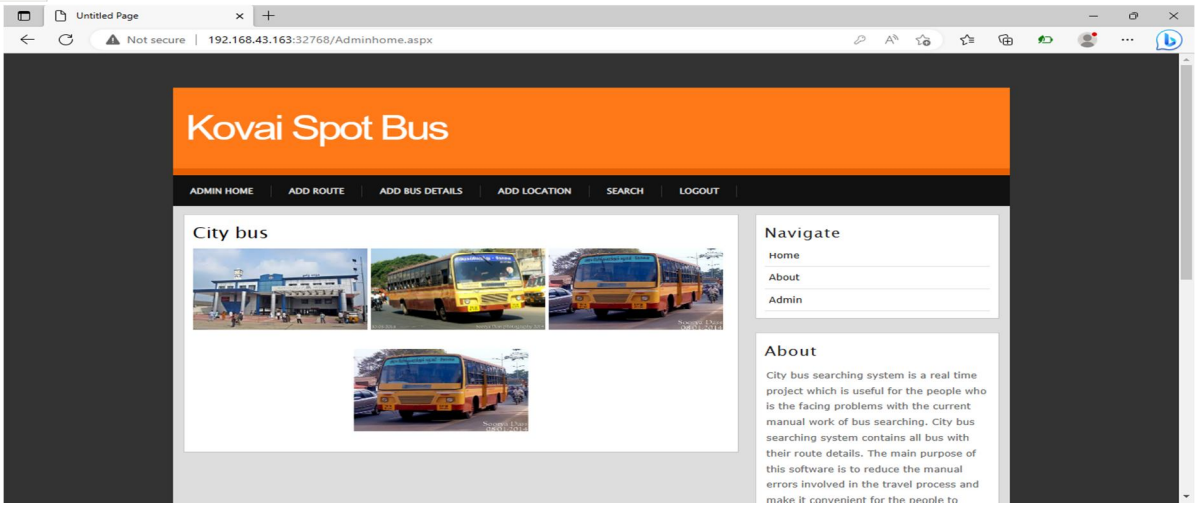
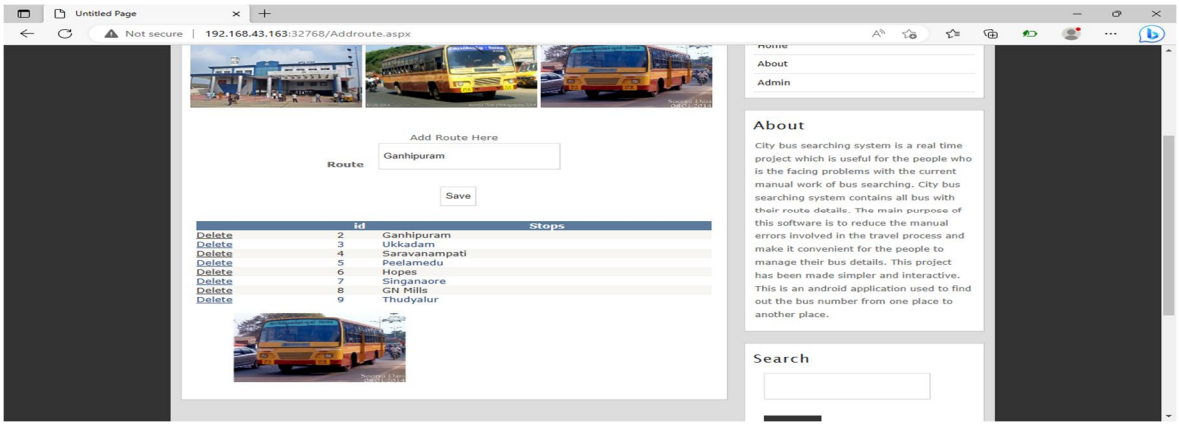


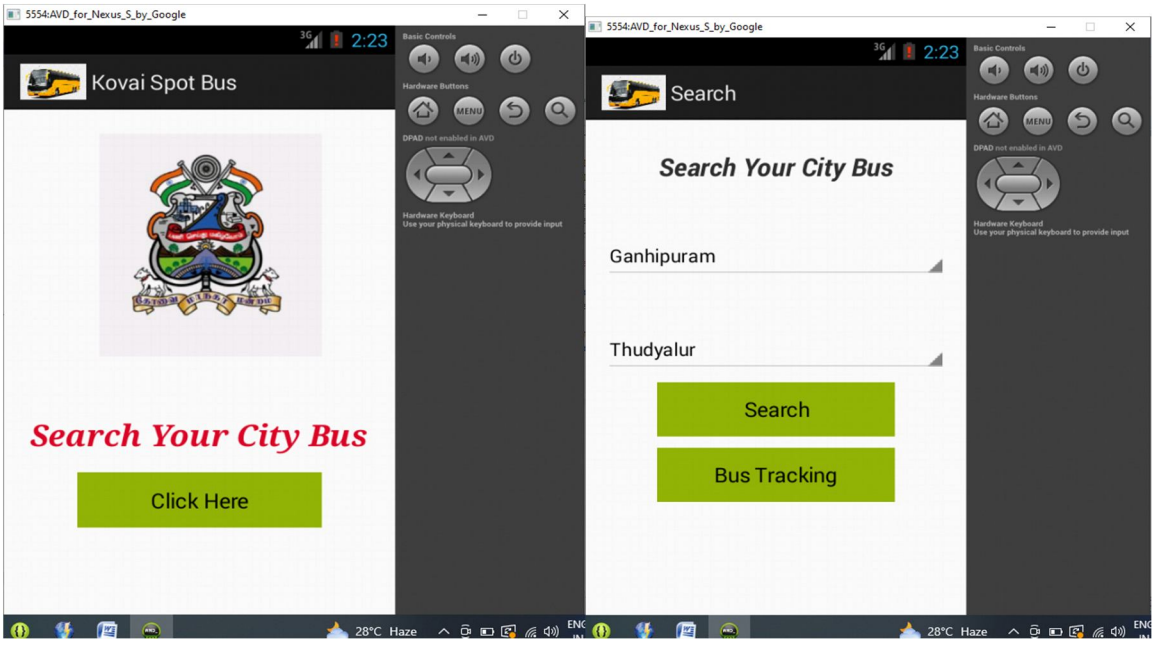
Figure.4: Architecture Diagram

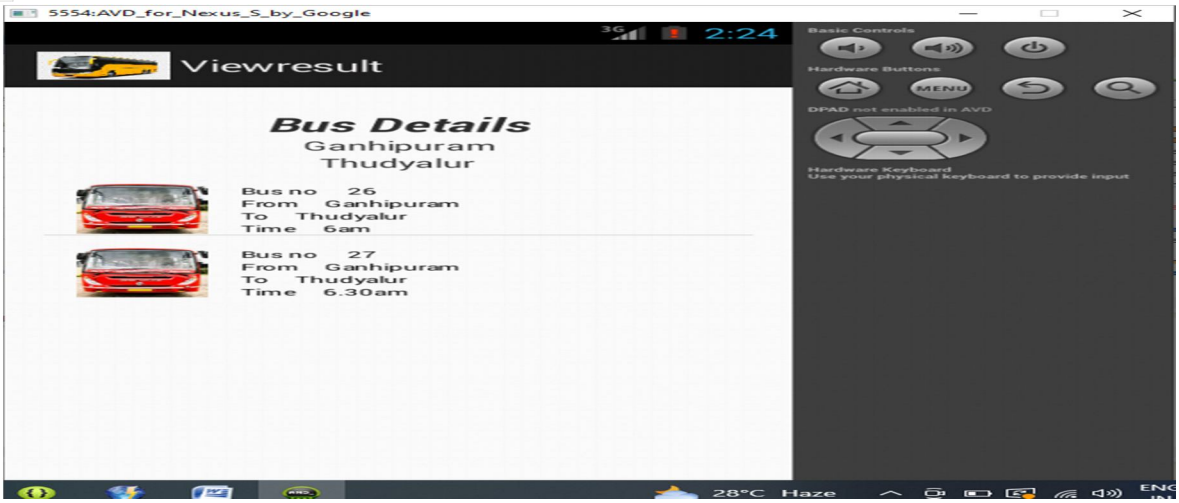
VI. RESULT

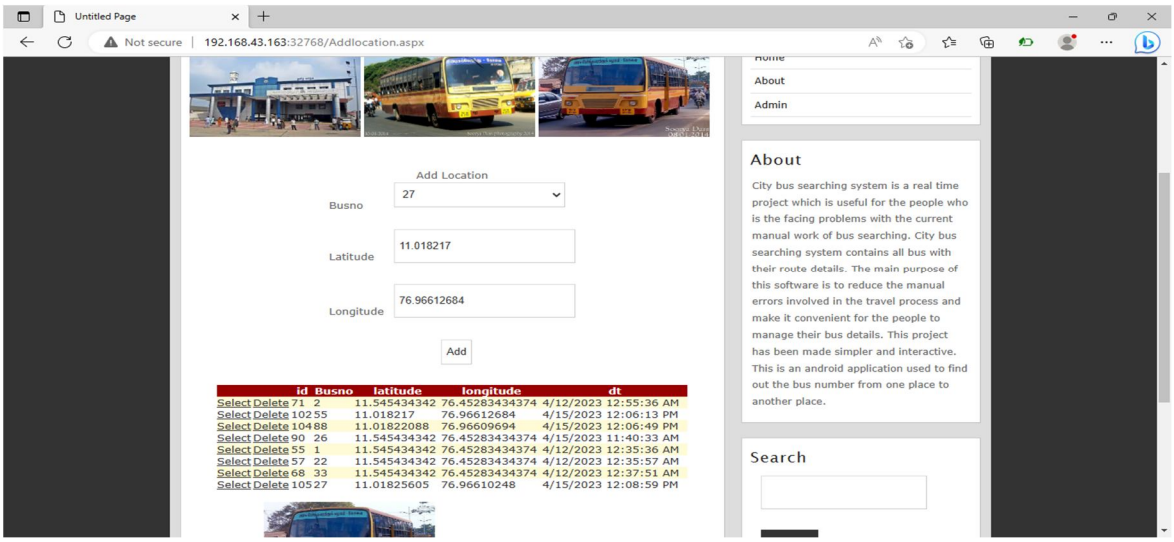


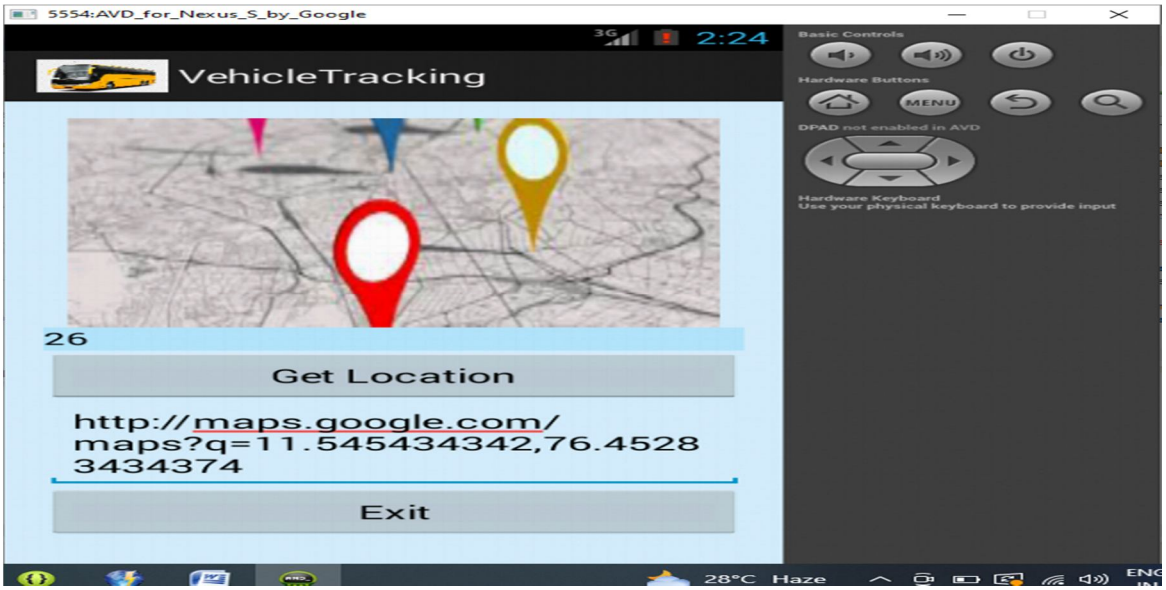

Untitled Page
Not secure | 192.168.43.163:32768/Adminhome.aspx
Kovai Spot Bus
ADMIN HOME
ADD ROUTE
ADD BUS DETAILS
ADD LOCATION
SEARCH
LOGOUT
City bus
Navigate
Home
About
Admin
About
City bus searching system is a real time project which is useful for the people who is the facing problems with the current manual work of bus searching. City bus searching system contains all bus with their route details. The main purpose of this software is to reduce the manual errors involved in the travel process and


Untitled Page
Not secure | 192.168.43.163:32768/Addroute.aspx
Add Route Here
Route
Ganhipuram
Save
id
Stops
Delete 2 Ganhipuram
Delete 3 Ukkadam
Delete 4 Saravanampati
Delete 5 Peelamedu
Delete 6 Hopes
Delete 7 Singanaore
Delete 8 GN Mills
Delete 9 Thudyalur
About
Admin
About
City bus searching system is a real time project which is useful for the people who is the facing problems with the current manual work of bus searching. City bus searching system contains all bus with their route details. The main purpose of this software is to reduce the manual errors involved in the travel process and make it convenient for the people to manage their bus details. This project has been made simpler and interactive. This is an android application used to find out the bus number from one place to another place.
Search


5554:AVD_for_Nexus_S_by_Google
2:23
Kovai Spot Bus
Search Your City Bus
Click Here
Search
Search Your City Bus
Ganhipuram
Thudyalur
Search
Bus Tracking


5554:AVD_for_Nexus_S_by_Google
2:24
Viewresult
Bus Details
Ganhipuram
Thudyalur
Bus no 26
From Ganhipuram
To Thudyalur
Time 6am
Bus no 27
From Ganhipuram
To Thudyalur
Time 6.30am
Basic Controls
Hardware Buttons
MENU
DPAD not enabled in AVD
Hardware Keyboard
Use your physical keyboard to provide input
28°C Haze


Untitled Page
Not secure | 192.168.43.163:32768/Addlocation.aspx
Add Location
Busno
27
Latitude
11.018217
Longitude
76.96612684
Add
id Busno latitude longitude dt
Select Delete 71 2 11.545434342 76.45283434374 4/12/2023 12:55:36 AM
Select Delete 102 55 11.018217 76.96612684 4/15/2023 12:06:13 PM
Select Delete 104 88 11.01822088 76.96609694 4/15/2023 12:06:49 PM
Select Delete 90 26 11.545434342 76.45283434374 4/15/2023 11:40:33 AM
Select Delete 55 1 11.545434342 76.45283434374 4/12/2023 12:35:36 AM
Select Delete 57 22 11.545434342 76.45283434374 4/12/2023 12:35:57 AM
Select Delete 68 33 11.545434342 76.45283434374 4/12/2023 12:37:51 AM
Select Delete 105 27 11.01825605 76.96610248 4/15/2023 12:08:59 PM
About
Admin
About
City bus searching system is a real time project which is useful for the people who is the facing problems with the current manual work of bus searching. City bus searching system contains all bus with their route details. The main purpose of this software is to reduce the manual errors involved in the travel process and make it convenient for the people to manage their bus details. This project has been made simpler and interactive. This is an android application used to find out the bus number from one place to another place.
Search


5554:AVD_for_Nexus_S_by_Google
2:24
VehicleTracking
26
Get Location
http://maps.google.com/maps?q=11.545434342,76.45283434374
Exit
Basic Controls
Hardware Buttons
MENU
DPAD not enabled in AVD
Hardware Keyboard
Use your physical keyboard to provide input
28°C Haze

VII. FUTURE SCOPE

The future scope for a Kovai spot bus app is Less time consuming, greatly reduces the time required to search for a place, searching facility for new peoples, easy to search . Here are some potential areas for future enhancement:

1) Integration with public transit systems: The app can be integrated with the public transit systems in various cities to provide users with real-time information on bus schedules, routes, and delays. This can help commuters plan their journeys better and reduce their waiting time.

2) Personalized user experience: By collecting data on user preferences and travel patterns, the app can offer personalized suggestions for routes and bus timings. This can help users save time and make their commute more comfortable.

3) Integration with other transportation modes: The app can be integrated with other transportation modes, such as trains and taxis, to offer users a seamless travel experience. This can also help reduce traffic congestion and carbon emissions.

4) Augmented Reality (AR) and Virtual Reality (VR) features: The app can incorporate AR and VR features to help users navigate to their bus stops and provide them with information on the surrounding area, such as nearby restaurants and landmarks.

5) Payment integration: The app can integrate with digital payment platforms to enable users to pay for their bus tickets and other transportation services directly from their mobile devices.

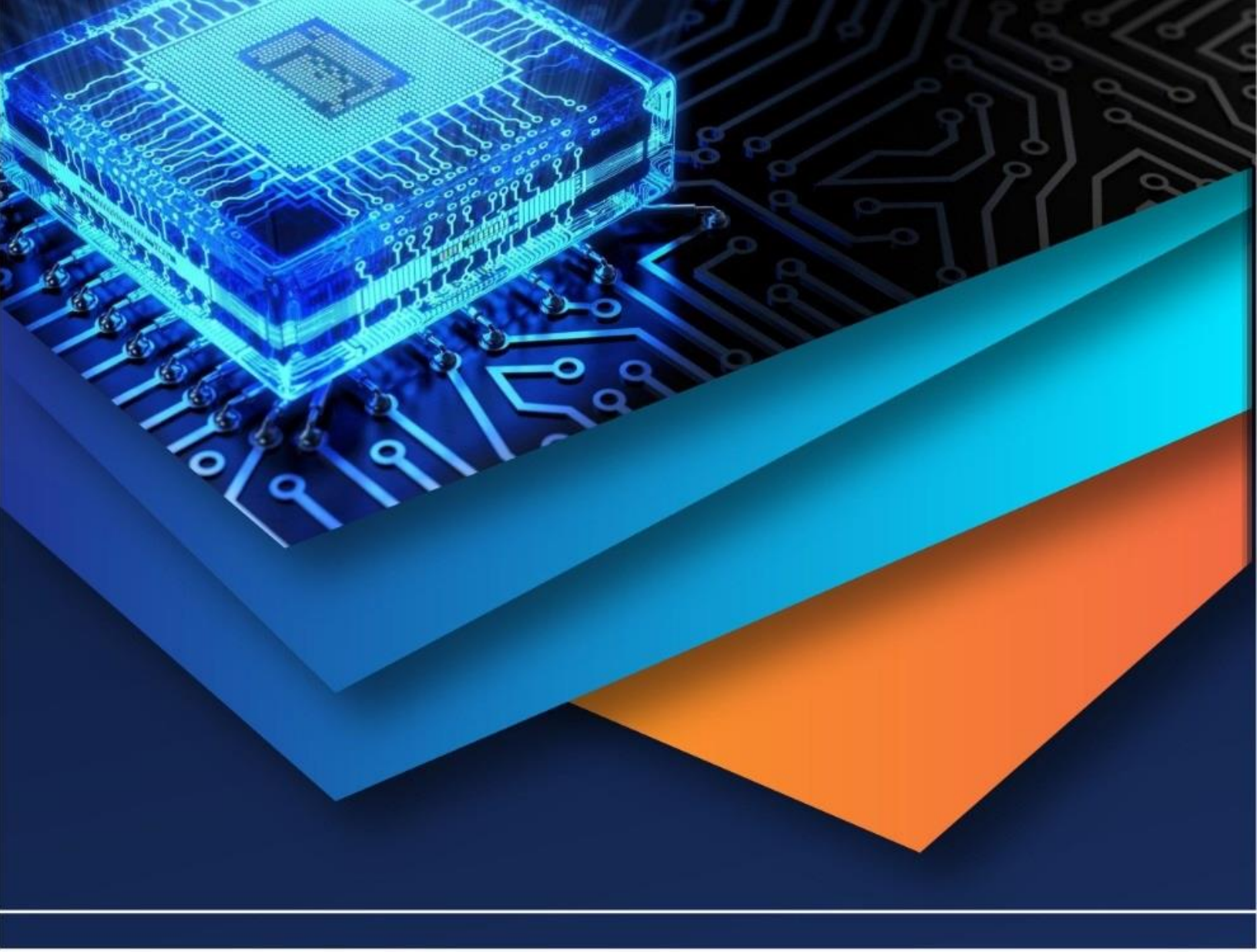
VIII. CONCLUSION

In conclusion, a bus searching app has the potential to revolutionize the way people travel by bus. With its real-time information on bus schedules, routes, and delays, personalized user experience, integration with other transportation modes, AR and VR features, and payment integration, the app can offer a seamless and convenient travel experience to commuters. Additionally, the app can help reduce traffic congestion, carbon emissions, and improve public transportation systems' efficiency. As more and more people rely on mobile apps for their daily transportation needs, the future scope of a bus searching app is quite promising.

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