



Submitted to:
SPL-2 PROGRAM COMMITTEE

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Contents

1. Introduction:	3
2. Scope of the project	3
Project Goal	3
Features:.....	3
Out of scope:.....	4
Required Language	4
Deliverables	4
3. Motivation.....	4
4. Work plan.....	5

1. Introduction:

The bus automation system is an automated system for university bus service. There are a number of buses for the university students on different routes i.e. Srabon, Torongo, Chaitali etc. The objective of the project is to create an environment which will help the university students and help us to develop a fully automated (without conductor and checker) bus management system.

The bus automation system will have two types of user, Normal user and admin. The students and the officers of University of Dhaka will be the normal user. The bus committee members will be the admin of the system. The user of the system can find information about the route, current location of the bus, the number of vacant seat, the summer and winter schedule of the bus dynamically and the location of the nearest bus. The user can also search for the name of the bus for his location from the system. The admin can publish and update notice in the system. The user can find most recent information of the bus from the notice section. The user can register for different event like picnic, cricket tournament, badminton tournament from the event section and pay online for these event from payment section.

2. Scope of the project

Project Goal

Developing an Automated Bus Management System which will be an android Application for DU students to know the routes, schedule updates and real time location of any varsity bus.

Features:

1. Route Management:

A user can see the route of his bus in the google map. The user has to select the name of his/her bus from the list. The system will show him/her the route of the bus. The admin can update the route if needed.

2. Search:

A user can search the name of the bus. He/she will provide the name of the location ie. Bashaboo, Banasree, Mohammadpur etc. The system will provide the name of the bus. If there is no bus service on that location, the system will also give that information.

3. Seat Management:

There will be cameras on the bus and the cameras will capture pictures at a regular interval. From the pictures the system will find out the number of vacant seats. The user can know the number of vacant seats from the system.

4. Schedule Management:

The schedule of different buses can be seen by the user. There are two types of bus schedule, up-trips and down-trips. The user has to provide the name of his bus and select up-trips or down-trips. The system will provide the schedule then. The schedule will be dynamic. During winter, the schedule will automatically change to winter schedule.

5. Notice Board:

There will be a notice section in the system. An admin can publish new updates in the notice section, if there is any kind of emergency or change of schedule.

6. Event Management:

For this section the user has to provide his first name, last name, registration number, year, session, hall and email address. Then he/she can get information about the upcoming event i.e. fresher's reception, cricket tournament, football tournament, badminton tournament and he/she can register for the event. The admin of the system can publish, update information about an event.

7. Payment:

For these events, the user has to pay i.e. fresher's reception. He/she can use the system for Bkash payment. For payment through Bkash, all rules will be given in this section. The user has to provide TrxID in the system.

8. Location:

The location of the nearest bus will be known from the system.

Out of scope:

1. Admin to admin communication is out of scope
2. Without internet connection location can't be detected

Required Language:

1. Java
2. Dart
3. SQL

Deliverables:

Deliverables of this project are-

1. SRS documentation
2. Android application

3. Motivation

Most of the students of Dhaka University stay outside the university campus and everyday they come to attend their classes and examinations by bus. So, information related to Dhaka University Bus is very important for each DU student. A common problem occurs that is, students couldn't get the bus location and they feel bored waiting for the bus. Sometimes the varsity buses cross stoppages earlier than the average time and some students wait for the bus for infinite period of time thinking that the bus hasn't come yet. There are a lot of problems related to bus schedule.

Sometimes bus schedule changes and this information couldn't be reached to all the students as there is less connection between bus admin and bus users. We want to solve these problems and want to implement all the solutions of the problems mentioned above.

Work Plan:

1. Analyzing and specifying the requirements of the projects within 3 weeks
2. Learning required language and tools
3. Preparing SRS document of the project within 8 weeks
4. Making database for the admin panel

