# LET'S GO EVERYWHERE

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## ABSTRACT

Public transport is the cheapest and has therefore, always been popular with the masses. The advancement in transport system has been increasing in day-to-day life. The transport plays a vital role in individual's life and for making it efficient we are introducing an android application. The android application has the message notification system based on location. The android mobile has a great part in human life; it helps the people be stay connected with travel updates. Users can also track current location of the bus using the app. During the travel time, by entering their location details alert will be notified to the passenger before destination to be reached. By this application, we can minimize the usage of the paper and there will not be confusion in the destination place.

## 1. INTRODUCTION

A bus terminal, or terminus, is the point where a bus route starts or ends, where vehicles stop, turn or reverse, and wait before departing on their return journeys. It's also where the passengers board and alight from vehicles. It also often provides a convenient point where services can be controlled from.

The size and nature of a terminal may vary, from a roadside bus stop with no facilities for passengers or bus crews, to a purpose built off-road bus station offering a wide range of facilities. If the number of vehicles arriving and departing is low, a roadside bus stop, with no facilities, will normally be adequate. With a large number of vehicles arriving and departing, it may be necessary to provide off-road bus station facilities for the convenience of passengers and to reduce traffic congestion.

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When a bus is delayed or detoured due to roadwork or other causes, customers will be able to track the bus's progress on the route. Passengers will also be able to receive text alerts notifying them of an upcoming bus departure, making trip planning easier than ever before.

With Track-it, information for every bus in service is transmitted to AVTA Operations through cellular communications. This information is immediately available to provide real-time departure information and is archived for scheduling, route planning, reporting, and performance analysis.

# 2. 2SYSTEM STUDY AND ANALYSIS

## 2.1. Preliminary Investigation

System study is done in order to understand the problem and emphasize what is needed from system. The information requirements of the user for their competitive world requires such a system. The various techniques used in this phase are Observations, Interviews and Discussion. A complete understanding of software requirements is essential to the success of a software development effort. System Analysis refers to an orderly structured process for identifying and solving problems using computer.

It is the most essential part of the project development. It is the process of the gathering and interpreting facts, diagnosing problems and using the information to recommend improvements to the system. Training, experience and common sense are required for the collection of the information needed to do the analysis.

## 2.2. Existing System

For the most part, in the transportation framework, the procedure of knowing bus routes, bus schedules, and bus location is difficult. In the current system, the bus info details will get from our friends or relatives. Such that it will take long time for knowing the details. Sometimes bus schedules will be printed and it will show near to the bus stops. To get the information about time, they must go to bus stops as there is no way to know the information earlier .If any break down or any issues to the bus users can't track or can't know about the bus status. And there is no an alert system to be notified to the passenger before destination to be reached and so the passenger always want to aware of destination places.

## 2.3. Proposed System

Reliability in public transport is of great importance today. This project provides a good solution for public transportation to know about bus info using an android application. Our system has three login modules, one for the user one for bus and the third for admin .This system provides

an android application for users to know about bus routes, schedules, bus stops, and also track bus location. This system is helpful to reduce the printed bus schedules; time consumption and user to get the bus info in simple and faster way. While entering into a bus a users give stop details, and then they can get alert about bus stops.

### Advantages of Proposed System

- This system is helpful to reduce the printed bus schedules; time consumption and user to get the bus info in simpler and faster way.
- While entering into a bus if a user hass entered stop details they can get alert about bus stops. Thus, they get a notification while travelling if the stop has been reached or not.

## 3. FEASIBILITY STUDY

A feasibility study is a preliminary study undertaken to determine and document a project's viability. The results of this study are used to make a decision whether to proceed with the project. If it indeed leads to a project being approved, it will, before the real work of the proposed project starts, be used to ascertain the likelihood of the project's success. It is an analysis of possible alternative solutions to a problem and a recommendation on the best alternative. It, for example, can decide whether an order processing be carried out by a new system more efficiently than the previous one. The feasibility study proposes one or more conceptual solutions to the problem set for the project. The conceptual solution gives an idea of what the new system will look like. They define what will be done on the computer and what will remain manual. It also indicates what input will be needed by the system and what outputs will be produced. These solutions should be proven feasible and a preferred solution is accepted.

The feasibility study environment enables all alternatives to be discussed and evaluated. This phase starts with an identification of the main characteristics of the required system. During this stage it is important to collect information as much as possible about the software package that might meet the specification from as many sources as possible.

Normally, the central endeavor of a feasibility study is a cost benefit analysis of various alternatives. It can be defined as a systematic comparison between the cost of carrying out a service or activity and the value of that service or activity. The main benefits are qualitative than quantitative.

**Technical Feasibility**

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on an outline design of system requirements in terms of Input, Output, Fields, Programs, and Procedures. This can be qualified in terms of volumes of data, trends, frequency of updating etc. in order to give an introduction to the technical system.

The system needs normal configurations of a computer system that are commonly available. The software requirements are Python and Android, Windows 8 or higher versions of OS. Thus, proposed system for our project work is technically feasible.

**Operational Feasibility**

This analysis involves how it will work when it is installed and the assessment of political and managerial environment in which it is implemented. People are inherently resistant to the change and the computers have been known to facilitate change. The new proposed system is very much useful to the users and there for it will accept a broad audience.

The proposed system offers:

- Greater user friendliness
- Better output which can be easily interpreted.
- Higher speed
- Meets the requirements of the passengers.

**Economic Feasibility**

This involves questions such as whether the firm can afford to build the system, whether its benefits should substantially exceed its costs, and whether the project has higher priority and profits than other projects that might use the same resources. This also includes whether the project is in the condition to fulfill all the eligibility criteria and the responsibility of both sides in case there are two parties involved in performing any project.

This study presents tangible and intangible benefits from the project by comparing the developments and operational costs. The technique of cost benefit analysis is often used as a basis for assessing economic feasibility. This system needs some more initial investment than the existing system, but it can be justifiable that it will improve the quality of service.

Thus, feasibility study should center along the following points:

- Improvement resulting over the existing method in terms of accuracy and timeliness.
- Cost comparison.
- Estimate on the life expectancy of the hardware.
- Overall objective.

**Legal Feasibility**

Determines, whether the proposed system conflicts with legal requirements. E.g. a data processing system must comply with the local Data Protection Acts.

**Schedule Feasibility**

A project will fail if it takes too long to be completed before it is useful. Typically this means estimating how long the system will take to develop, and if it can be completed in a given time period using some methods like payback period.

Schedule feasibility is a measure of how reasonable the project timetable is given our technical expertise and are the project deadlines reasonable? Some projects are initiated with specific deadlines. We need to determine whether the deadlines are mandatory or desirable.

# 4. PROJECT PLANNING AND SCHEDULING

## 4.1. Project Planning

For the successful completion of every project there must have a detailed scheduling. The software development has different participating steps. First of all, we have done the requirement analysis phase. For this, we visited different sites that offer resume writing helps, visited different business websites and we discussed with my friends and project guide.

After collecting the requirements, a detailed study of preliminary investigation has done. It includes six major questions.

1. What is being done?
2. How it is being done?
3. Does a problem exist?
4. If a problem exists how severe it is?
5. How frequently does it occur?
6. What is the main reason for that problem?

After the analysis phase the requirement is divided into modules. The design document is divided into modules. The document is created, which includes data flow diagrams, ER diagrams etc.

As the next step, the actual development of the system takes place. The design representations are translated into the codes. Documentation of codes are done by providing an explanation of how procedures are used. Documentation is essential to test the program and carry on maintenance once the application has been installed.

And then the testing is done. Once a system has been developed it is very important to check if it fulfills the customer requirements.

Implementation of the system means putting up system on users' side. Like any other system there is an aging process. Therefore, the system requires periodic maintenance for software or hardware.

# 5. SYSTEM REQUIREMENT SPECIFICATION

## 5.1. Introduction

A software requirements specification (SRS) is a description of a software system to be developed, laying out functional and non-functional requirements. (Non-functional requirements impose constraints on the design or implementation, such as performance, engineering requirements, quality of standards, or design constraints). The specification may include a set of use cases that describe interactions the users will have with the software. The software requirements specification document enlists enough and necessary requirements that are required for the project development. To derive the requirements, we need to have clear and thorough understanding of the products to be developed or being developed. This is achieved and refined with detailed and continuous communications with the project team and the customer until the completion of the software.

## 5.2. Purpose

The transport plays a vital role in individual's life. Very often we are unaware of the schedules of the bus transportation. This project provides an effective solution for public transport to know about bus info using an android application. It helps the people to stay connected with travel updates, know about bus routes, schedules, bus stops. Here we provide a booking service, where a user can book. Hence a voice alert is generated few minutes before the bus reaches the stop. Bus service provider can update bus timings in case of variation in bus timing. Users can send

complaints on the bus about the rude behavior, rash driving, etc. Users can also track current location of the bus using the app.

## 5.3. Scope

For the most part, in the transportation framework, the procedure of knowing bus routes, bus schedules, and bus location is difficult. . If any break down or any issues to bus users can't track or can't know about the bus status. This system provides an android application for users to know about bus routes, schedules, bus stops, and also track bus location. The application provides real-time information about bus routes and schedules, including information about upcoming and past bus arrivals and departures. It is also able to manage changes to the bus routes and schedules in real-time. The application tracks the bus location in real-time and display information on google map so users can see where the bus is and how long it will take to arrive at their location. Overall, the scope of this project involves designing and developing an android application that provides a comprehensive and user-friendly system for public transport users, allowing them to easily access bus info in real-time.

## 5.4. System Requirements

## Hardware Specification

The selection of hardware is very important in the existence and proper working of any of the software. When selecting hardware, the size and capacity requirements are also important. The hardware must suit all application developments.

- Processor : I3 or above.
- System Bus : 32Bit or 64Bit
- RAM : 2 GB or Above
- HDD : 1 TB or Above
- Monitor : 14" LCD or Above
- Key Board : Any type of keyboard
- Mouse : Any Type of mouse
- Mobile : Android supported mobile phone

**Software Specification**

One of the most difficult tasks is selection of the software. Once the hardwareneeds are met, we have to determine whether a particular software package fits for those system requirements.

This section summarizes the application requirement.

- Operating System : Windows 10 And 32 bit or 64 bit platform
- Front End : Android, Python
- Back End : SQLyog
- IDE : Android studio
  : Python 3.6 or above, Pycharm

# 6. MODULE DESCRIPTION

## 1. Admin

The admin can log in to the web using a unique username and a password. Admin can view complaint, view/block bus, view bus time, view feedback, view passenger. Admin can add and manage stop, bus registration approval and track bus.

## 2. Passenger

Passenger uses an android application. Passenger need to register once and they can login with the username and password. They can know about bus routes, view bus schedule, view alert, send feedback, post complaint and view reply. User can also track live location of bus. During the travel time, by entering their location details, alert will be notified to the passenger before the destination reached.

## 3. Bus

Bus uses an android application. Bus also needs to register once and they can login with the username and password. They can view route, add and manage time according to stop, view complaint and give reply. Bus can update their location automatically.

# 7. SYSTEM DESIGN

The most creative and challenging phase of the system life cycle is system design. The term design describes a final system and the process by which it is developed. It refers to the technical specification that will be applied in implementing the candidate system. It also includes the

construction of the program and the program testing. The key question involved here is “how the problem should be solved”.

System design is a solution for the question of how to approach to the creation of a new system. This important phase is composed of several steps. It provides the understanding and procedural details necessary for implementing the system recommended feasible study. Emphasis is on translating the performance requirements into design specifications. Design goes through logical and physical system; prepare input and output specification; make credit, security and control specification; details the implementation plan; prepare a logical design walk. Physical design maps out the physical system, plans the system implements, devices a test and implementation plan and specifies any new hardware and software.

The first most is to determine how the output is to be produced and in what format. Samples of output and input are presented. Second, input data and master files have to be designed to meet the requirements of the proposed output. The operational phases are handled through program construction and testing, including a list of programs needed to meet the system’s objectives and complete documentation. Finally, details related to justification of the system and estimate of the impact of the candidate system on the user and organization are documentation and evaluated by management as a step towards implementation. The final report prior to the implementation phases includes procedural flowcharts, record layouts and workable plan for implementing the candidate system.

# 8. CODING AND IMPLEMENTATION

## 8.1. Coding Environment

### Front End

An Integrated Development Environment (IDE) (also known as Integrated Design Environment or Integrated Debugging Environment) is a software application that provides comprehensive facilities to computer programmers for software development. An IDE normally consists of:

- A source code editor
- A compiler and/or an interpreter
- Build automation tools
- A debugger

## Pycharm

PyCharm is an integrated development environment (IDE) used in computer programming, specifically for the Python language. It is developed by the Czech company Jet Brains. It provides code analysis, a graphical debugger, an integrated unit tester, integration with version control systems (CVSs), and supports web development with Django as well as Data Science with Anaconda.

PyCharm is cross-platform, with Windows, macOS and Linux versions. The Community Edition is released under the Apache License, and there is also Professional Edition with extra features – released under a proprietary license.

## Features

- Coding assistance and analysis, with code completion, syntax and error highlighting, linter integration, and quick fixes
- Project and code navigation: specialized project views, file structure views and quick jumping between files, classes, methods and usages
- Python refactoring: includes rename, extract method, introduce variable, introduce constant, pull up, push down and others
- Support for web frameworks: Django, web2py and Flask [professional edition only]
- Integrated Python debugger
- Integrated unit testing, with line-by-line code coverage
- Google App Engine Python development [professional edition only]
- Version control integration: unified user interface for Mercurial, Git, Subversion, Perforce and CVS with change lists and merge
- Support for scientific tools like matplotlib, NumPy and SciPy [professional edition only]

It competes mainly with a number of other Python-oriented IDEs, including Eclipse's PyDev, and the more broadly focused Komodo IDE.

## Eclipse IDE

Google provides an integrated development environment (IDEs) to develop new applications. The Android Developer Tools (ADT) are based on the Eclipse IDE. ADT is a set of components (plug-ins), which extend the Eclipse IDE with Android development capabilities. Eclipse is an integrated development environment (IDE).it contains a base workspace and an extensible plug-in system for customizing the environment. It is written mostly in java. Eclipse can be used to develop applications. Eclipse sometimes performs multiple commands within a single connection to the server. This may cause problems with servers that are servers that are running server scripts in response to certain commands. Eclipse IDE contains all required functionality to create, compile, debug and deploy Android applications. This also allows the developer to create and start virtual Android devices for testing. Both tools provide specialized editors for Android specific files. Most of Android's configuration files are based on XML. In this case these editors allow you to switch between the XML representation of the file and a structured user interface for entering the data. Eclipse uses plug-ins to provide all the functionality within and on top of the runtime system.

The plug-in architecture supports writing any desired extension to the environment, such as for configuration management. Java and CVS support is provided in the Eclipse SDK, with support for other version control systems provided by third-party plug-ins. The Eclipse SDK includes the Eclipse Java development tools (JDT), offering an IDE with a built-in incremental Java compiler and a full model of the Java source files. This allows for advanced refactoring techniques and code analysis. The IDE also makes use of a workspace, in this case a set of metadata over a flat file space allowing external file modifications as long as the corresponding workspace "resource" is refreshed afterwards. Eclipse implements use the graphical control elements of the Java toolkit called SWT, whereas most Java applications use the Java standard Abstract Window Toolkit (AWT) or Swing. Eclipse's user interface also uses an intermediate graphical user interface layer called JFace, which simplifies the construction of applications based on SWT. Eclipse was made to run on Wayland during a GSoC-Project in 2014.

## Back End

## Database Servers

A database server is used to store data in a database. Users can access the data and manipulate it. There are many types of databases. The most popular among them is the Relational Database Management System (RDBMS).

## RDBMS

RDBMS is a type of database management system that stores data in the form of related tables. Relational database are powerful because they require few assumptions about how data is related or how it will be extracted from the database. As a result, the same database can be viewed in many different ways. An important feature of relational systems is that a single database can be spread across several tables. This differs from flat-file database, in which each database is self-contained in a single table.

## MySQL

MySQL is an open source relational database and it includes advanced data types. MySQL operates using client/server architecture in which the server runs on the machine containing the database and client connect to the server over the network. MySQL run on all platforms supported by MySQL and provides the most direct means of interacting with the server, so it's the logical client to begin with.

• You need to have the MySQL software installed.

• You need a MySQL account so that you can connect to the server. • You need a database to work with.

The required software includes the MySQL clients and a MySQL clients and a MySQL server. The client program must be located on the machine where you will working. The server can be located on our machine although that is not required. As long as you have permission to connect to it the server can be located anywhere. In addition to the MySQL software you will need a MySQL account so that the server will allow you to connect and create us sample database and its table.

Microsoft SQL Server 2008 is a full-featured relational database management system (RDBMS) that offers a variety of administrative tools to ease the burdens of database development, maintenance and administration. In this article, we'll cover six of the more frequently used tool: Enterprise Manager, Query analyzer, SQL Profiler, Service Manager, and Data

Transformation Services and Books Online. Let's take a brief look at each:

**Enterprise Manager** is the main administrative console for SQL Server installations. It provides you with a graphical "birds-eye" view of all of the SQL Server installation on your network.

You can perform high-level administrative functions that affect one or more servers, schedule common maintenance tasks or create and modify the structure of individual databases.

**Query Analyzer** offers a quick method for performing queries against any of your SQL Server databases. It's a great way to quickly pull information out of a database in response to a user request, test queries before implementing them in other applications, create/modify stored procedures and execute administrative tasks.

**SQL Profiler** provides a window into the inner workings of your database. You can monitor many different event types and observe database performance in real time. SQL Profiler allows you to capture and replay system "traces" that log various activities. It's a great tool for optimizing databases with performance issues or troubleshooting particular problems.

**Service Manager** is used to control the MS SQL Server (the main SQL Server process), MSDTC (Microsoft Distributed Transaction Coordinator) and SQLServer– Agent processes. An icon for this service Manager to start, stop or pause any one of these services.

**Data Transformation Services (DTS)** provide an extremely flexible method for importing and exporting data between a Microsoft SQL Server installation and a large variety of other formats.

The most commonly used DTS application is the "Import and Export Data" wizard found in the SQL Server program group.

## Programming Languages

## Python

Python is a widely used general-purpose, high level programming language. It was initially designed by Guido van Rossum in 1991 and developed by Python Software Foundation. It was mainly developed for emphasis on code readability, and its syntax allows programmers to express concepts in fewer lines of code.

Python is a programming language that lets you work quickly and integrate systems more efficiently.

There are two major Python versions- Python 2 and Python 3. Both are quite different.

## HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document

## 8.2. Implementation

Implementation of the system refers to the final installing of the package in its real environment, to the satisfaction of the indeed users and the operation of the system. It is the process of converting a new or revised system design to operation. It is the key stage in achieving successful new system. The process of putting the developed system in actual use is called system implementation. This includes all those activities that take place to convert from the old system to new system. It must therefore be carefully planned and controlled. Proper guidance should be imparted to the users so that he is comfortable in using the application.

**Implementation Plan**

The transformation from theoretical designs to working system is done in this stage. Developed package of system is tested with simple data, accurate error identification and then through proposed change from the user etc. a dress rehearsal working of system is done, so as the system is scrutinized, for pointing out errors and modifications required if any keeping in mind the expectations and specifications from the system.

**Education and Training**

The expectations from the system are achieved by the people who will be involved to be confident of their role in the new system. The complexity of the system is directly proportional to the amount of training and education given for the user. Education is different from the training, as the user through education can be a part of development of the system. Education has the capability to make training more interesting and important contributions in the system changes.

Training just means to give user specific skills in order to meet their new job requirements. The role of system analyst in training will make it more understandable and effective. Training provides a better overview of new system and its present objectives.

**Training Of the Application Software**

Awareness about the new system is made to the users through training, and with the underlying philosophy of the system (screen design, flow, error types during inputs, validation checks etc.) application use the system, as the users of the system may be of at different levels of hierarchy.

**Post Implementation Review**

System performance v/s expected requirements are evaluated. The implementation problems if any is taken seriously and taken care of along with admiring the achievements, failures etc. The works done here are used to improve the efficiency and user friendliness of the system.

**Security**

System security is a branch of technology known as information security as applied to computers and networks. The objective of system security includes protection of information and property from theft, corruption, or natural disaster, while allowing the information and property to remain accessible and productive to its intended users. The term system security, means the collective processes and mechanisms by which sensitive and valuable information and services are protected from publication, tempering or collapse by unauthorized activities or untrustworthy individuals and unplanned events respectively. The technologies of system security are based on logic. As security is not necessarily the primary goal of most computer applications, designing a program with security in mind often imposes restrictions on that program's behavior.

**Maintenance**

Maintenance is making adaptation of the software for external changes (requirements changes or enhancements) and internal changes (fixing bugs). When changes are made during the maintenance phase all preceding steps of the model must be revisited.

There are three types of maintenance:

1. Corrective (Fixing bugs/errors)

2. Adaptive (Updates due to environment changes)

3. Perfective (Enhancements, requirements changes

Maintenance is enigma of the system development. The definition of the software maintenance can be given describing four activities that are undertaken after the program is released for use.

The maintenance activity occurs since it is unreasonable to assume that software testing will uncover all in a large system. The second activity that contributes the definition of maintenance occurs since rapid changes are encountered in every aspects of computing. The third activity involves recommendation for new capabilities, modification to the existing functions and general enhancements when the software is used. The fourth maintenance activity occurs when software is changed to improve future maintainability or reliability.

# 9. TESTING

## 9.1. Testing Objectives

Testing is an important step in the software engineering process that could view rather than constructive. Testing is the process of executing a program with the intent of finding an error. A good test is that has probability to find an as yet undiscovered error.

• A good case is one that has a high probability of finding an unpredictable error.

• A successful case is one that has a high probability of finding an unpredictable error.

• A good test case is one that provides solution to that unpredictable error.

• A test plan entailed the following activities. We prepare list plan.

• We specified condition for users acceptance testing.

• We prepared list data for program testing.

• Also we prepared list data transaction plan testing.

• Then we planned user training.

• Our programs were compiled and assembled.

• Job performance aids were prepared.

**Need For Testing**

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. Testing includes the verification of the basic logic of each program and verifies that the entire system works properly. Testing the individual program involves and attempt to be sure of the most likely possible. Test case design focuses on asset of technique for the creation test the cases that meet over all testing objectives.

## 9.2. Testing Strategy

Software testing determines the correctness, completeness, and quality of software being developed. Validation refers to the process of checking that the developed software meets the requirements specified by the user. The activities involved in the testing phase basically evaluate the capability of that system meets its requirements. The main objective of software testing is to detect errors in the software. Errors occur if some part of the developed system is found to be incorrect, incomplete or inconsistent. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs (errors or other defects).It involves the execution of a software component or system to evaluate one or more properties of interest. In general, these properties indicate the extent to which the component or system under test:

• meets the requirements that guided its design and development,

• responds correctly to all kinds of inputs,

• performs its functions within an acceptable time,

• is sufficiently usable,

• can be installed and run in its intended environments, and

• achieves the general result its stake holders desire.

As the number of possible tests for even simple software components is practically infinite, all software testing uses some strategy to select tests that are feasible for the available time and resources. As a result, software testing typically (but not exclusively) attempts to execute a program or application with the intent of finding software bugs (errors or other defects).Software testing can provide objective, independent information about the quality of software and risk of its failure to users and/or sponsors. Software testing can be conducted as soon as executable software (even if partially complete) exists. The overall approach to software development often determines when and how testing is conducted. For example, in a phased process, most testing occurs after system requirements have been defined and then implemented in testable programs. In contrast, under an Agile approach, requirements, programming, and testing are often done concurrently.

## Test Results

Test results emphasize how the actual results differed from the expected results. This suggests the need for re-testing, and to discover the source of differences. The test phase of systems development process involves the defining of the criteria by which the system will be tested and measuring the criteria against the acceptable failure rate. Individual modules are tested during the development itself. Errors detected are corrected and re-tested, and the project leader has verified the compliance. Each input, output and processes are tested to verify that it performs as specified in the design. The units in the system are re-compiled and errors found are corrected as indicated by the compiler. The tests are repeated until all known errors are eliminated and the program matched the design specifications. Separate tests are performed to ensure that program units are properly interfaced with each other to form a complete system.

# 10. FUTURE ENHANCEMENT

In future, can add more features to this proposed system. This real-time mechanism helps people to know the arrival time of respective stops. The basic objective of the system is to provide a convenient and easy navigation to the people who widely uses Public Transportation. We are doing this project in an android supported mobile phone. In future we can implement this application used by the passenger and bus which helps people to know the exact time of bus arrival in respective stops and also they can know whether the bus is running or not by tracking the bus. In addition to providing information about buses, the application could be enhanced to integrate with other mode of transportation, such as trains, taxis, and subways. The application could be enhanced to provide personalized recommendations based on user's location, travel history, and preferences. We can add real-time information about traffic congestion and road condition, which allow user to adjust their travel plan. Also it can be enhanced to provide augmented reality features, such as using user's camera to display real-time information about bus stops and routes in their immediate surroundings. It also can be integrated with payment systems, allowing users to purchase tickets or passes directly from app. We can add online ticket booking system as well as passengers can know number of seats available in the bus. All these future enhancements could provide additional value to users and improve the overall functionality of application, making it a more comprehensive and user-friendly transportation solution.

## 11. CONCLUTION

The application provides an effective solution for public transportation system to improve its service delivery to the community. The application has made it easier for commuters to plan their trips, check schedules and track bus location in real-time. This has resulted in reduction of waiting time and has improved experience of using public transportation. Moreover, the application has provided a more efficient way for bus drivers to manage their routes and schedules, and has allowed transportation companies to optimize their fleet management. In short, the application has provided an efficient solution for public transportation, which has enhanced the experience for both commuters and transportation companies. It is expected that the adoption of this technology will continue to grow, resulting in a more efficient and reliable public transportation system.

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