



# PEC Bus Tracking system using kotlin

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## ABSTRACT

Prathyusha Engineering College provide transportation services to their students and staff members. However, tracking the location and availability of these transportation services can be a challenge, especially during peak hours. This can result in long waiting times, missed classes or meetings, and overall inconvenience for the users of the service. To address this problem, there is a need for a college transport tracker system that can provide real-time information on the location, schedule, and availability of transportation services to students and staff members. Overall, the pec transport tracker system aims to improve the accessibility and efficiency of transportation services on campus, and enhance the overall experience of students and staff members.

**Keywords** – GPRS, GPS, Interactive maps, Monitoring and Management System, Smart phones, kotlin.

## I INTRODUCTION

The PEC Bus Tracker paper provides an overview of the transportation issue faced by students who rely on buses to commute to and from college. It highlights the lack of accurate information on the bus's real-time location, which results in students having to wait for extended periods or missing the bus altogether, causing unnecessary delays and frustration. To address this issue, the PEC Bus Tracker application was developed to provide students with real-time information on the location of college buses. The application allows bus drivers to share their real-time location, which is then available for students to track on their mobile devices. The application's goal is to improve the daily commute experience for students by providing them with accurate and real-time information on bus locations, enabling them to plan their commute more efficiently and avoid unnecessary delays. The

introduction also highlights the increase in demand for real-time transportation tracking, enabled by the availability of GPS-enabled devices and cloud-based storage. It draws a parallel between popular transportation tracking applications such as Uber, Lyft, and Ola and the PEC Bus Tracker, highlighting the application's potential to make bus tracking more accessible to students and improve their daily commute experience.

## II LITERATURE REVIEW

[1].P. Chaiprapa, S. Kiattisin, at al., proposed authorized person passengers can track the location of the bus and estimate the arrival time of the bus. It is also provided with the nearest stoppage from the current location. Therefore, passengers with no worry can utilize the waiting time by choosing the nearest route.

[2] Kumbhar, Meghana Survase, at al., proposed the application is designed and developed so as to provide the remote user with all the necessary information as to which buses from the source will go to his destination along with their routes and exact location.

[3] Sharmin Akter, Thouhedul Islam at al., proposed the technological rise in public transportation is on the horizon, but the bus network structure and intelligent bus tracking system should first be in place. Bus transport service is on the edge of digital revolution, generating real-time tracking information about the bus service using smartphones.

[4] Priyanka V. Narkhede, Radhika V. at al., proposed the application has been implemented in Pune, named "Pune Bus Guide". This application

will give the correct information about the specific destination

[5] . Benjamin Y.O. Low at al., proposed the bus arrival and departure information is widely accessible specially provided by the local public bus services. Using a sophisticated GPS technology.it gives the correct information about the bus arrival time and location

### III MODULES DESCRIPTION

**Driver Module:** This module is designed for the bus driver. The authorized bus drivers can use this module by providing their unique login credentials. They need to start their location services before driving. The current location of the bus will automatically be updated from the driver’s mobile to the server every moment.

**Admin Module:** This module is designed for the bus administrator for updating the information. Admin can log in to the admin account after authentication and authorization. He can add the driver, buses and students.

**Student Module:** This is the most important module and the soul of the system. Users of this module need to click on the student login. They can access the details of all the buses through their smartphones. Here, they will get all the buses information

### III RESULTS AND DISCUSSIONS

The details of buses will be stored in the database and be retrieved whenever needed. This application will show the present location of the college buses. The application will be updated from time to time.

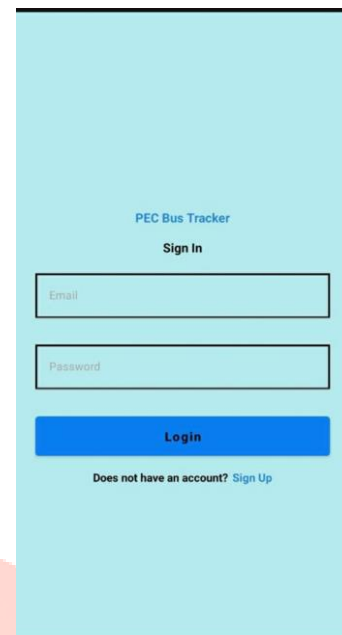


Fig 2: SignIn Screen

The SignIn screen will allow the existing user to enter into the account

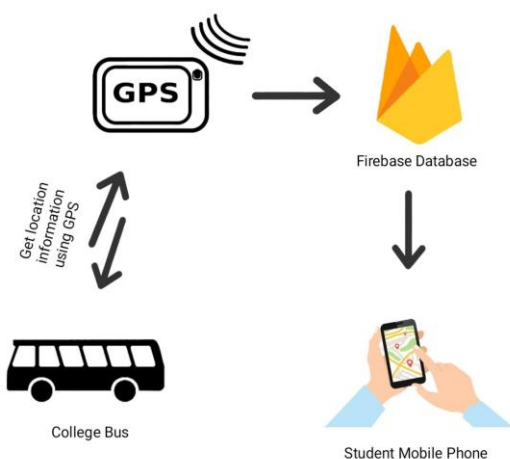


Fig 1: Architecture Diagram for Bus Tracking system

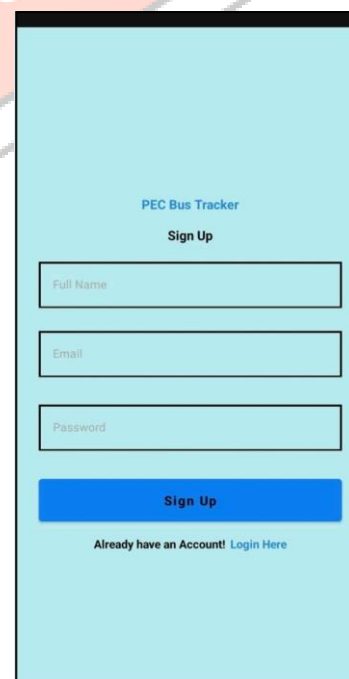


Fig 2: SignUp Screen

The SignUp screen will allow the user to create a new account



Fig 4: Driver Home

Driver Home screen will allow the driver to share the location



Fig 5: Location Screen

Location screen will show the current location of the bus.

In this paper we designed and developed a real time bus tracking system using Android studio. In this paper achieved the time taken will be reduced the time of the students mainly who uses the college transportation service and we also tend to help them with easy and tension mornings for a bright and peaceful day. This application does not need any external hardware except a smartphone which is available to all the students. So, the overall cost is very low or no cost needed for tracking the bus location. It provide nearly accurate data in real time that makes possible for the user to track the buses

## Conclusion

The proposed system can further be enhanced by making use of it in college bus tracking systems and also to report accidents and helps windows OS supporting systems.

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