



NORTH SOUTH UNIVERSITY
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

PROJECT REPORT FOR

”BUS MANAGEMENT SYSTEM”

DATABASE SYSTEM LAB
CSE311L

SECTION: 3

SEMESTER: FALL 2020

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Submission Date : January 20, 2021

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Introduction

Bangladesh is a densely populated country. The main mean of transportation is bus because it is cheap and economic. In the market there are many tickets buying app available such as Shohoz, BDTICKETS, etc. However, none of those app provide information of driver or the condition of the bus. This web application will contain all that information and will also provide the customer a safe travel. On the other hand, it will also notify the owner of the bus about the expiration date of maintenance or fitness of car as well as expiration date of driver license.

About

Bus Management System is a a web-based technology, created to simplify the experience of traveling with bus.

Typically, this web application provides bus owner and passenger an easy way of traveling by booking and seeing review of buses.

Repository link :

https://github.com/kazimosaddequr/CSE311L_Project_BUS_Management_System

Purpose and benefit of Bus Management System

The web page will open with the customer view at first. It will be general view and anyone accessing the domain will be able to view it. This view will show all the routes and buses available. Passenger has to create an account first to buy the tickets. Once a passenger has created an account, he/she can:

- Buy or book ticket .

- Suggestion for alternative.
- Rate or give suggestions.
- Access history of their past travels.
- information related to the buses they will or have already traveled.
- Notification for boarding bus.

On top right there will be log in or sign up for bus owners. They will be able to add their company to the database and see their progress. Once a bus Owner has created a profile, he/she can:

- See the information of their bus, driver and maintenance.
- weekly and monthly ranking of the bus.
- Feedback of their service.
- The current status of their bus.

Benefits

- To easily access the ticket from home.
- Get to know about driver and the condition of bus.
- Notification of bus arrival
- Bus owner will get notification about the expiration of necessary information such as driver license
- Owner will also get to know which bus route is used by many people.
- survey report about their bus service.

Target Customers

- Passenger – People who will use our service to buy ticket. They will also get to know all the information about bus and the driver.
- Bus Owner – Bus owners will be able to maintain all the bus's route traffic and information of their buses. They will also be able to calculate the payment of their driver and utilize cost.

User Story

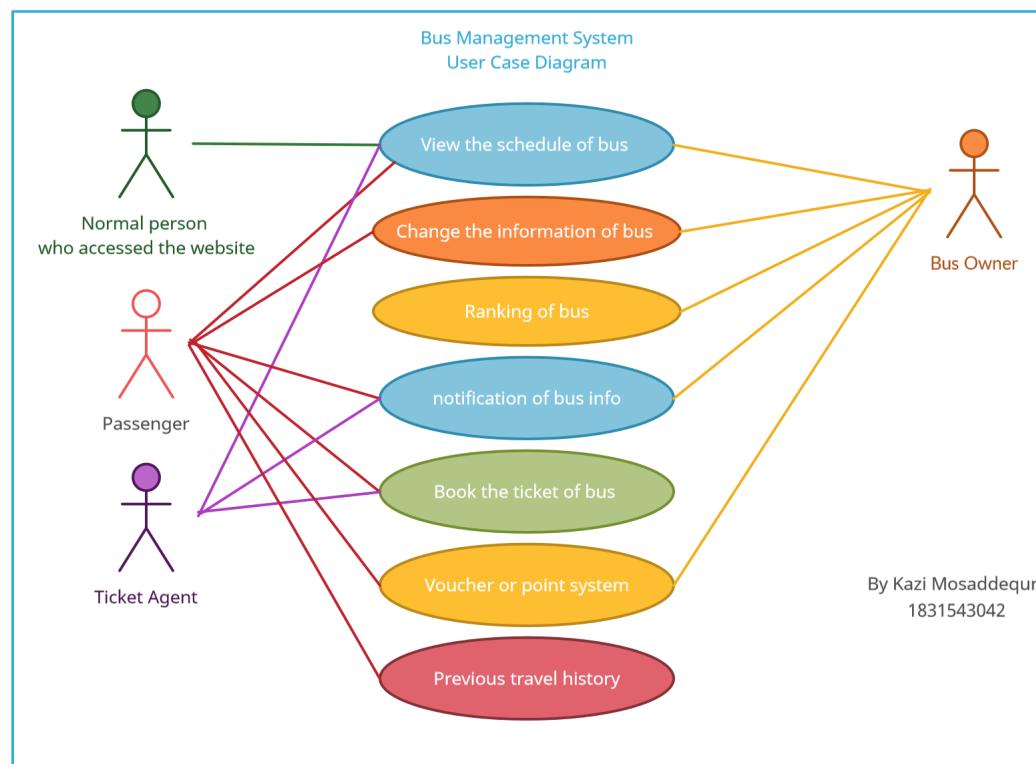


Figure 1: Use Case Diagram of Bus Management System

Use case 1

Mr X, a normal person who saw or visited the web page can only see the schedule of bus.

Use case 2

Mr.Y, a member of our program can view the schedule, check information of bus, get notification about the bus, voucher or point system for bus, book ticket and lastly can see the previous travel history.

Use case 3

An organization xyz uses our service to book bus ticket for other passenger. Their employee can view the schedule, get notification about the bus and lastly book a ticket.

Use case 4

Mr Z, The owner of the bus company who supply us the bus can view the schedule of bus, can change the information of bus, can see the ranking of bus, get notification about bus information and participate in the voucher program.

Limitation

The problem with the software is that there is no method to check if the information provided by the users are correct or not.

Value Proposition

This website will reduce the bothering and time of going to a bus stop and constantly ask them for booking a seat in bus. It will also reduce the cost of

keeping a manager to keep track of the information. Bus owner will be notified for updating the papers which will reduce the chance of being late and hence, saving the penalty money.

Solution Description

Database Schema and ER Diagram

Database Schema

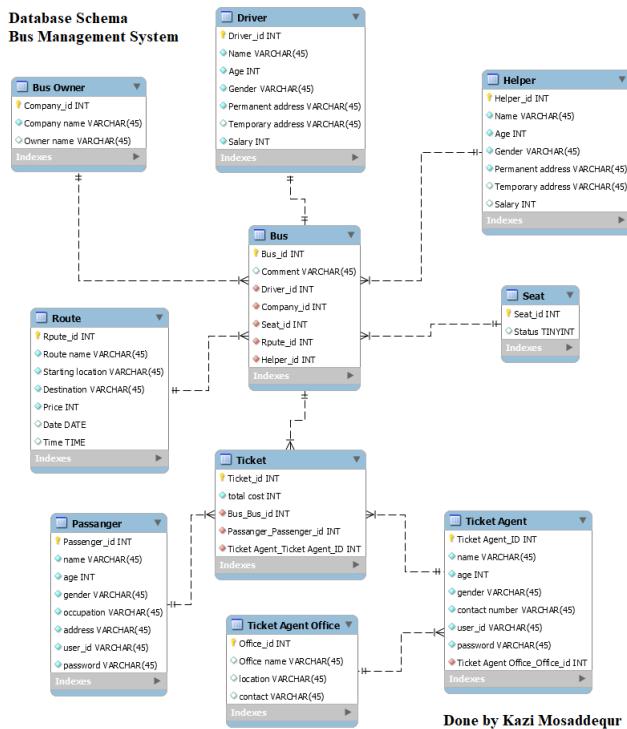


Figure 2: Database Schema

ER Diagram

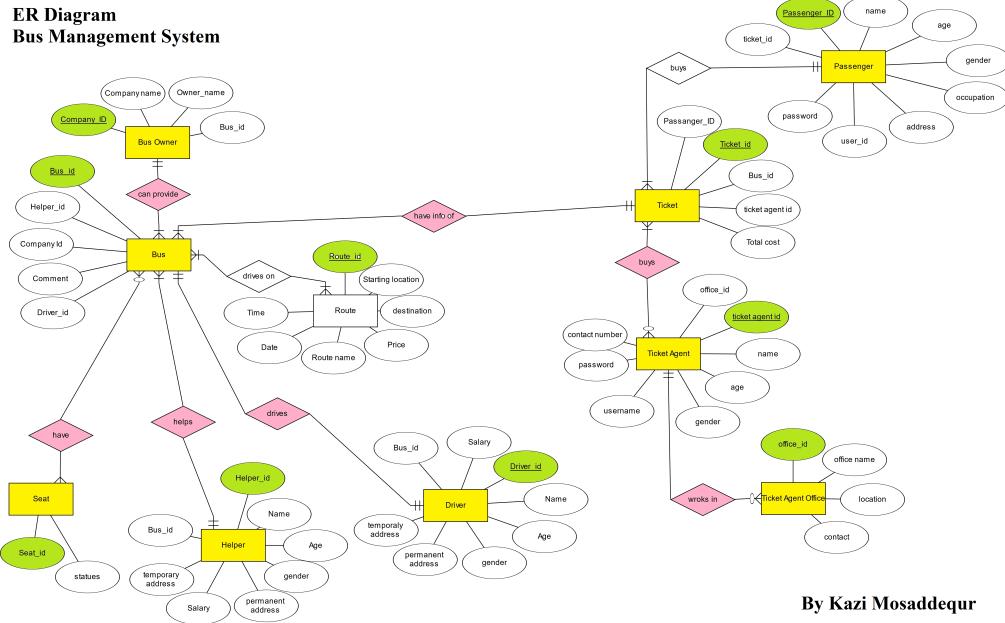


Figure 3: ER Diagram

Front-end design

- Main page
- Login page
- Register page
- Bus owner page
- Payment page
- Schedule page
- accommodation page

Back-end design

- sign up
- Login
- new account
- sorting data
- log

Tools and Resources

HTML using atom text editor

Javascript using atom text editor

MySQL using XAMPP and MYSQL Workbench

PHP using atom text editor

Web server using XAMPP

API for sms and google sign in (GOOGLE OATH)

Challenge

One of the biggest challenge is cost. As there will be a huge data like image, tracking bus and SMS for alert, there may be a chance of high cost maintenance.

Second challenge will be the verification of data. We will need to check if the data entered are reliable or not. Although Bangladesh has started digital NID cards but to access the database will not be easy, many processing need to be done. UI also need to be simple and easy so that normal people can also use it.

Lastly, connection or providing security for online payment will be difficult.

Advantage

The advantages of using this software are

- Easy access of ticket from home.
- Get to know about driver and the condition of bus.
- Notification of bus arrival
- Bus owner will get notification about the expiration of necessary information such as driver license
- Owner will also get to know which bus route is used by many people.
- survey report about their bus service.

Some screen-shot of project

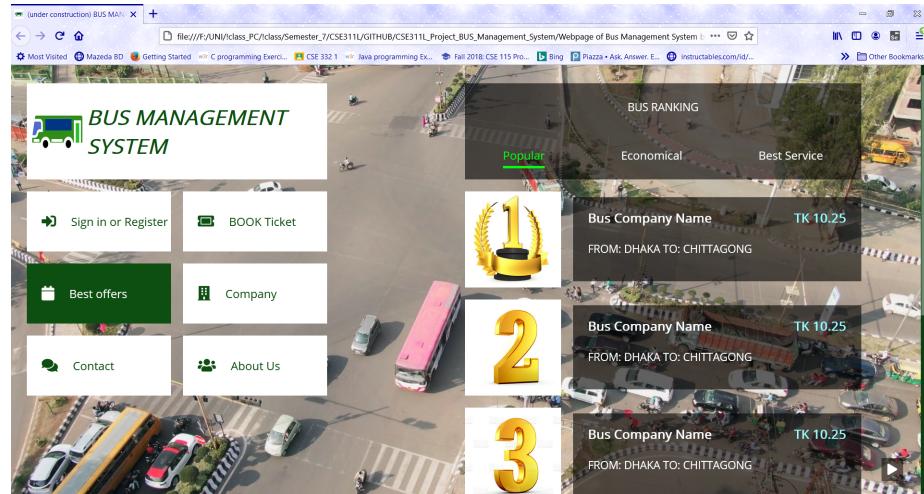


Figure 4: Homepage

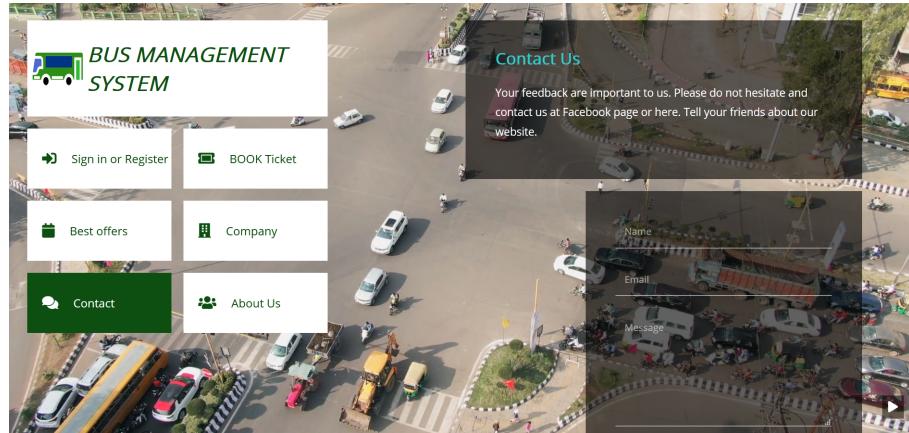


Figure 5: Contact Us page

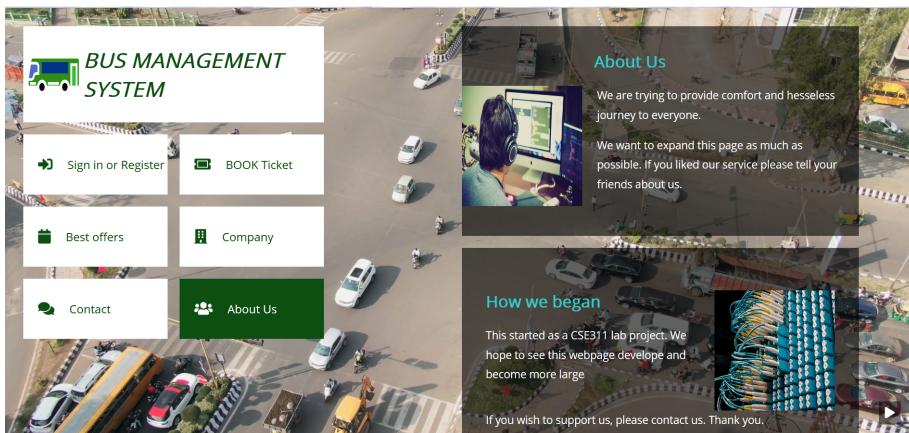


Figure 6: About page

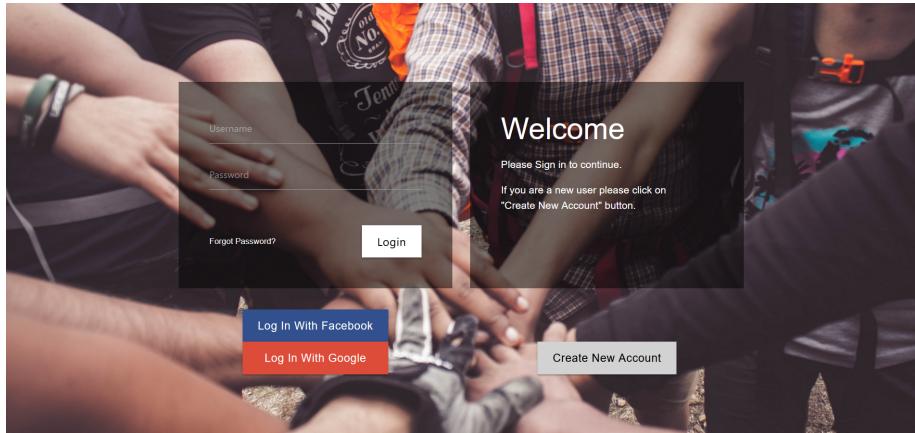


Figure 7: Login page

A screenshot of a registration page titled "REGISTRATION". The page includes fields for gender selection (radio buttons for Mr., Ms., and Mrs.), Name, Gender (dropdown menu), Occupation, Mobile, Address, District/Province, Your City (dropdown menu), Zip Code, and a "SUBMIT" button. A message at the top right reads: "Thank you for registering to our service. Please fill the necessary information and click on submit button." The background is dark with some foliage visible.

Figure 8: Registration page

The screenshot shows a web-based ticket booking system. At the top, there are navigation links for "Online Ticketing" and "Reservation". A "Back To Home" link is located in the top right corner. Below the navigation, a pink header bar titled "STEPS FOR BOOKING" contains four tabs: "1. Choose your travel", "2. ACCOMODATION", "3. PASSENGER INFO", and "4. PAYMENT INFO". The "1. Choose your travel" tab is active, showing a form with fields for "Origin" (Dhaka), "Destination" (Chittagong), and "Departure Date" (01/05/2021). A green "NEXT" button is at the bottom of this section.

Figure 9: Page for buying ticket

The screenshot shows a login page titled "Company Sign In" at the top left. A "Return Home" link is at the top right. The main area has a green header bar with the text "Please Login Here". It contains fields for "Username" (admin) and "Password" (Enter password), a "Remember me" checkbox, and a "Login" button.

Figure 10: Login page for Bus owner page

Appendix

Contact

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