

# **Bus Automation System**

## **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 ie. 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.

### **Actors of Bus Automation System :**

#### **1. Normal User :**

A normal user will use the system to see the route and the schedule of the bus. The user can also know the current location of the nearest bus from the system. He or she can know the number of vacant seats of the nearest bus by using the system.

#### **2. Admin :**

The Admin account will be created initially by the system. Then an admin can create another admin account. The bus committee members of different routes will be the admin of the system. An admin can publish and update notices. An admin can also edit the schedule of the bus.

### **Features :**

#### **Account Management:**

An admin account will be created initially by the system. The admin can create another admin account. To create a new admin account, the admin has to enter first name, last name, registration number, present address, permanent address, session, hall, department, mobile number, username, password and email address. All information will be stored in the system. An admin can login into the system by providing his/her username and password. Inactive admin accounts can be deleted by admin.

***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.

***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.

***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.

***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 uptrips or downtrips. The system will provide the schedule then. The schedule will be dynamic. During winter, the schedule will automatically change to winter schedule.

***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.

***Event Management:***

For this section the user has to provide his first name, last name, registration number, year, session, hall, department and email address. Then he/she can get information about the upcoming event ie. picnic, 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.

***Payment :***

For these events , the user has to pay ie. freshers' 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.