Software Requirements Specification
for
BUS TRACKING SYSTEM

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Contents

Chapter 1

Introduction

1.1 Purpose

The main goal of the work is to improve bus system of colleges and universities by adding necessary additional features into the application like accurate bus timing, correct bus number and location and moreover adding GPS tracker to it. It tends to reduce the waiting time for students as well as develop stimulation of sharing of update information between bus driver and student. Any change in the scheduled movement of bus will be updated instantly. Bus locations and routes are shown on the dynamic maps using Google maps. Student can rate the ride.

1.2 Intended Audience

Our product will potentially have many users, as there may be many add-ones to the product each one catering to different types of users in various industries.

- **Home User (Student)** – A user who wants to use the product to keep track of bus anytime. They won't need to have extended functionality.
- **Bus driver**– This is a user who uses the product to make his life easier and to perform specific tasks. Such tasks for a bus driver, for example, would be to keep track of where the students are waiting for the bus.

1.3 Intended Use

The main intended use of the system is to provide students correct time and location of the bus. With the help of using mobile app, students can also easily track bus number. Student can rate the ride too.

1.4 Product Scope

The application is user friendly that student of specific institution will able to use the app for free. It will help to monitor the location the bus driver nearby and able to wait at any place. By using GPS tracker diver to identify that his passenger is waiting that place and meet at the pickup point. The proposed system is divided into two modules,

1. Gives information about all routes of source to destination as well as map location.

2. Give information about bus number, bus availability, bus driver. Student can rate how the ride was.

1.5 Risk Definition

If students or driver do not have proper internet connection it may A malicious request might cause the application to do something bad or the database to divulge information it shouldn't divulge.Malicious code can be sent to a dynamic site via things like password entry forms.

Chapter 2

Overall Description

2.1 User Classes and Characteristics

- All_Users (To save all users' data)
- Bus (To save the data of bus type user. Subset of All_Users class)
- Student (To save the data of student type user. Subset of All_Users class)
- Active Bus (To save the data of the buses on the roots)
- Active Student (To save the data of the students waiting near the roots)

2.2 User Needs

- **Route Details**: It includes the originating terminal and destination terminal, along with the stops in between.
- **Star Ratings**: Star ratings are a well-known feature on the ride sharing app. giving drivers a boost of confidence when their likability is confirmed with a solid five stars.
- **Bus description**: It includes supervisor details, Bus number, time and date updates.

2.3 Operating Environment

This application is for android platform. It will be operational on any android device with Android API level 19(KitKat) or higher.

2.4 Constraints

- Default Language will be English. In next increment we will provide the facility to see the web in Bengali.
- Project will follow all the copyright infringement.
- Project should be finished within deadline.

2.5 Assumptions

- Student has proper internet connection.
- Every student has Student ID .
- Every student has Email ID.
- Every student has valid contact number.
- The app must be able to respond to database software within reasonable time.
- The system database will be accessible in real time.
- The student doesn't submit any fake feedback to the system

Chapter 3

Requirements

3.1 Functional Requirements

- To request information about bus location (Passenger-End).
- To request information about passenger location (Driver-end).
- Authentication of a user when he/she tries to log into the system.
- Verification email is sent to user whenever he/she registers for the first time on some software system.

3.2 Non-Functional Requirements

- **Safety Requirements:** If a student doesn't manage to provide his/her username and the password in 3times the student automatically will log out from the website.

  System must not provide access to any student except the designated student to update the database.
- **Security Requirements:**The access permissions for system data may only be changed by the system's users and admin.They can provide a security code sending via message or e-mail for accessing in the blog website from other devices.
- **Safety Requirements**: Mobile app shall ensure that data is protected from unauthorized access, spams or viruses.
- **Performance**: For example Response time, Throughput, Utilization, Static Volumetric.
- **Manageability**

Figure 3.1: Login User Interface

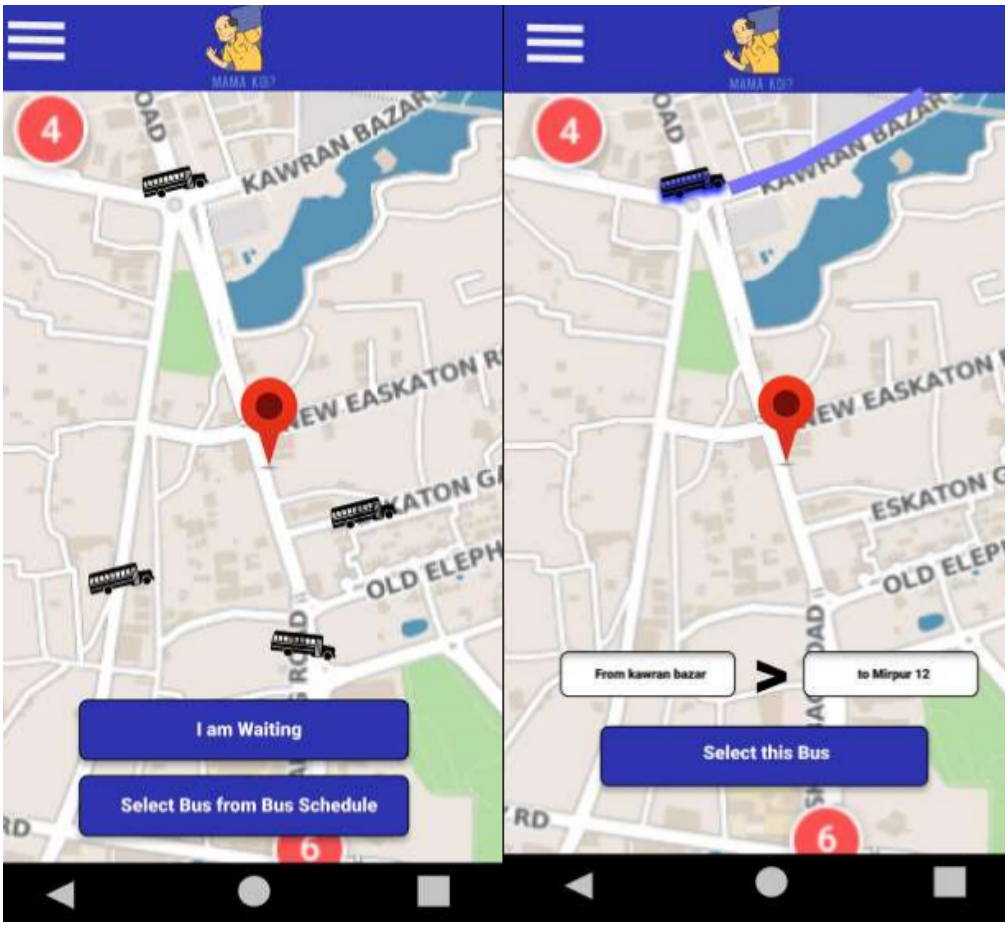

Figure 3.2: Login User Interface

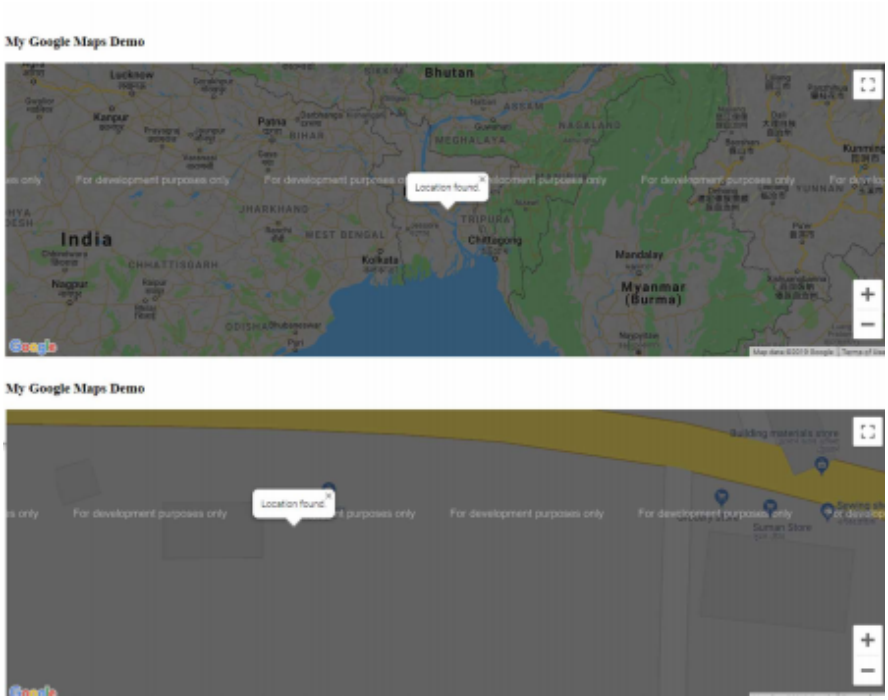

Figure 3.3: Desktop-View

Appendices

Appendix A

Glossary