Green University of Bangladesh

Department of Computer Science and Engineering (CSE)
Semester: (Spring, Year: 2023), B.Sc. in CSE (Day)

Assistant of Traveler

Course Title: Object Oriented Programming Lab
Course Code: CSE 202
Section: DD

Students Details

Name	ID
Md. Hosain Rohman Noyon	221902370

Submission Date: 20-06-2023
Course Teacher's Name: Md. Parvez Hossain

[For teachers use only: Don't write anything inside this box]

Lab Project Status	
Marks:	**Signature:**
Comments:	**Date:**

Contents

Chapter 1

1.1 Introduction

An online bus ticketing system is a simple automated system that allows passengers to process internet-based buying ticket from online through a branded website or mobile app. An online ticketing system enables a much quicker service and save much time. So, I have built this assistant system. The Online Buying System is aimed at providing a convenient platform for users to purchase bus tickets online. It simplifies the process of searching for available buses, selecting a suitable option, and making the purchase. The system is designed to be user-friendly and easy to manage for both users and administrators.

1.2 Objectives:

The primary objectives of the Online Buying System project are as follows:=

- To develop a application that allows users to search for available buses based on their present location and destination.
- To enable users to select and purchase bus tickets online, providing them with a hassle-free experience.
- To create an admin interface that allows easy management of bus records.
- To make a simple and easier system for customers to order food on online.
- To make easy to get ticket anytime at any place.

1.3 Features:

The Online Buying System offers the following key features:

- User-friendly Interface: The system provides a simple and intuitive interface for users to input their present location and destination.

- Bus Search: Based on the user's input, the system displays a list of available buses along with their names and relevant details.
- Ticket Purchase: Users can choose a bus from the list and proceed to purchase the tickets online, eliminating the need for physical ticket counters.
- Admin Panel: An administrative interface is available to the system administrator, allowing them to manage bus records and add bus stoppages easily.
- Easy to get all ticket purchasing data
- This system can be used from anywhere anytime

Chapter 2

2.1 Algorithm

```
        #start-> Display the home page showing:
     i. Log In As Admin,    ii. log in as User
```

```
                    Log In as USER

1. Find Bus
2. Change Password
3. History of Buying Ticket
```

```
                     Find Bus

1. Take the present and destination stoppage name
    If present & destination is matched with any bus path,
        -->Display the buses name
2. Take bus name and Go For Next Frame
3. Go Confirmation process
4. After being done payment process Display the ticket
5. Add Buying history to database
```

```
                     Change Password

1. Take the current password and new password
    If current password is matched with the user data,
        --> Password may be changed in database
```

```
                Show History of buying Tickets

1. Connect to database
2. Match the Ticket buying data with logged in user name
    If matched,
        --> add object row to JTable
```

```
                        ADMIN Panel

1. Add New Bus Record
2. Update Bus Path & Cost
```

```
3. Delete Bus Path
4. Show Buying Ticket History
```

```
                          Add  Bus

1. Read Bus Name, Cost, Stoppage Places, Distance from starting
    place
2. After clicking    Add    button it will able to take more
   stoppage place and destination
3. After clicking    Confirm    button the Bus records will be
   updated to database
```

```
                        Update  Bus Path

1. Read Bus Name, Stoppage Places
2. If    Delete    button is clicked  The  stoppage name  will
    be deleted from the Bus records.
3. If    Update    button is clicked  the  stoppage and
   destination will be replaced
```

```
                    Update  Bus Cost(/KM)

1. Read Bus Name, new Cost
2. If  bus  n a m e  e x i s t s The cost will be updated
3. Else ->show exception
```

```
                    Show  Ticket Buying Data

1. Connect to database
2. Read data from the required table
3. Show the data to JTable
```

Chapter 3

3.1 Methodology

- Encapsulation: Encapsulation in Java refers to integrating data (variables) and code (methods) into a single unit. In encapsulation, a class's variables are hidden from other classes and can only be accessed by the methods of the class in which they are found.
- Exception Handling: The Exception Handling in Java is one of the powerful mechanism to handle the runtime errors so that the normal flow of the application can be maintained.
- static keywords: The static keyword is used to represent the class member. It is basically used with methods and variables to indicate that it is a part of the class, not the object.
- String, hashmap : In Java, string is basically an object that represents sequence of char values. An array of characters works same as Java string. Java HashMap class implements the Map interface which allows us to store key and value pair, where keys should be unique.
- Built in packages: Packages in java are used to avoid naming conflict and to control the access of class, interface, sub-classes, etc. A package can be defined as a group of similar types of classes, sub-classes, interfaces or enumerations, etc. while using packages it becomes easier to locate or find the related classes and packages provides a good structure or outline of the project with a huge amount of classes and files.
- Swing: Java Swing is a part of Java Foundation Classes (JFC) that is used to create window-based applications. It is built on the top of AWT (Abstract Windowing Toolkit) API and entirely written in java.
- MySQL Database: MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license.

3.2 Results

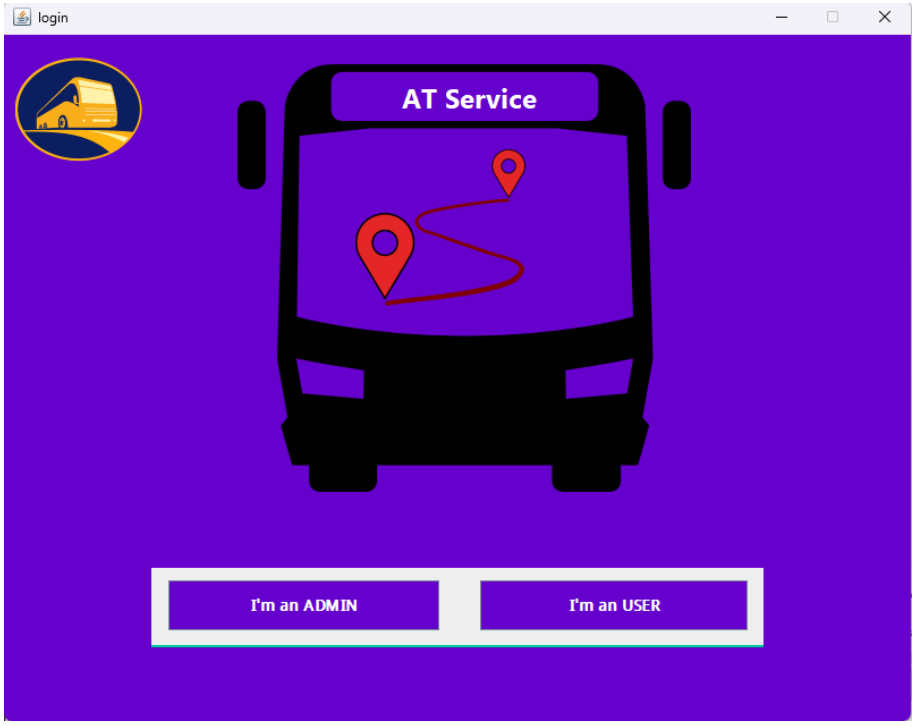

Figure 3.1: First Page

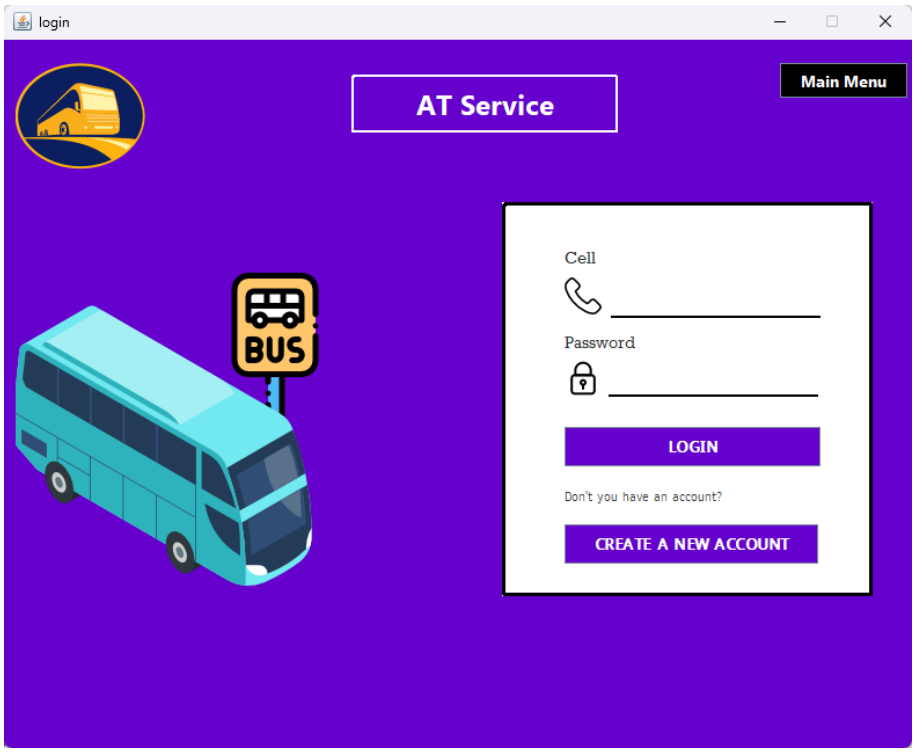

Figure 3.2: User Log In Page

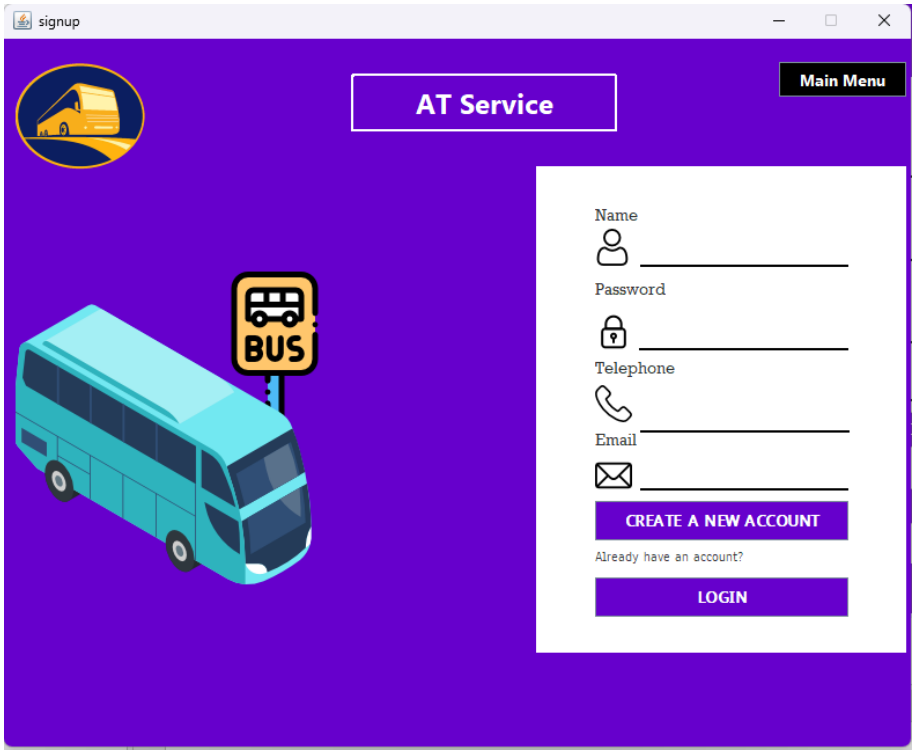

Figure 3.3: User Create Account Page

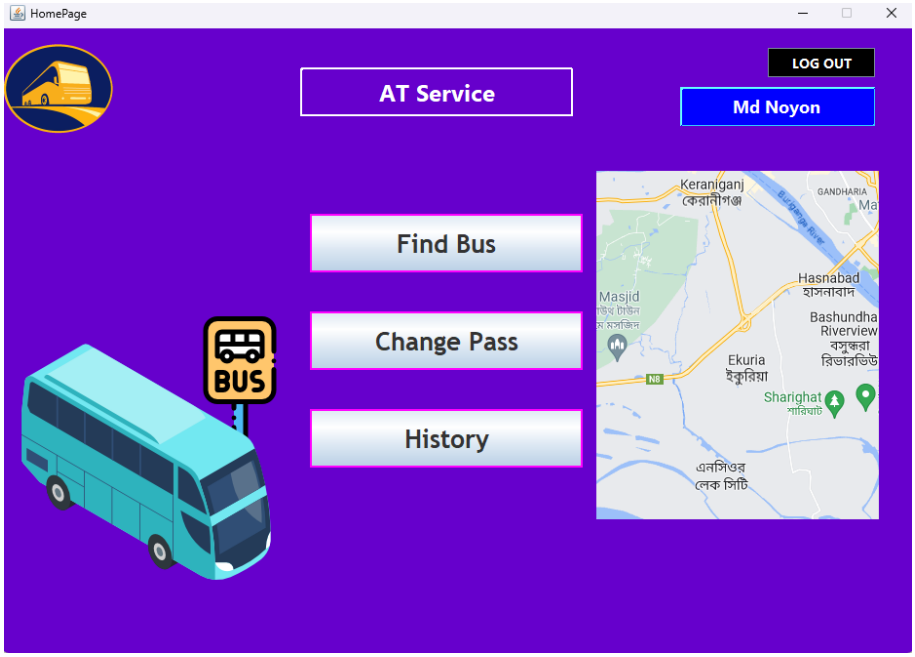

Figure 3.4: User Home Page

Figure 3.5: Searching for Bus

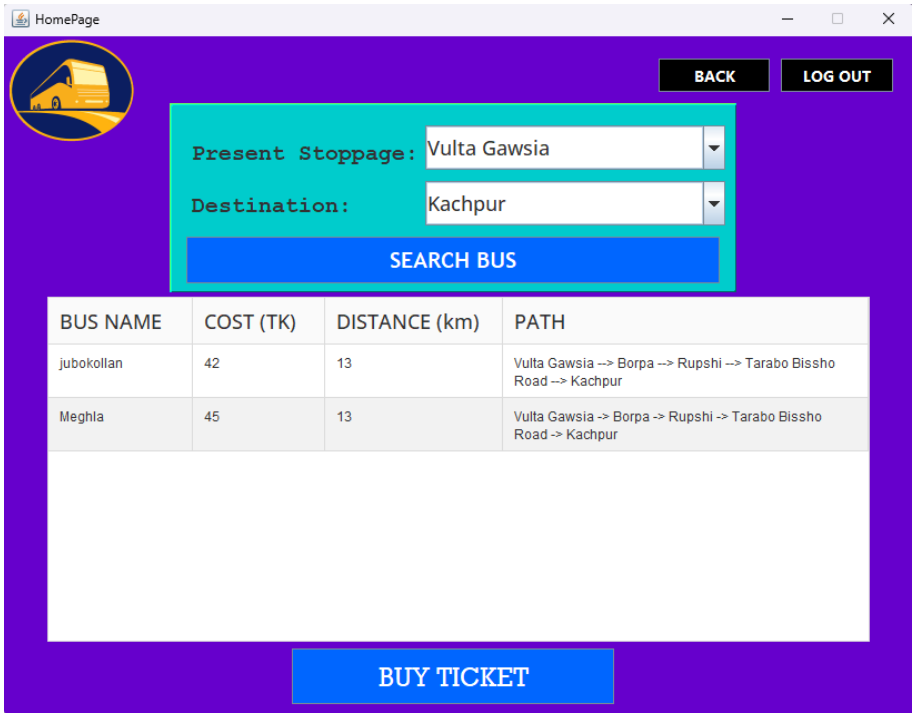

Figure 3.6: Select from Bus list

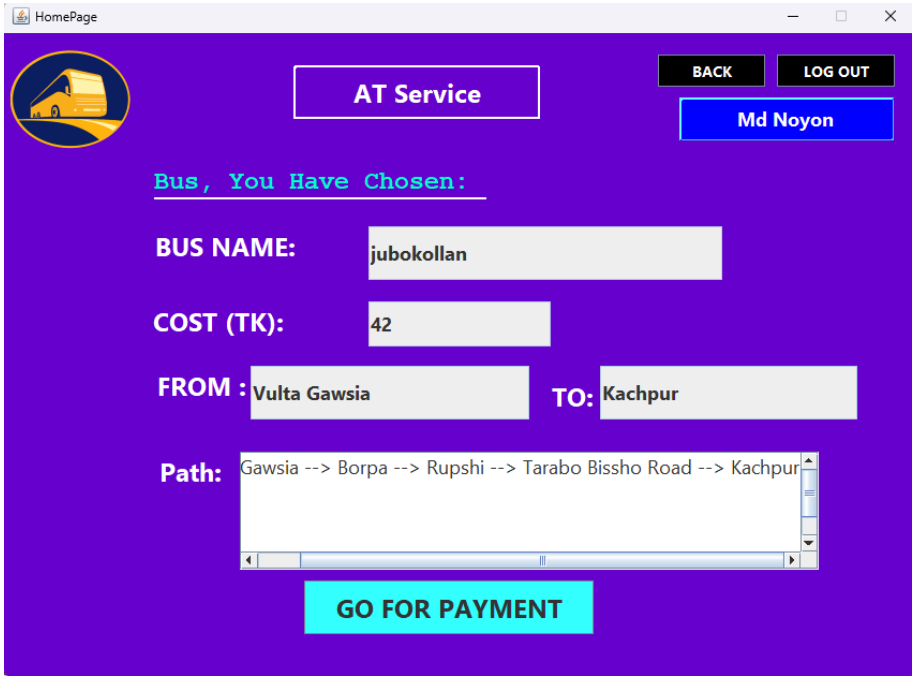

Figure 3.7: Confirmation page

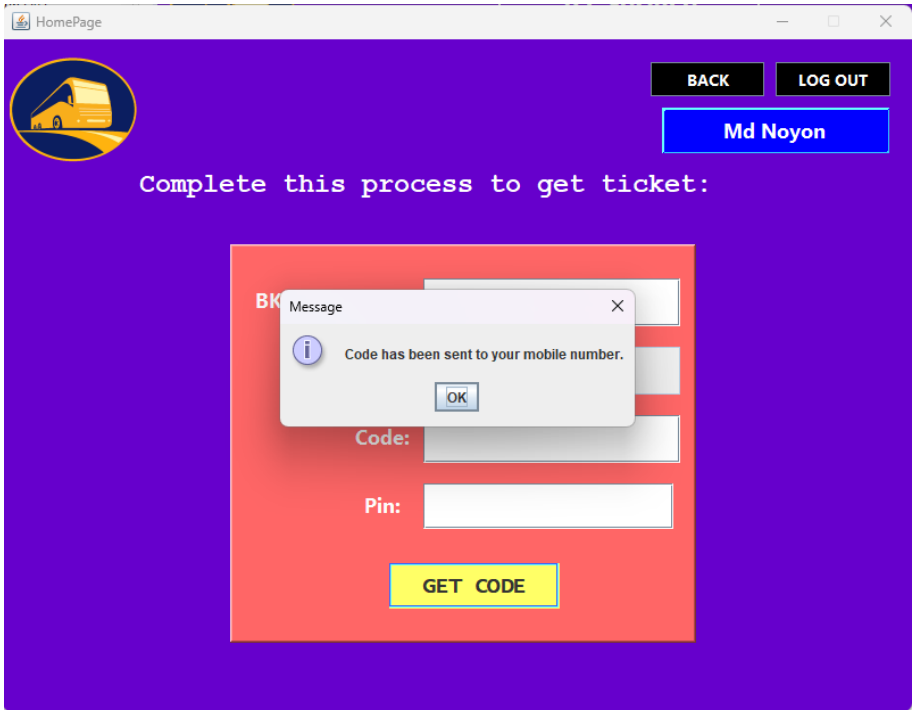

Figure 3.8: Payment page

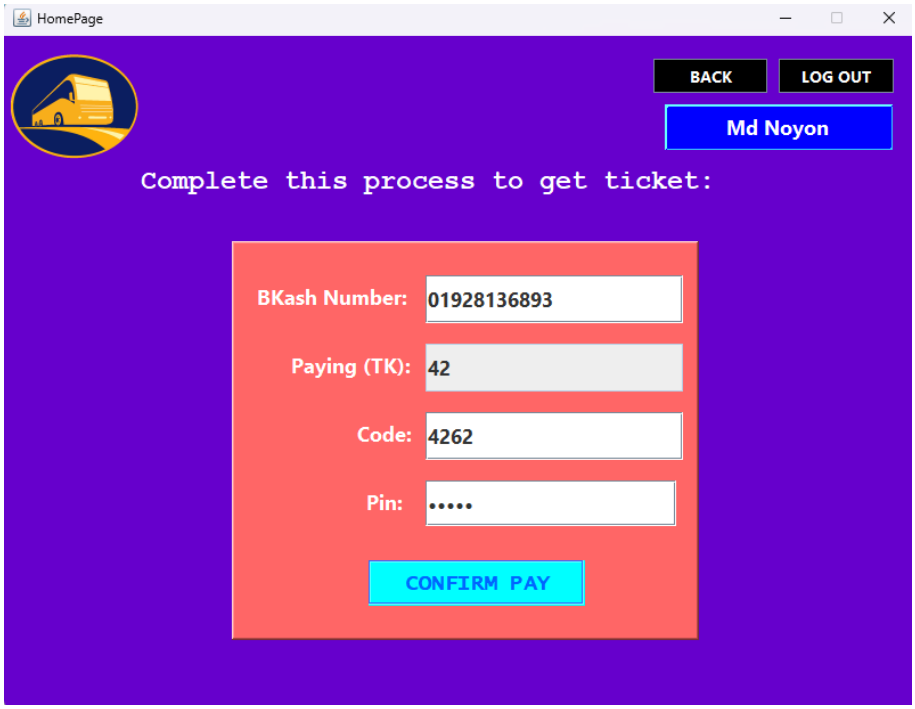

Figure 3.9: payment page (2)

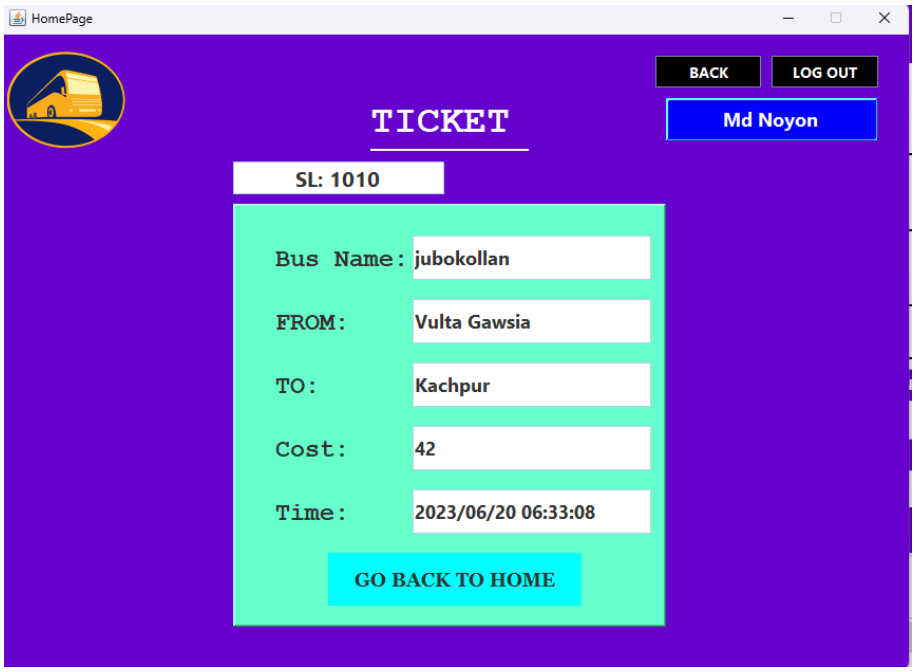

Figure 3.10: Ticket

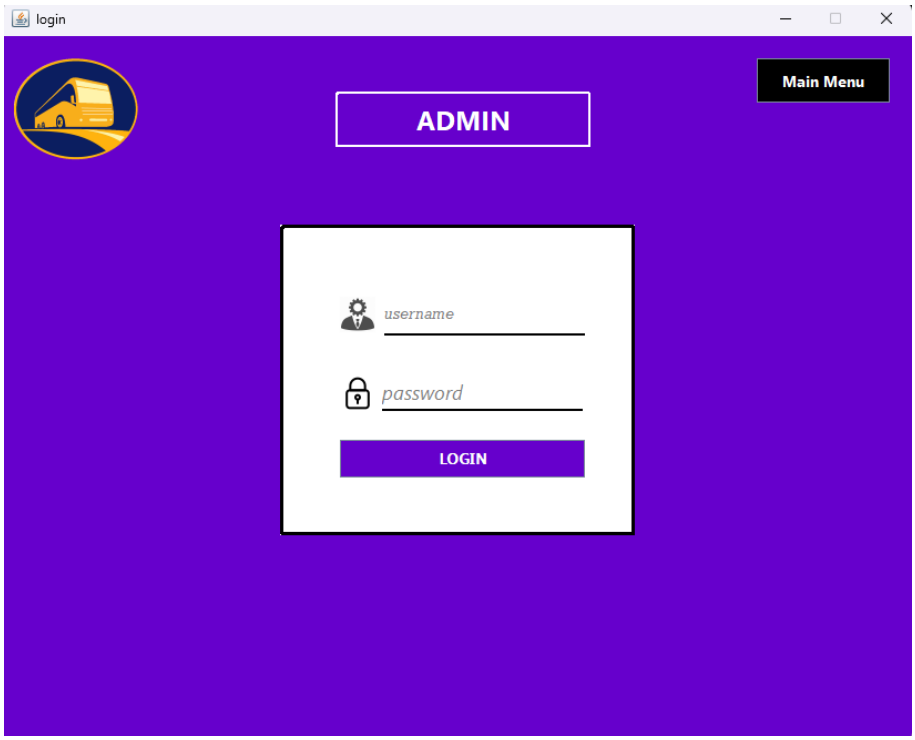

Figure 3.11: Admin Login Page

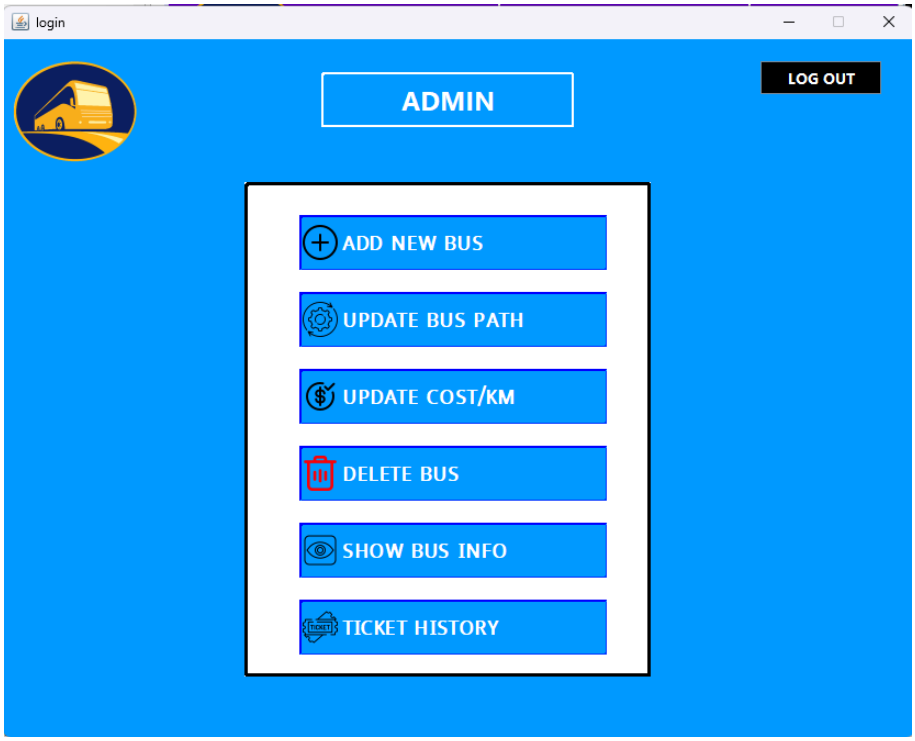

Figure 3.12: Admin Home panel

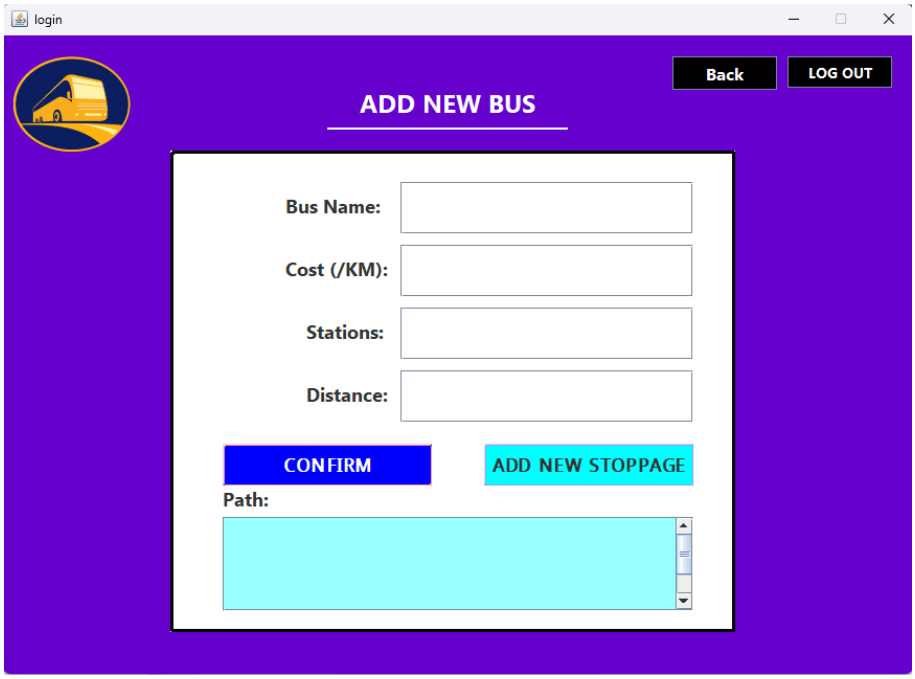

Figure 3.13: Add new bus

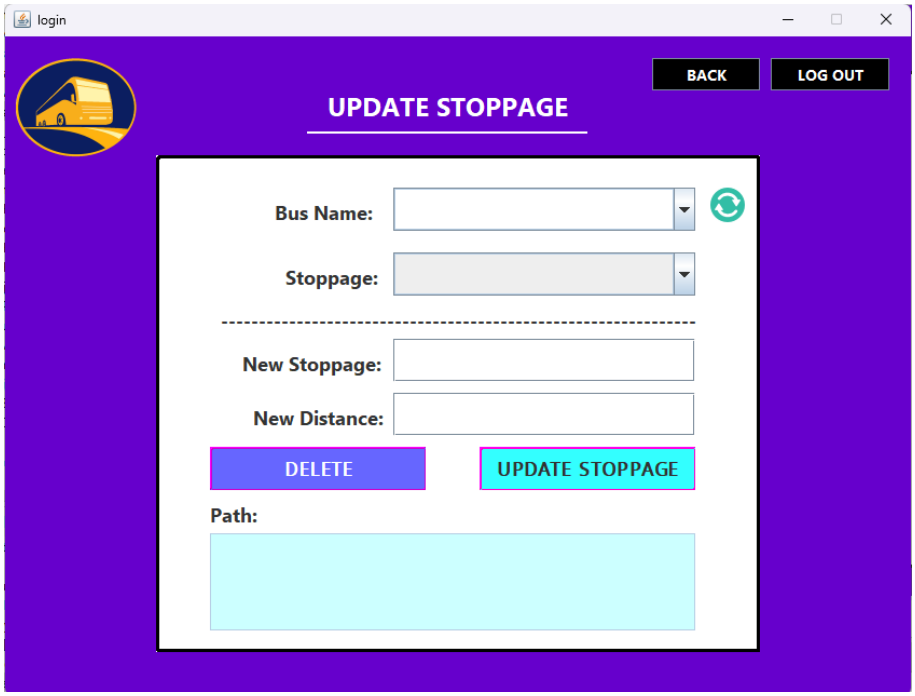

Figure 3.14: Update Stoppage page

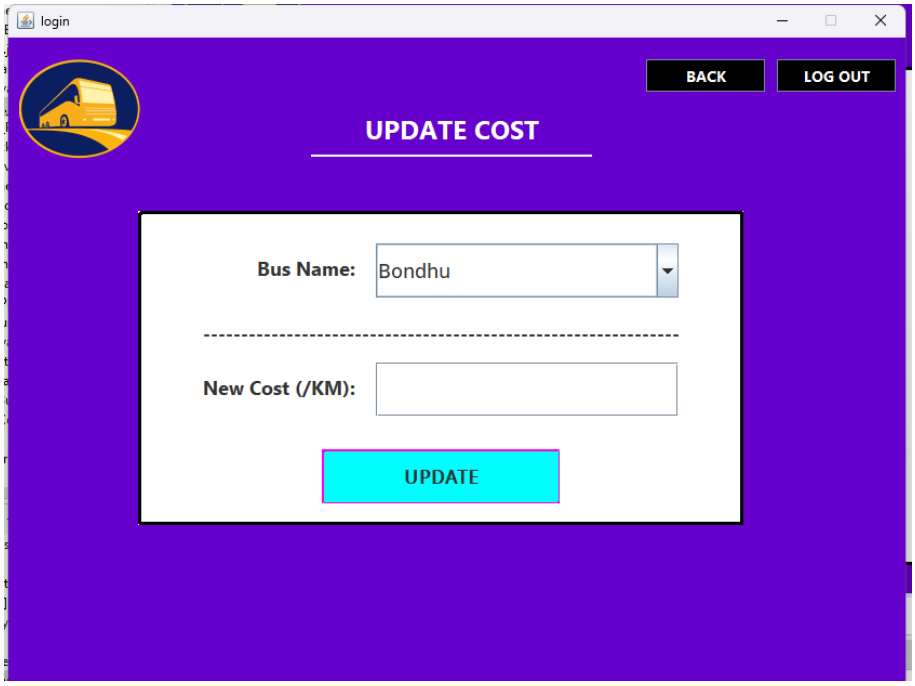

Figure 3.15: Update cost

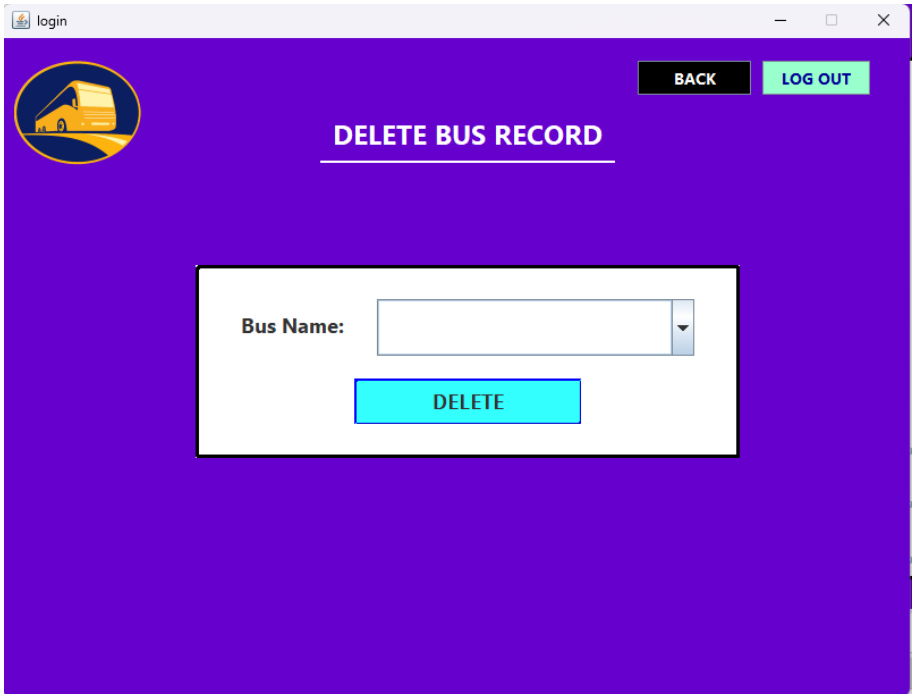

Figure 3.16: Delete bus record

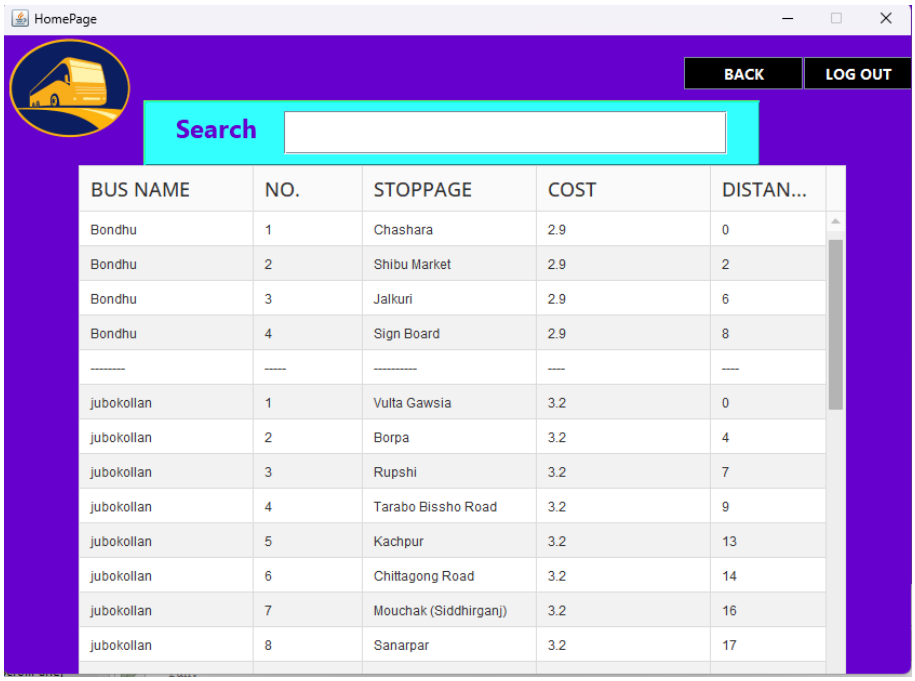

Figure 3.17: Bus data

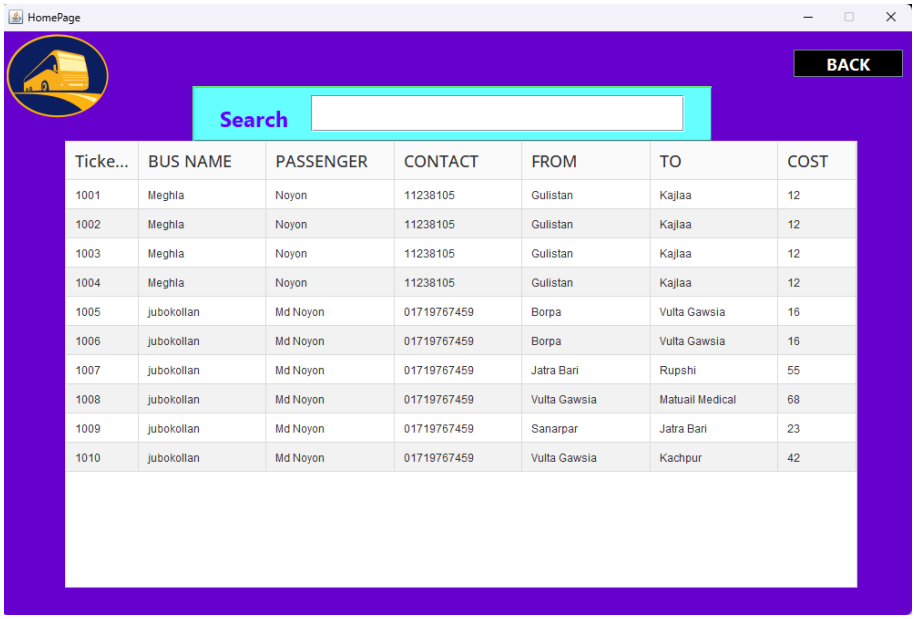

Figure 3.18: Ticket purchasing data

Chapter 4

4.1 Conclusion

The Online Ticket Buying System aims to purchase bus tickets by offering a user-friendly online platform. By allowing users to input their present location and destination, the system presents them with a list of available buses to choose from. This system also provides an admin panel for managing bus records and stoppages. This system provides a convenient and efficient solution for purchasing bus tickets online.

4.2 References:

- Connect Database: https://youtu.be/sifEAuiVUac
- Auto Complete JComboBox: https://youtu.be/vHNc5vIIxxQ
- Data From database to JTable: https://youtu.be/frafcK6fhdQ
- Search from JTable: https://youtu.be/btA5RzD-Zn0
- HashMap: https://www.javatpoint.com/java-hashmap
- MySQL connection: https://stackoverflow.com/questions/2839321/connect-java-to-a-mysql-database