KOVAI SPOT BUS – BUS RECOMMENTATION SYSTEM

Niranjan E, Sasi Keerthana R, Sasi kumar R, Tharini M
Final CSE-B
Guide Name : Nambi Rajeswari G

Introduction

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.

Motivation

Developing a Kovai spot bus app can be motivated by various factors and benefits. A bus searching app provides users with the convenience of easily finding bus routes, schedules, and stops in their area. It eliminates the need to manually search for bus information or rely on outdated printed schedules.

Scope of the Project

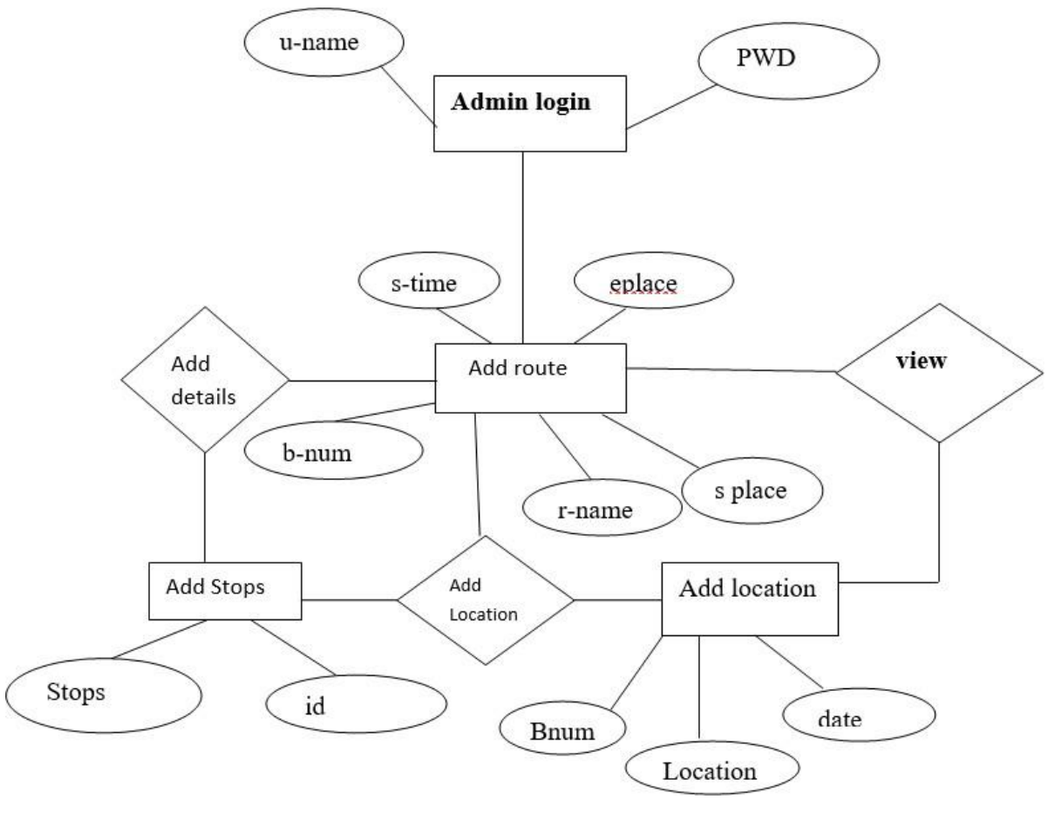
The scope of this project included :

1. Bus Routes and Schedules: The app should provide comprehensive information about bus routes, including the starting and ending points, intermediate stops, and schedules. It should display the routes on a map, allowing users to visualize the bus network .Future enhancements can be done by using the voice recognition mechanism.

2. Real-Time Bus Tracking: Integrating with GPS tracking systems or bus operators' data, the app can display real-time bus locations, estimated arrival times, and any delays or disruptions. This feature enhances the user's ability to plan their journey and adjust their schedule accordingly.

Methodology

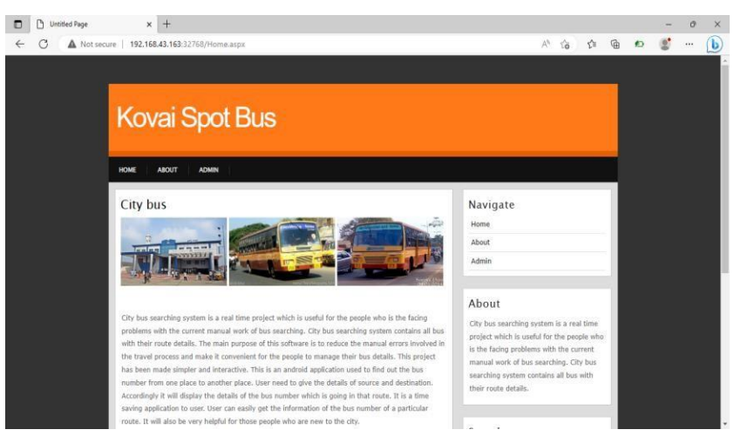
1. Define the requirements: The first step in developing a bus searching app is to define the requirements of the app. This involves identifying the features and functionalities that the app should offer, such as real-time bus schedules, route planning, personalized suggestions, payment integration,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



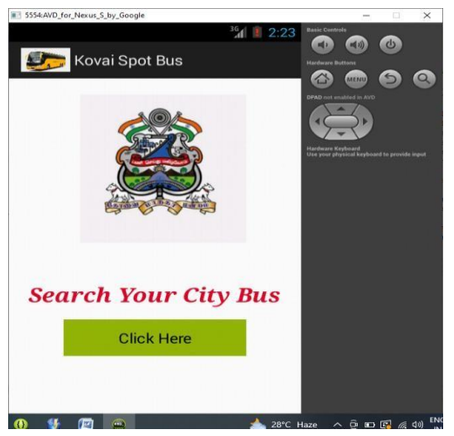
Architecture Diagram

Results

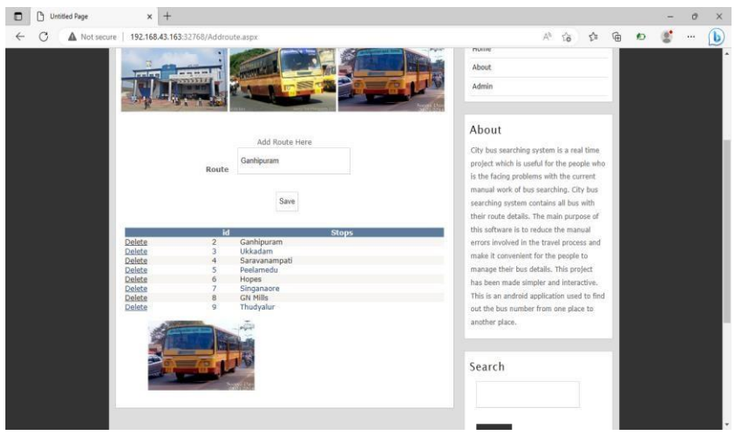
With real-time bus tracking and arrival information, users can plan their trips more efficiently, minimizing the time spent waiting at bus stops. This can lead to shorter wait times and increased user satisfaction. The app's journey planning feature can help users find the most optimal bus routes based on their starting point , destination, and preferred travel time. This can save users time and effort in manually searching for the best routes or transfers. Aggregated data collected from the app, such as popular routes and peak travel times, can help bus operators optimize their services. It enables better resource allocation, including adjusting bus frequencies or adding additional buses during high-demand periods.



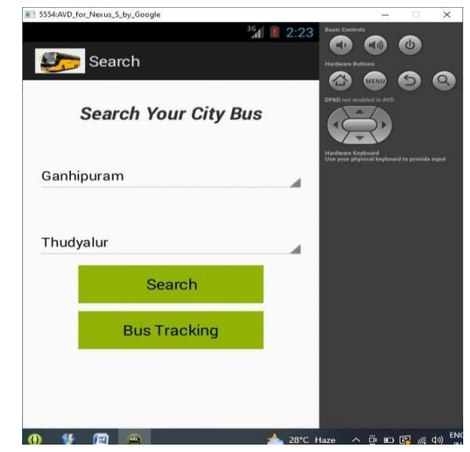
Home page- Website



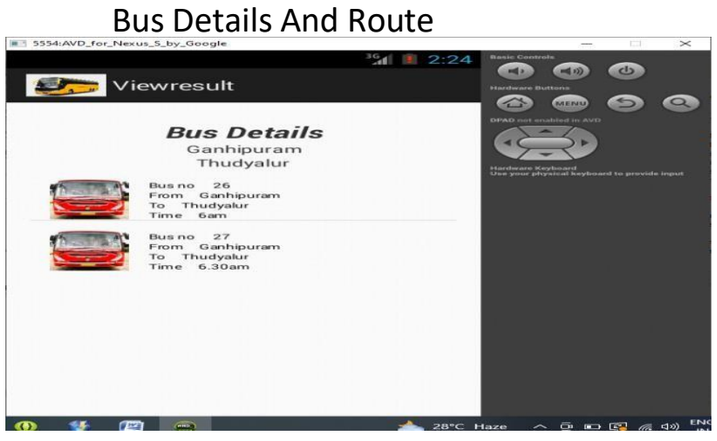
Home page- Mobile App



Logging in Successfully

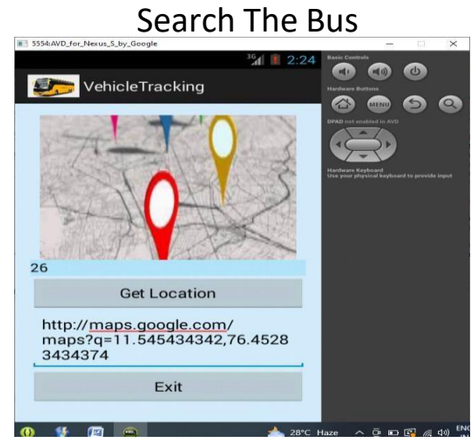


Bus Details And Route



Bus Information

Search The Bus



Map The Bus Location

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.

References

[1] Jerrin George James and Sreekumar Nair - Efficient Real time Tracking of Public Transport Using LoRaWAN and RF Transceivers-(2021).

[2] Darshan Ingle and A. B. Bagwan – Real Time Analysis and Simulation of Efficient Bus Monitoring System-(2022).