OUR CITY OUR BUS

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Abstract - A rapid increase in the growth of world population has changed the way people perceive public transportation. Today, many consider public transportation as convenient and cost-effective. However, there are certain limitations to the transit system that are holding back certain section of public from utilizing the service. Increased waiting time and uncertainty with the bus arrival timings makes public transport system unattractive for passengers. Therefore, more visibility in the running timings of the buses and a consolidated list of buses available will help passengers in deciding what routes to take to reach their destination on time. In this era of modern technologies, it is easy for people to stay in contact at all times with the use of smart phones and other internet capable mobile devices. The major feature included in the Android Application is user can know all the city bus timings and bus numbers.

I INTRODUCTION

This paper primarily aims at encouraging students to focus on developing applications that not only can they use but also can help the society in general. This way, students will be able to fulfill their responsibility toward society in addition to developing expertise in their preferred subject.

A. Organization of the paper:

The Android-based application, Our City–Our Bus, is developed for the users of public transportation service. The project's primary goal is to equip the city bus passengers with a handy, user-friendly application that will provide them with all required information on the local government buses running in the city. To use this application, the passengers should first download the application in their mobile phones. The users must also be connected to a high-speed wireless network when using the application.

II OVERVIEW OF OUR CITY OUR BUS ON ANDROID

Our City–Our Bus is an android application that eases the way passengers access the public transportation service. This application is particularly developed for those passengers who are not too familiar with the bus numbers, the routes the buses take, and the correct time of arrival for each bus.

A. Advantages of Android:

- Messaging

SMS and MMS are available forms of messaging, including threaded text messaging and Android Cloud to Device Messaging (C2DM) and now enhanced version of C2DM, Android Google Cloud Messaging (GCM) is also a part of Android Push Messaging services.

- Java support

While most Android applications are written in Java, there is no Java Virtual Machine in the platform and Java byte code is not executed. Java classes are compiled into Dalvik executables and run on using Android Runtime or in Dalvik in older versions, a specialized virtual machine designed specifically for Android and optimized for battery-powered mobile devices with limited memory and CPU. J2ME support can be provided via third-party applications.

- Handset layouts

The platform works for various screen sizes from Smartphone sizes and to tablet size, and can potentially connect to an external screen, e.g. through HDMI, or wirelessly with Miracast. Portrait and landscape orientations are supported and usually switching between by turning. A 2D graphics library, 3D graphics library based on OpenGL ES 2.0 specifications is used.

- Multitasking

Multitasking of applications, with unique handling of memory allocation, is available.

B System/Application Architecture:

The proposed application acts as a bus timing consultant that provides the user with precise bus timings and other relevant information based on what the user requested for. For the system to provide the user with accurate results a proper input from the user is essential. For example, to return results for the arrival time of a bus to a certain location, the user should provide appropriate input about the related source location.

Users who are new to a city may spend a lot of time searching for buses because of unfamiliarity with the locations and the road routes they need to take. This application will be of great help to such new passengers. All they have to do is download the app, enter the source and destination, and they will be provided with the required details pertaining to buses.

C. Implementation:

Proposed system currently developed for the bus schedule of one city. This application can be further updated. So it is applicable to all cities in the nation. This application considers the bus city timings with an appropriate fare. We can develop it same for the railway and air schedule also.

This Proposed application consisting of the following modules:

- Bus Timings.
- Route.

The application would open up the main page

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When the user tries to open the application, he or she will be directed to the welcome page.

The welcome page will allow the users to choose between the **Bus Timings** and **Routes** buttons.

If you click the 'Bus Timings' module, you will be prompted for the bus number.

If you know the bus number, then type the number in the 'Enter Bus Number' field.

Then, press Ok.

The system will display the schedule of the requested bus.

III. ROUTE MODULE

If you had clicked on the '**Route'** button, then you will be directed to the following page:

Enter your source location in the '**Enter Source Name**' field.

Enter your destination in the '**Enter Destination Name**' field.

Then, press Ok.

The system will display the list of buses travelling between the entered source and destination.

IV. CONCLUSION

This system is designed to be used for all users of city buses who are connected to internet through their mobile phone. The Road Transport Corporation that runs the buses will also benefit through this service because of the increase in customer satisfaction levels. The user-friendly nature of this application will help the daily travellers commute easily and reach their destinations on time.

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