

# GPS Enabled Android Application for Local Bus Schedule System

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## ABSTRACT

Nowadays in this fast life where everyone is in a hurry to reach their destinations. Waiting for bus is a hectic and even many of us are unaware of the bus timings, hence to overcome this difficulty we have come up with the system of GPS Enabled Android Application For Bus Schedule System is considered in this study. The major feature included in the Android Application is user can know all the Nasik City Bus timings. This includes the various ways to find out the Bus available, by giving the appropriate bus number, by providing the source and destination or by providing the bus stop. Second module consisting of capturing the current latitude, longitude and location of the current position of the user using the GPS facility available in mobile. Third module includes the facility of security call, if user feels unsecure or any disaster occur, just by pressing a single button user can notify to its closed ones with its current position. Then the Android and Java platforms are used to develop the application using eclipse tool.

**Keywords:** GPS, Google Android, Android SDK, Google API.

## I. INTRODUCTION

Android is becoming very popular in embedded market for two mainstream reasons. First, source code is completely free; moreover there are no royalty fees for Java VM (Virtual Machine). Second deriving from the first, Android is highly suitable for expansion as the developer sees fit. This paper presents an approach using Android SDK and Google API as to develop application for intelligent mobile devices, mainly GPS. The core part of this paper is as follows.

Bus schedule system is an application of Android phones. This application uses the GPS function also, available in most smart phones today, to pin point your location fairly accurately. With this application installed on your Smart phone, all you need to do is to start up your apps when you needed. User has to select the source and destination. This application will show you the bus timings with the accurate fare as per your source and destination. It also runs in the background so you are free to use your phone for the other activities like playing games, listening songs etc. This application also gives the users current position. And also includes the user's security.

## II. PROJECT SCOPE

This is purely android based application which only runs on android devices or android phones. Basically, this application provides all the city/town bus time table with and appropriate fare. Locating of user and security factors also considered in this. This application can also save the time of user that who wants to travel through the bus.

### 2.1 User Classes and Characteristics

- ✓ User must have GPS in his/her smart phone.
- ✓ The Application should not disturb user while performing any task on their handset. Like making or receiving calls, sending SMS, MMS and etc.
- ✓ When user enters the source and destination then application should show appropriate bus schedule.
- ✓ When user presses the security key it directly send the message to the registered people.
- ✓ If some area's time table changes then administrator is provided with a separate module to change or update the timetable as required which will be reflective to the users.

## 2.2 Design and Implementation Constraint

- ✓ Android operating system device/phone.
- ✓ Internet Connection
- ✓ Phone having GPS facility.

## III. LITERATURE SURVEY

### i) Real time bus availability system:

In this fast paced world, everybody is in a hurry to reach their destinations. Public transport is suffering from a number of conditions which are highly uncertain such as congestions, delays, rider demand and accidents

### ii) GSM Based Real Time Bus Arrival Information System

A This paper presents the prototype implementation of a real-time bus arrival information system. The system focuses upon real-time bus operations information which includes the current location and estimated arrival time at the next stop, and distributes this information to the public in an effort to reduce passenger waiting time.

### iii) A Mobile Application for Bus Information System and Location Tracking using Client-Server Technology:

This project has been developed on the Bus Information System in Pune. This paper proposes an Android mobile phone application that gives information about buses, bus numbers as well as bus routes – both online and offline

### iv) Implementation of Real Time Bus Monitoring and Passenger Information System

In the daily operation of a bus system, the movement of vehicles is affected by uncertain conditions as the day progresses, such as traffic congestion, unexpected delays, and randomness in passenger demand, irregular vehicle dispatching times, and incidents.

## v) Analysis of Bus Tracking System Using GPs on Smart Phones

Public transport networks (PTNs) are difficult to use when the user is unfamiliar with the area they are traveling to. This is true for both infrequent users (including visitors) and regular users who need to travel to areas with which they are not acquaint.

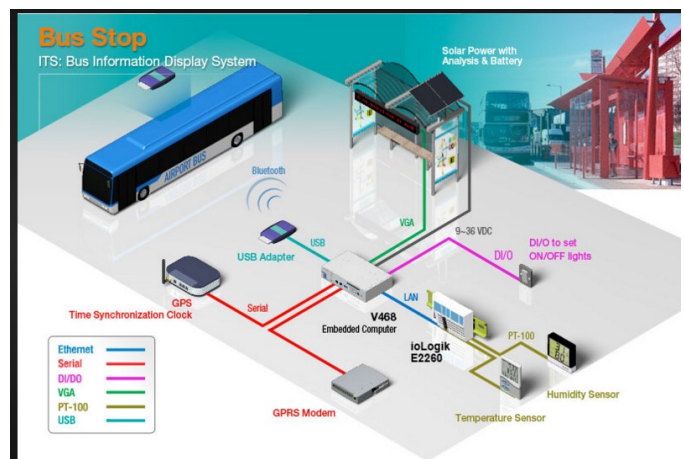
## IV. EXISTING SYSTEM

Bus schedule system is an application of Android phones. This application uses the GPS function also, available in most smart phones today. then the schedule are using in city bus .

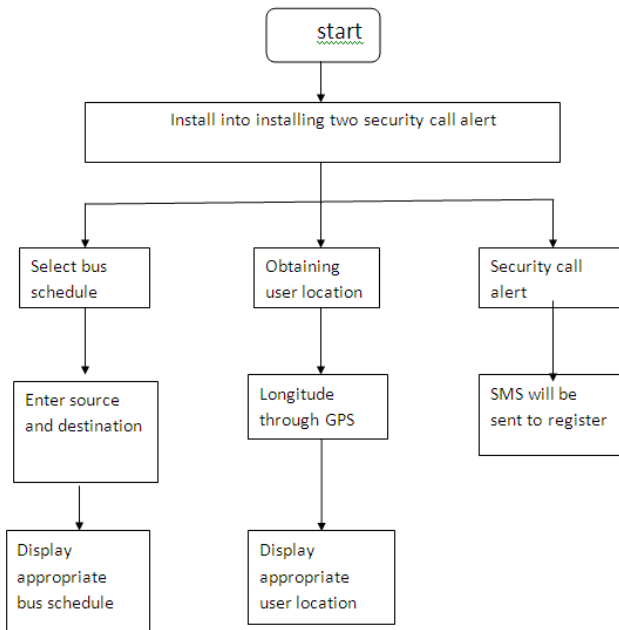
## V. PROPOSED WORK

The application is a user friendly one, that anyone can access for free of cost. The basic idea for this project was to guide the bus travelers with the routes, all the possible stops that come on their way to the destination and moreover, display maps and track their locations and show the estimate remaining time required to reach. The aim is to overcome all the drawbacks faced in all the previous applications and generate fast and accurate results.

### Architecture



## Dataflow Diagram



This system acts as a bus timing consultant in which user is provided with required bus timings according to his need for a specific source. Apart from this, this system also provides facility for user to know his current position on map.

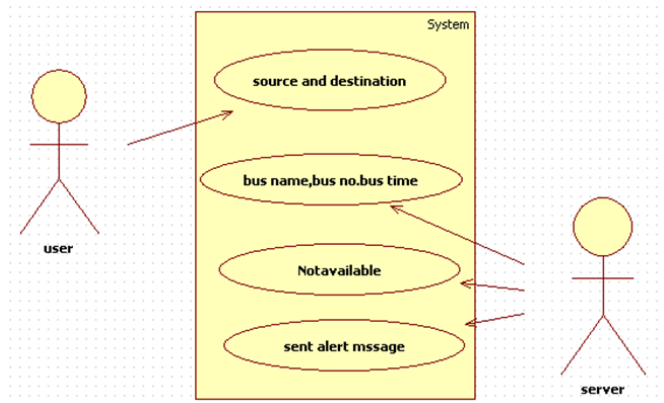
As well as it also generates security SMS as when needed by the user.

For the above system to provide the user with accurate results a proper input from the user is essential that is to get the proper timings of bus schedules user should provide proper input of his required source. If the user is new traveler in the city then he can know his current position in the local by using this.

## UML Diagrams

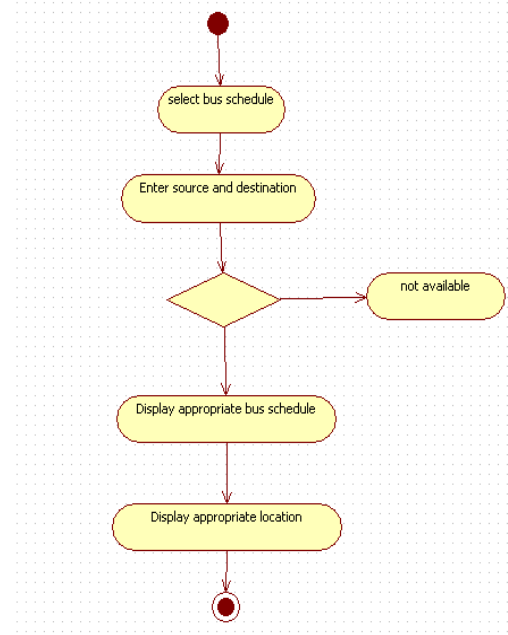
### 1) Use Case Diagram

Use case diagram gives an overview of the Users and the System Interaction



### 2) Activity Diagram

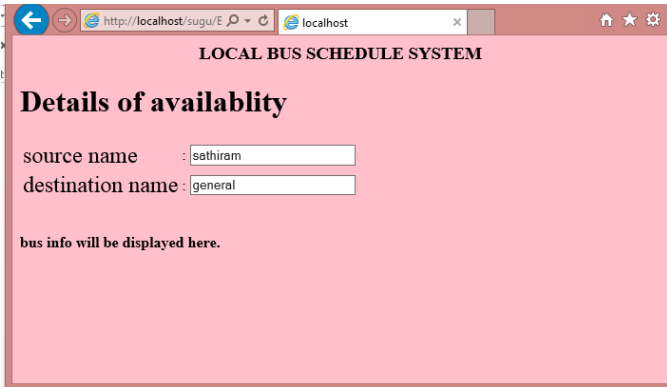
Activity diagram gives the activity involved in the working of the proposed application.



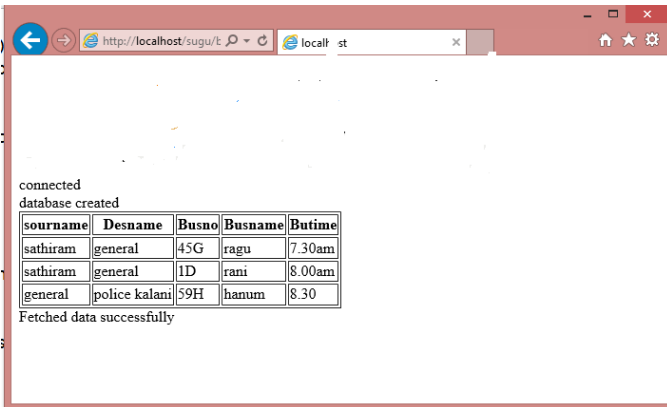
## Objective

The main goal of the project is to create a local bus time scheduling system that has some added features for users. The execution is much faster than the existing android application.

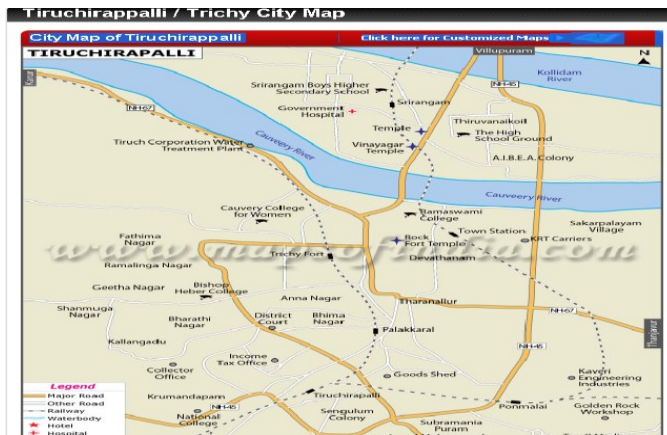
## VI. RESULTS



The notation is not available display the alert



Before display the schedule



## VII. CONCLUSION AND FUTURE WORK

Learning while developing was the main theme of this project. This project allows us to get acquainted with the work culture, people and environment. Project was great opportunity for us to learn and work in the environment.

## VIII. REFERENCES

Search, the source and destination



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