PMPML APPLICATION

Prajakta Musale,Phalesh.D.Kolpe, Samiksha.S.Pokale, Parth.R.Pishte,
Tushar.S.Phulari, Jayesh.S.Pingle

Department of Engineering, Sciences and Humanities (DESH)
Vishwakarma Institute of Technology, Pune, 411037, Maharashtra, India

Abstract *— **With the current increasing prices of fuels people are shifting towards public transport more and more but people are not able to know the accurate timing of the buses. Taking into consideration this difficulties we have created a something which will be very helpful and save the time of public transport users. We have created a application which helps in knowing the timing of the buses and the current location of the bus. The app includes necessary information about the public transportation system within the city. The user can open the app and put the destination where he wants to go in the search bar and then a list of buses which go to that location will be showed to the user by providing preferable routes. We have used different tools like Android Studio, Java, Firebase to create our application. The application will use the mentioned tools to execute all the commands given to it by the users. The application also have a database which stores the bus times and also used for GPS integration. Users can use this to locate the bus stop and bus. This application's primary goal is to give users accurate bus arrival times as well as other relevant information, such as stops, routes, and bus details. Since Android handsets are now widely available and reasonably priced for everyone, the local user may utilize this program frequently. It is a real-time system since it updates the bus's current time. Additionally, the software calculates how long it will take to travel to a specific point along the route.***

Keywords *— Android Studio, database, public transport management, XML, Java, Mobile application*

I. INTRODUCTION

Due to rapid increase in the population, there is an increased burden on public transportation system. Therefore user needs a smart system which provides the real-time information of the bus. There are various systems available for passengers travelling to different locations, but not most of the new passengers have complete information about these systems like government buses, tours and travels service. Complete necessary information namely the number of available buses that go to the required destination of the passengers, bus numbers along with the distance in kilometers , bus timings, the routes by which the bus would pass, time taken to reach the destination, tracking the current location of the bus, will be provided by the app.

The proposed application helps to deals with the necessities stated above. The platform chosen for our application is android studio. The reason behind using android studio is that, it helps to create rich and connected apps which can be optimized by all android devices. The application is basically the journey planning app, which provides all the required information about the public transportation systems in the city. The key objective of our application is to guide the user about transit network through preferable routes. This app saves time and offers a number for an emergency helpline. An effective public transportation system is required because of the population growth that has been occurring so quickly. The population alone puts more strain on

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public transit systems like the bus. Consequently, a smart system that offers real-time bus information is needed by a distant user. So, in order to address the flaw in the current public transportation system, we developed a new one. Users can use this app to look for the arrival time of their preferred bus. On their phones, they have access to information about all the buses. They can acquire all bus-related offline information here. They can also learn the bus's anticipated arrival time. An ever-growing fleet of automobiles is required to manage transportation to work, school, shopping, and other destinations for the expanding population, especially the explosive urban population. Despite being admirable, road construction cannot keep up with the rate of expansion that we are experiencing.

will soon run out of room inside the towns and cities to construct more highways. Government state transport firms are moving in the correct path by introducing numerous amenities like low-floor buses for the disabled and air-conditioned buses to entice private automobile owners and reduce traffic on the roads. According to a review of numerous alternative methodologies, the primary objective of the researchers is to assure the ease for new comers to travel by the pmpml easily and to locate the location and to know the nearby bus stops. After researching deeply about the topic, we came to the conclusion that every other method involves complex user interactions and to solve that problems we focused to keep our user interface as simple as it can be and used simple but effective database integrations in the application. According to current scenario, the implementation of smart travelling management system is mainly based on the internet of things which refers to the global network of connected devices which helps to provide real time client server based system to find the available buses and nearby bus stops for users. pmpml is helpful for a variety of user groups, including students, workers, senior folks, shoppers, visitors to Pune, etc. For the past 58 years, PMPML Bus Service has provided transportation for passengers on the same route as PMT, formerly known as Pune Municipal Transport. As people prioritarize the locations where PMPML buses run when choosing where to settle down, PMPML has a stake in the city's development.

II. METHODOLOGY/EXPERIMENTAL

A. Flowchart:

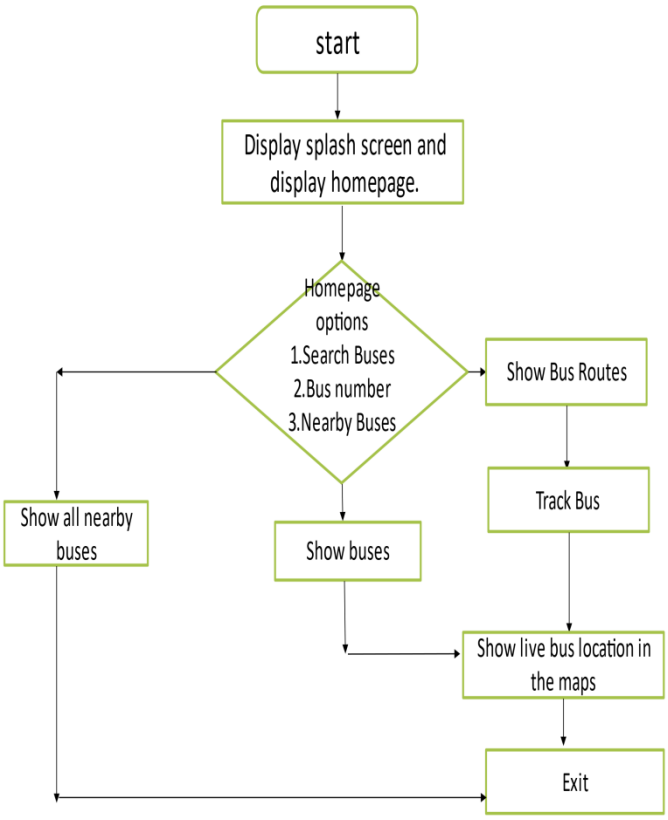


Figure I. Flow Chart

B. Methods:

The application aimed to save the time of people. To provide the real time information regarding current transportation system, the most difficult task to gather the information of the buses according to the client requirements. The main purpose of our application is to enhance and to provide services and infrastructure for the mobility of the people to provide transport that is accessible, affordable, efficient, reliable, safe, secure, all the features that user needs to make their travelling easier. To give the user the approximate distance and time of the bus from the user location is main focus of our methodologies.

1].Passenger-searching techniques: These techniques take into account the practical aspects influencing a taxi driver's choice when looking for

various new passengers. The taxi driver could prefer to wait at a well-known area close by or go to a his nearby area far away to search for new passengers.

2]. Going Distant: The absolute co-relation value can be positively defined depending on the grid sales and trip fares.

3]. Passenger Delivery Speed: Bus speed and traffic conditions both affect how quickly passengers are delivered.

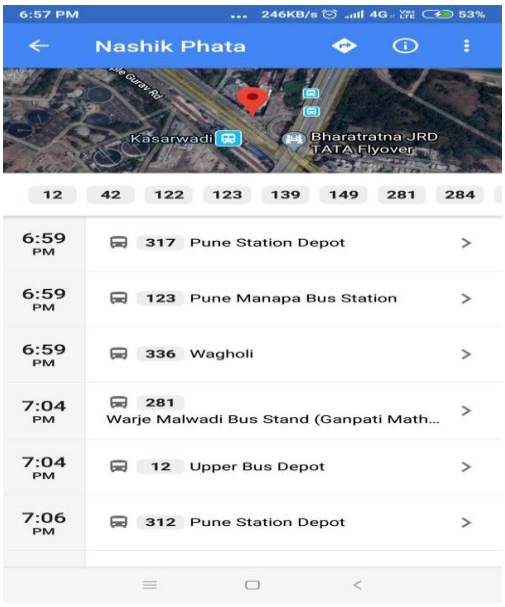
4].Preference for the service area: Taxi drivers may choose to serve in a specific location of a city at a particular time of the day according on the traffic, the demand from passengers, and their familiarity with the areas.

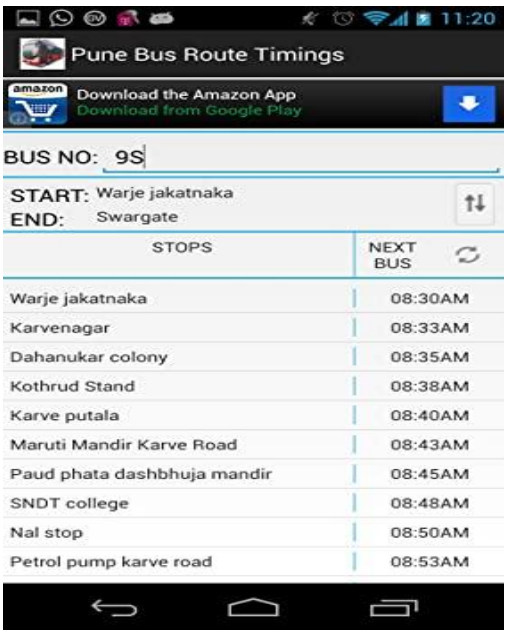
5].Zero Service Time in Each Region: Driver has control over how long they spend in each area.

III. Results and Discussions

The application provides the live location of the bus to the users. The passengers can not only get the location of the bus but are also able to fetch the required time taken by bus to reach its destination. The request made by the user for the preferred bus information will be fetched from the database and delivered to client through server. The application helps to travel by the bus without harassment. This application may be widely used by the local area user since android smartphones have become common and affordable for all. It is a real-time system as the current time of the bus is updated. In todays life, no one want to waste their time by travelling long route instead of shortcut. In keeping with the tide of time , we have made this application to assure the ease for travelling through bus within a city specially for new passengers as they don't have too much information regarding the current transportation system and various updated features now. For passengers to know the actual time that the bus will arrive, this technique is helpful.

By doing this, the public transportation system will become competitive and user-friendly. When more people utilize public transportation, there is a reduction in the usage of private vehicles, which lowers traffic and pollution. Here are some results of live demonstration of our application:





IV. FUTURE SCOPE

Talking about the future scope of our system, the project will prove beneficial for every bus traveler or even tourists. Not just buses, but this application will be useful for every person travelling by any means of transport. The GPS module will help to give the exact location of the bus which will make it easy for the passengers to travel.

V. CONCLUSION

The system allows a user to get their current location and to track the bus from our android application. With the help of GPS module, user can get details about how far is the bus from the current location of the user and many more features such as: more than one preferable routes according to required destination of the user. This android application will make the current bus transportation system more productive. In big cities, the PMPML service is becoming more and more crucial. The development of GPS and the widespread cellular network has improved the accuracy and effectiveness of real-time vehicle tracking systems.

This system tracks the real-time whereabouts of buses using a number of technologies and uses this data to calculate the precise time for bus arrival. In order to receive the precise arrival time of the bus on his route, the user only needs to provide the system his source location and destination location.

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