

CITY TRANSPORT MANAGEMENT SYSTEM

By

MD. AL EMAM

ID: 19202103242

ANUPAM KUMAR

ID: 19202103261

FARHAN ISRAQ

ID: 19202103272

This Report Presented in Partial Fulfilment of the Requirements for the Degree of
Bachelor of Science in Computer Science and Engineering

Supervised By

Mamun Hossain

Lecturer

Department of Computer Science & Engineering
Bangladesh University of Business and Technology (BUBT)



BANGLADESH UNIVERSITY OF BUSINESS AND TECHNOLOGY (BUBT)

DHAKA, BANGLADESH

MARCH, 2022

ACKNOWLEDGEMENT

First, we express our heartiest thanks and gratitude to all-powerful ALLAH for His divine blessing that makes us appreciable to finish the final year project effectively.

We extremely grateful and wish our significant and obligation to **Mamun Hossain**, Lecturer, Department of CSE, Bangladesh University of Business and Technology. Profound Knowledge and unmistakable fascination of our supervisor in the field of utilization advancement influenced us to complete this project. His interminable persistence, academic direction, nonstop support, constant and strenuous supervision, productive analysis, profitable consultation, reading many inferior drafts and revising them at all stage have made it appreciable to finish this project. We might want to thank our entire course mate in Bangladesh University of Business and Technology, who participated in this exchange while finishing the course work.

PROJECT OVERVIEW

Introduction

In this modern world, where every thing greatly relies on technology there is a possible to develop unique application which can justify the problems faced by ordinary methodology to achieve a desired functionality in a real time system. Our project belongs to that half. The main purpose of our project is to reduce traffic jams. In our daily lives we have to face a lot of traffic jams while we travelling to different places. As a result, we waste a lot of time. For this reason, the Government has introduced '**NOGOR PORIBOHON**' platform which will operate at fixed times and routes which makes our daily life easier. And making this platform popular and maintains transport system easier, so we develop this application. In this system user can access to our application features.

There are three types of users can access this they are admin, supervisor and passengers. Admin can control entire system.

This project is a real time application that is being developed for **CITY TRANSPORT MANAGEMENT**. The project takes Netbeans as development platform and JAVA is the language used for development and used MySql for store all data in local database. The **CITY TRANSPORT MANAGEMENT** system is designed in a simplest manner, very much user friendly so that the people using it should not struggle with the operational feature of the system.

Objectives

The key objects of the project are as follows:

- ✓ Provide a better application to reduce traffic jam.
- ✓ To maintain the proper time schedules all transport system.
- ✓ To provide registration option for all passengers.
- ✓ To provide a personal profile for every registered users. Where they can login by using username or password and also can update their own information.
- ✓ There is no fear of losing document, and it's easy to find any route information easily.

REQUIREMENTS

Software Requirement

To build up this application, we used following software:

- Operating System: Windows
- Software: Netbeans, XAMPP
- Language: Java, MySQL
- Framework: DOT NET (.NET)
- Device: Laptop

Software Requirement for running the app:

- Operating System: Windows
- Devices: Computer or Laptop
- Software: Netbeans, XAMPP

Hardware Requirement

- Processor: Intel Core i5
- RAM: Minimum 8 GB
- Space on Disk: Minimum 20 GB

Functional Requirements

From the whole of the view of our system, it should have huge functional requirements, user registration panel, user login panel, Main-Menu. In main-menu user can search bus,

buy ticket, download ticket, view own profile, delete own account, change password, logout.

Non-functional Requirement

Non-functional requirements are help to being more efficiently such as: performance optimize, consuming of memory, smoother operation and load on quickly as soon as possible to our application. Application design of UI should be user friendly and gorgeous for user experience.

LOGICAL DATA MODEL

An Entity Relationship diagram is the part of flowchart that are broadly describes how to connected each other like as people and object. An Entity Relationship diagrams are biggest portion to use to draw a relationship diagram in software engineering, computer engineering, business, education thesis and research field. This field are easy to describe using ER diagram. people and student can easily understand whole system in a few times. And also known as ER or ERDs models used they can create a set of symbols such as diamond, ovals, rectangle, connecting lines together. Data structure diagram (DSDs) are related to Entity Relationship. ER diagram are flow the design of whole diagram of system. Now we can see this process, how to describe whole system in ER diagram in our project. Given below is the Schema diagram and ER diagram used in our Project.

SCHEMA DIAGRAM

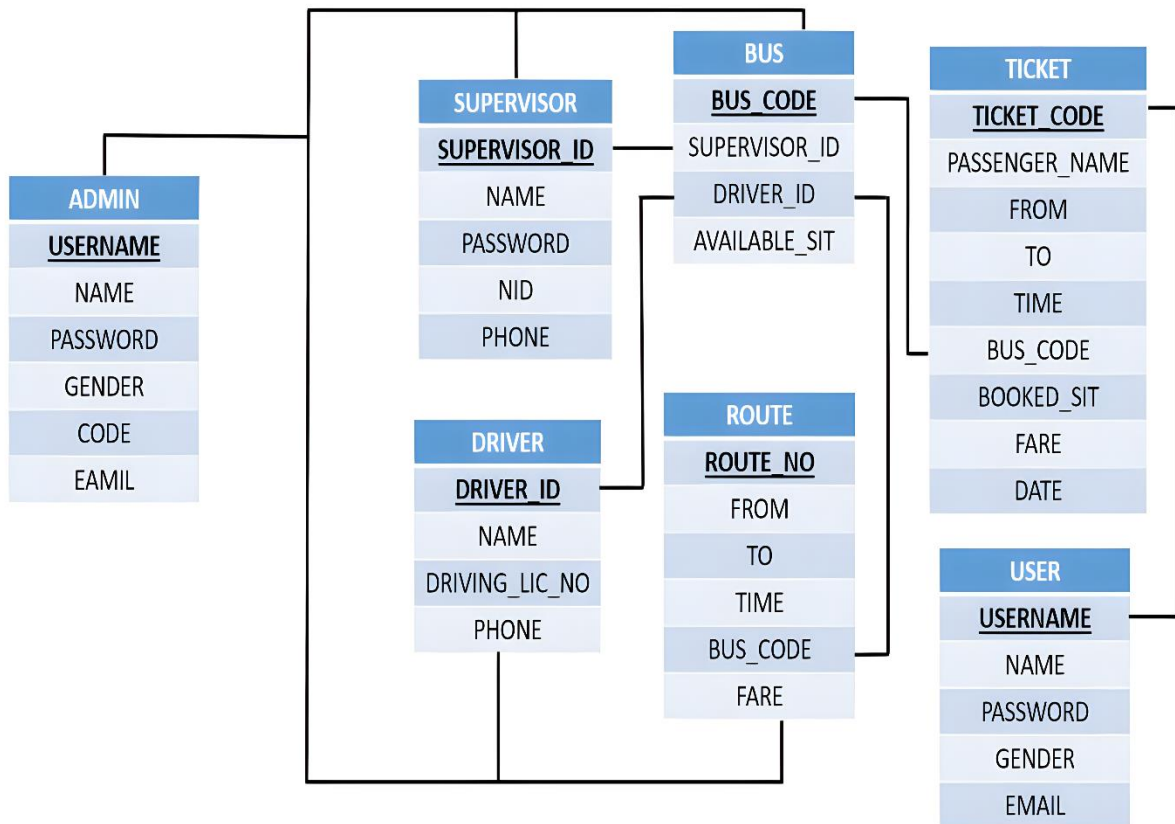


Figure 1: Schema Diagram of our project

ER DIAGRAM

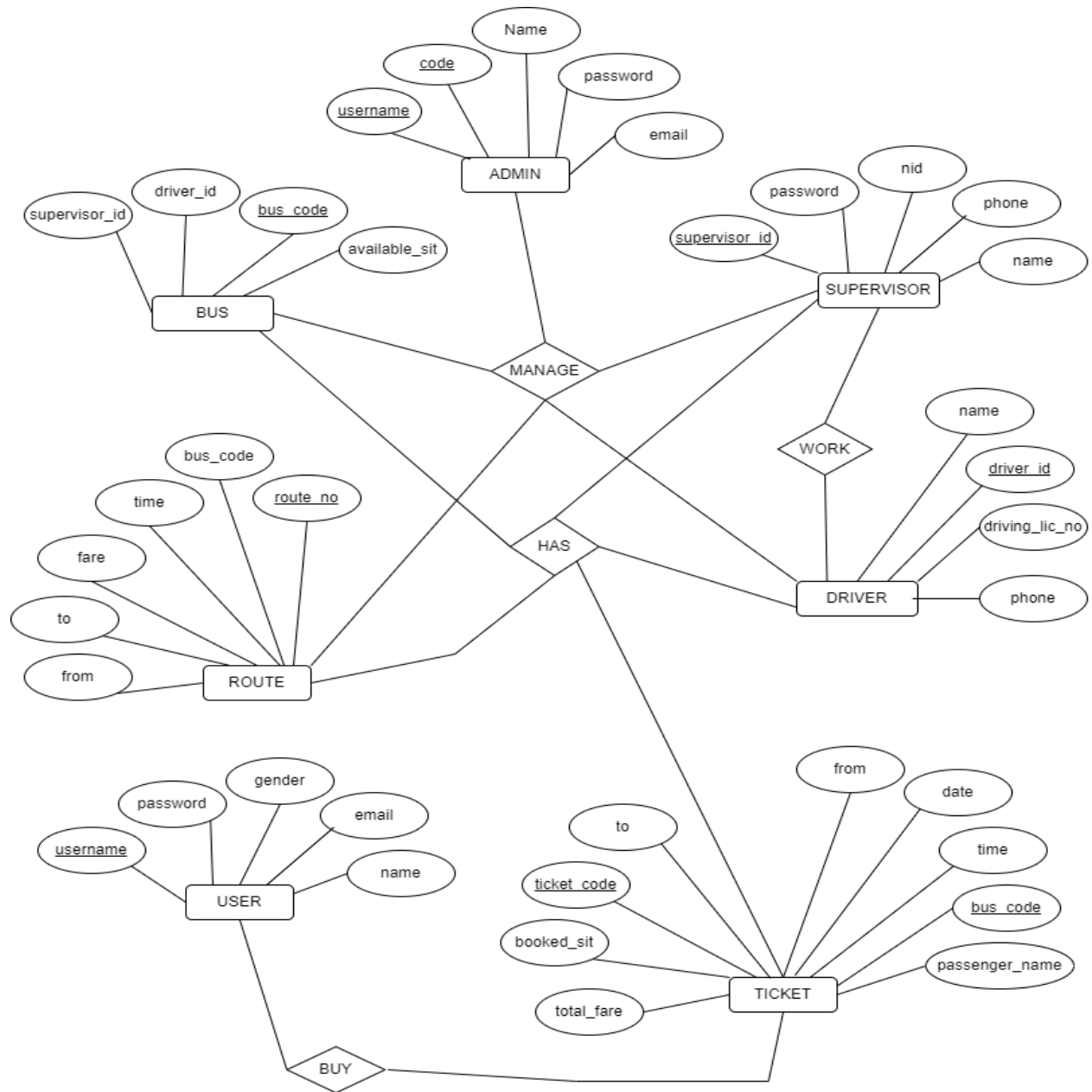


Figure 2: ER Diagram of our project

DESIGN SPECIFICATION

Front-end Design

In this transportation system we use in front-end and back-end process on this system. We trying to beautiful designed on this transportation system. Also trying to easy process for users friendly on this management system. In front-end back-end we want to try user friendly management system on this management system process.

Front-end Design

Dynamic function on this project application on the system on transport management process. In this procedure we used in data base management because transport management system is trying to solve in user friendly app on the system. Application in our transport system is easier for users and friendly for this procedure. The user can't be accessed by the back-end design or framework system or management system on this application procedure. The controller can be accessed by all files on the transportation system. It is the important system for the application. Model is trying to be drawing easy for users. In this all combinations then everyone can be seen this framework easily.

IMPLEMENTATION AND TESTING

1. Implementation of Database

In this web application app, we can use DBMS (MySQL). MySQL is one of the best server side applications. Here I am showing figure in MySQL database.

Table	Action	Rows	Type
<input type="checkbox"/> admin_info	★ Browse Structure Search Insert Empty Drop	3	InnoDB
<input type="checkbox"/> bus_info	★ Browse Structure Search Insert Empty Drop	5	InnoDB
<input type="checkbox"/> driver_info	★ Browse Structure Search Insert Empty Drop	5	InnoDB
<input type="checkbox"/> route	★ Browse Structure Search Insert Empty Drop	6	InnoDB
<input type="checkbox"/> supervisor_info	★ Browse Structure Search Insert Empty Drop	5	InnoDB
<input type="checkbox"/> ticket_info	★ Browse Structure Search Insert Empty Drop	2	InnoDB
<input type="checkbox"/> user_info	★ Browse Structure Search Insert Empty Drop	3	InnoDB
7 tables	Sum	29	InnoDB

Figure 1.1: Implementation of main system table

The figure 1.1 shows the MySQL table system. This page manages database table system edit, deleted and update. It's also shows all table information.

+ Options




















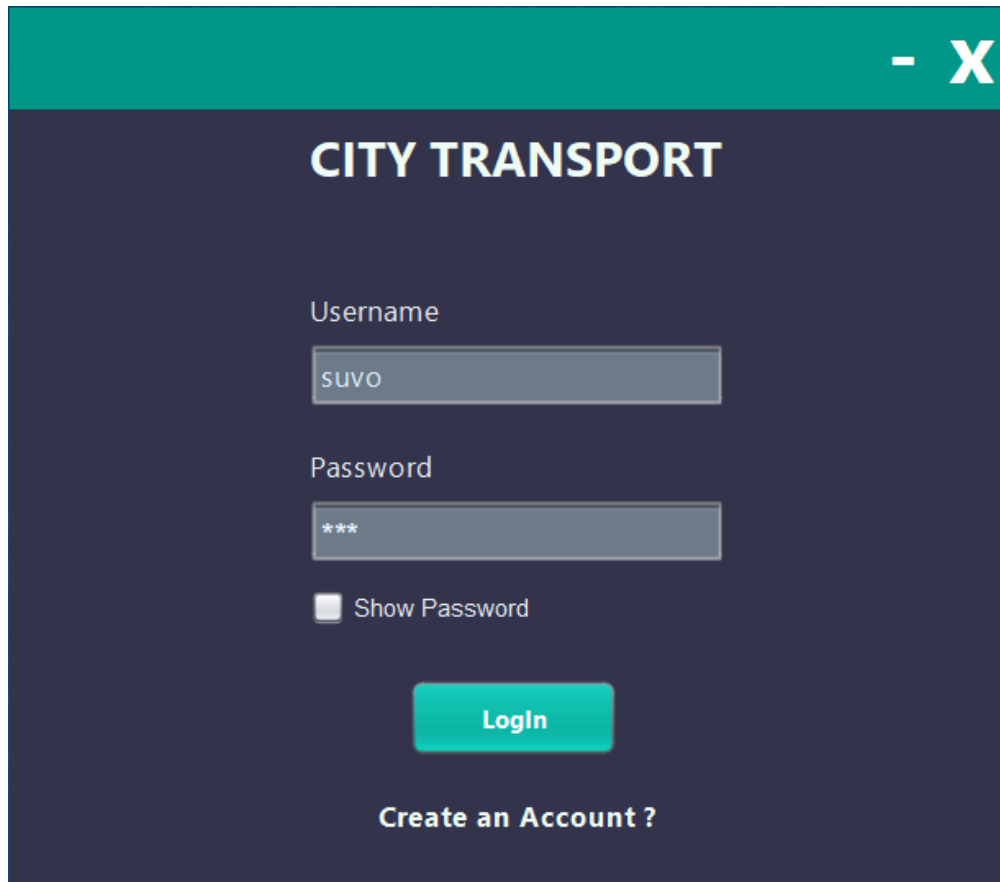
				from_where	to_where	fare	time	bus_code	route_no			
<input type="checkbox"/>		Edit		Copy		Delete	Mirpur-1	Gabtoli	30	8 AM	B101	R1
<input type="checkbox"/>		Edit		Copy		Delete	Mirpur-2	Airport	40	8:45 AM	B102	R2
<input type="checkbox"/>		Edit		Copy		Delete	Mirpur-1	Airport	30	8:15 AM	B102	R3
<input type="checkbox"/>		Edit		Copy		Delete	Mirpur-1	Gabtoli	40	8:30 AM	B102	R4
<input type="checkbox"/>		Edit		Copy		Delete	Airport	Mirur-2	40	9 AM	B103	R5
<input type="checkbox"/>		Edit		Copy		Delete	Kamlapur	Mirpur-2	40	9:30 AM	B104	R6

Figure 1.2: Show Route

The figure 1.2 shows data from Route table.

2. Implementation of Front-end Design:

For the application development front-end is a most important section. User can directly interact front-end design and its work on presentation layer. It is very useful to user when they use application and they can easily understand. So, we tried to develop and design our application easy user friendly so that user can easily use this application, but development task was not easy. Now we attach some front-end screen given below.



The image shows a user login interface for 'CITY TRANSPORT'. It features a teal header bar with a minus sign and a large 'X' icon. The main area has a dark blue background. The title 'CITY TRANSPORT' is centered at the top. Below it, there are two input fields: 'Username' with the text 'suvo' and 'Password' with three asterisks. A 'Show Password' checkbox is located below the password field. A teal 'Login' button is centered below the inputs. At the bottom, there is a link that says 'Create an Account ?'.

CITY TRANSPORT

Username

suvo

Password

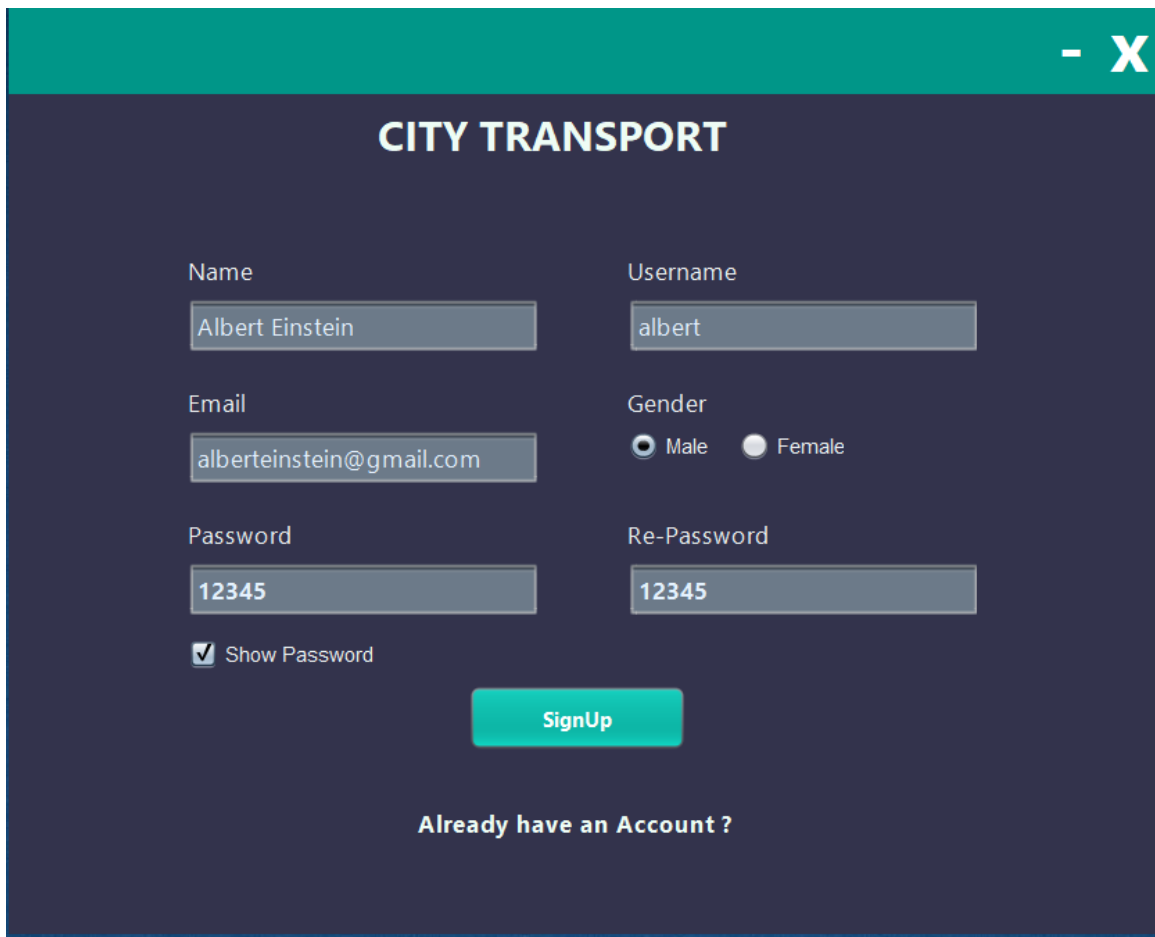
☐ Show Password

Login

Create an Account ?

Figure 2.1: User login page

The figure 2.1 show in this system user must login before use this application.



The image shows a user registration form for 'CITY TRANSPORT'. The form is set against a dark blue background with a teal header bar containing a minus sign and a close button 'X'. The form fields are arranged in two columns. The first column contains 'Name' (filled with 'Albert Einstein'), 'Email' (filled with 'alberteinstein@gmail.com'), and 'Password' (filled with '12345'). The second column contains 'Username' (filled with 'albert'), 'Gender' (with 'Male' selected), and 'Re-Password' (filled with '12345'). A 'Show Password' checkbox is located below the password field. A teal 'SignUp' button is centered below the form fields. At the bottom, there is a link that says 'Already have an Account ?'.

CITY TRANSPORT

Name: Albert Einstein

Username: albert

Email: alberteinstein@gmail.com

Gender: ☒ Male ☐ Female

Password: 12345

Re-Password: 12345

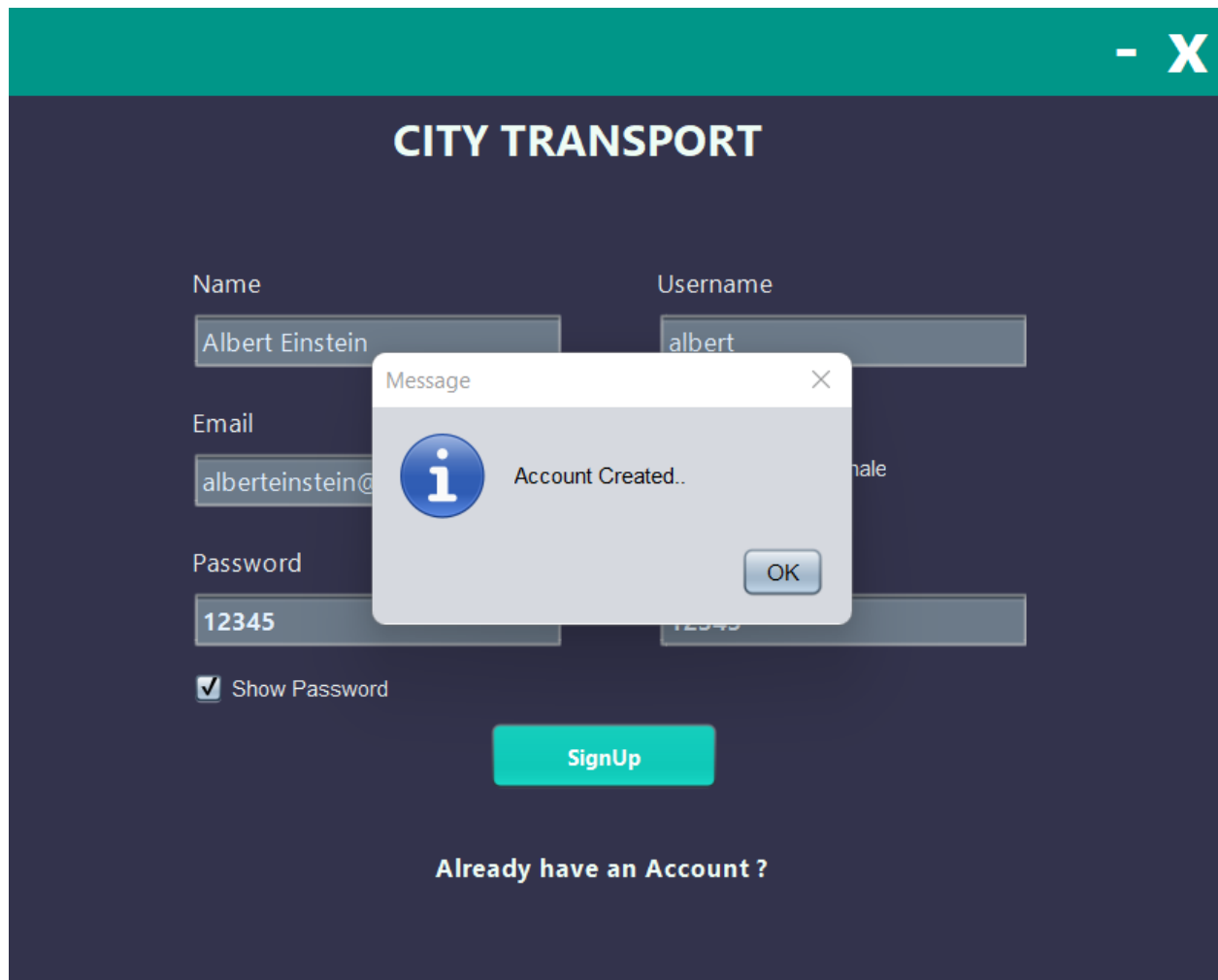
☒ Show Password

SignUp

Already have an Account ?

Figure 2.2: User Registration page

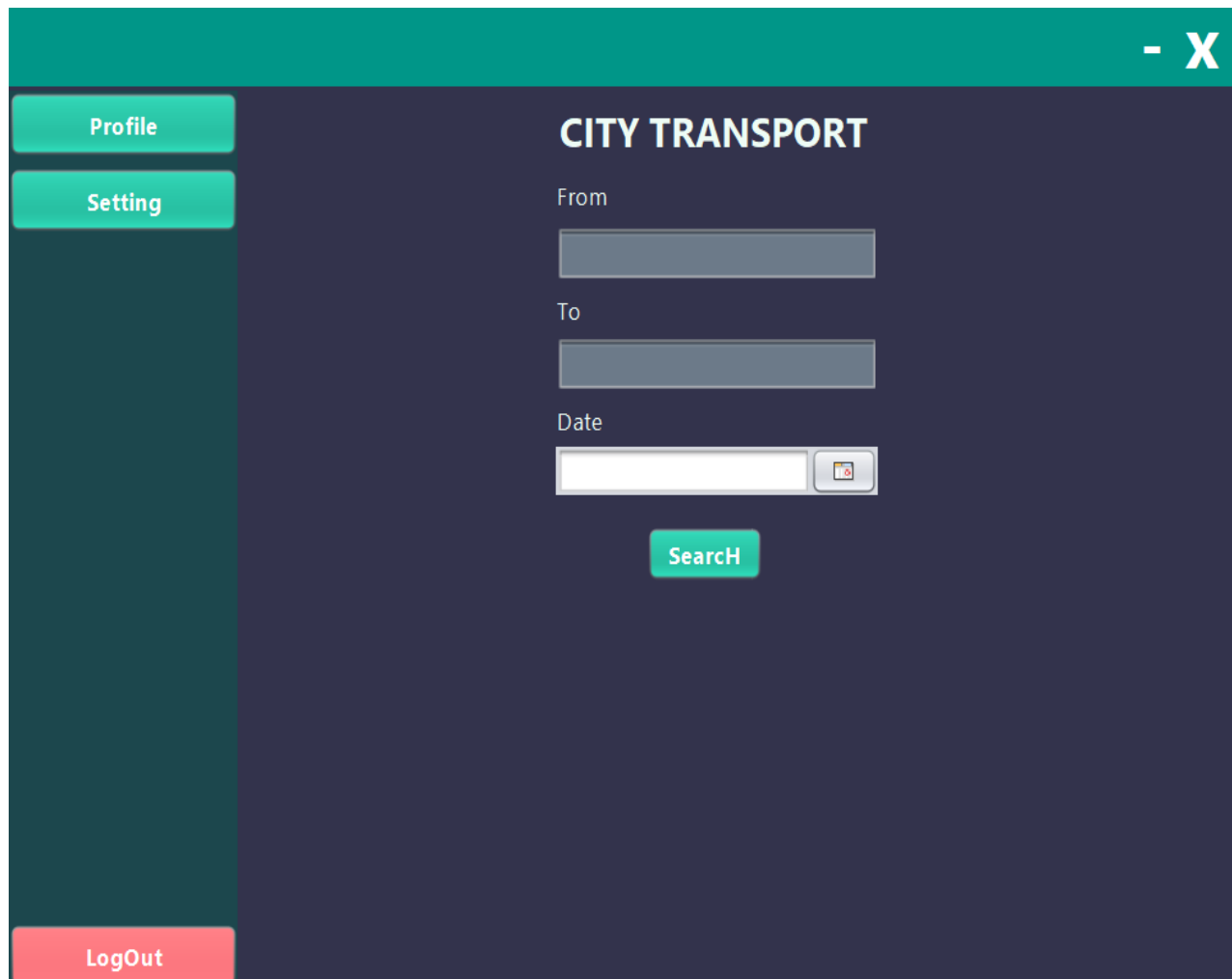
The figure 2.2 shows user registration page where user can registration easily. User must registration first if they don't register before.



The image shows a user registration interface for 'CITY TRANSPORT'. The page has a dark blue background with a teal header bar containing a minus sign and an 'X' icon. The title 'CITY TRANSPORT' is centered at the top. Below the title, there are four input fields: 'Name' (containing 'Albert Einstein'), 'Username' (containing 'albert'), 'Email' (containing 'alberteinstein@'), and 'Password' (containing '12345'). A 'Show Password' checkbox is checked. A teal 'SignUp' button is positioned below the password field. A confirmation message pop-up is displayed in the center, titled 'Message', with an information icon and the text 'Account Created..'. An 'OK' button is at the bottom right of the pop-up. At the bottom of the page, the text 'Already have an Account ?' is visible.

Figure 2.3: User Registration page

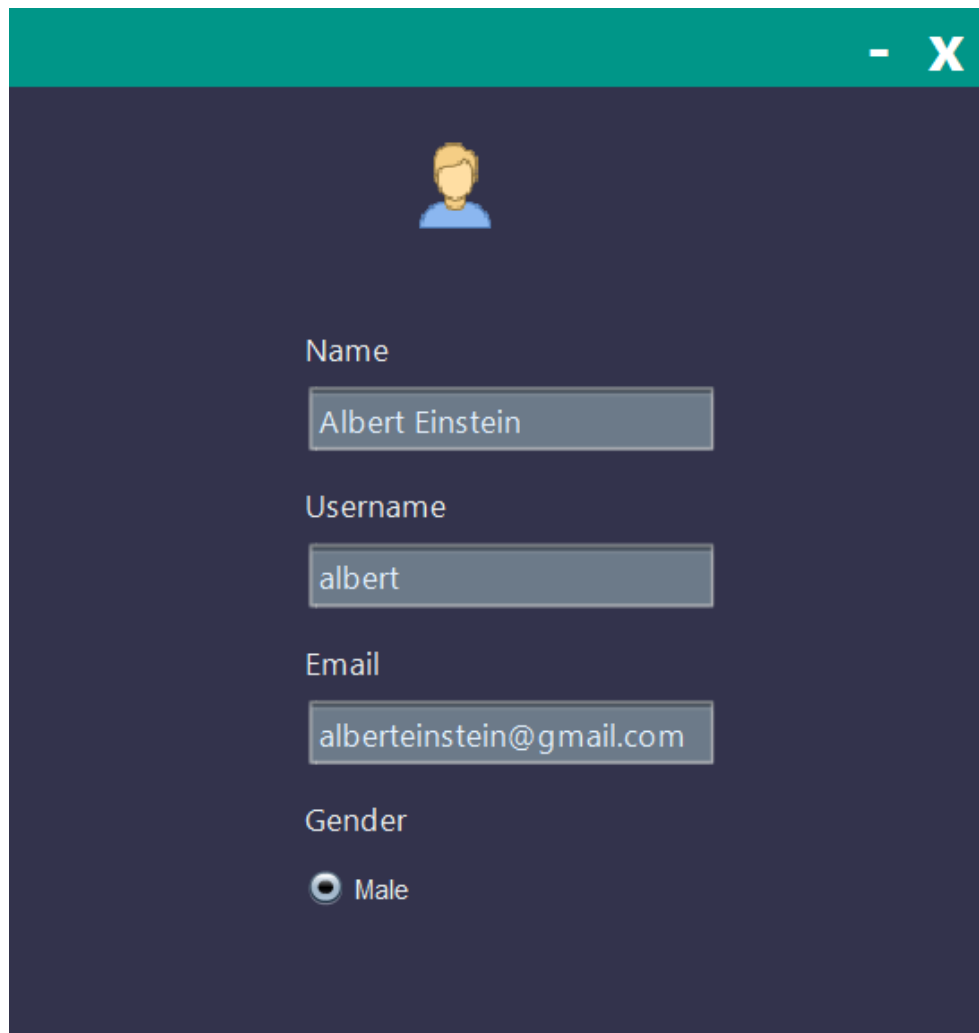
After complete the registration process a confirmation message will pop-up like figure 2.3



The screenshot shows a web application interface for 'CITY TRANSPORT'. At the top right, there is a teal header bar with a white minus sign and an 'X' icon. On the left side, there is a dark teal sidebar containing three buttons: 'Profile' (teal), 'Setting' (teal), and 'LogOut' (red). The main content area has a dark blue background. At the top of this area, the text 'CITY TRANSPORT' is displayed in white. Below this, there are three input fields: 'From' (teal), 'To' (teal), and 'Date' (white). A teal 'SearchH' button is positioned below the 'Date' field. A small calendar icon is visible next to the 'Date' input field.

Figure 2.4: Dash-Board page

This is our Main Menu. While user login/register then they will come to this page.

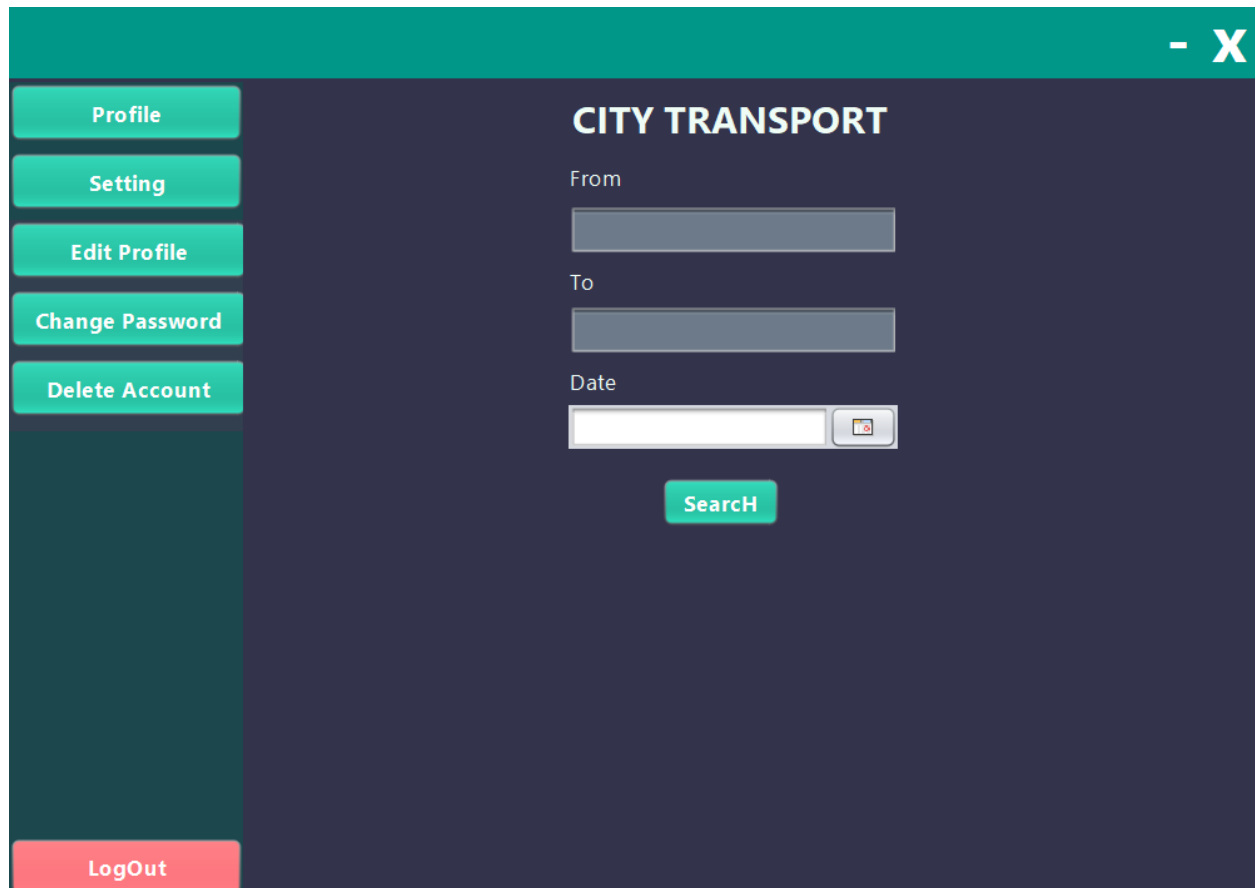


A screenshot of a user profile view window. The window has a teal header bar with a minus sign and a close button (X). Below the header is a dark blue background. At the top center is a placeholder icon for a user profile picture. Below the icon, the following information is displayed in a light gray text box:

- Name: Albert Einstein
- Username: albert
- Email: alberteinstein@gmail.com
- Gender: ☒ Male

Figure 2.5: View Profile

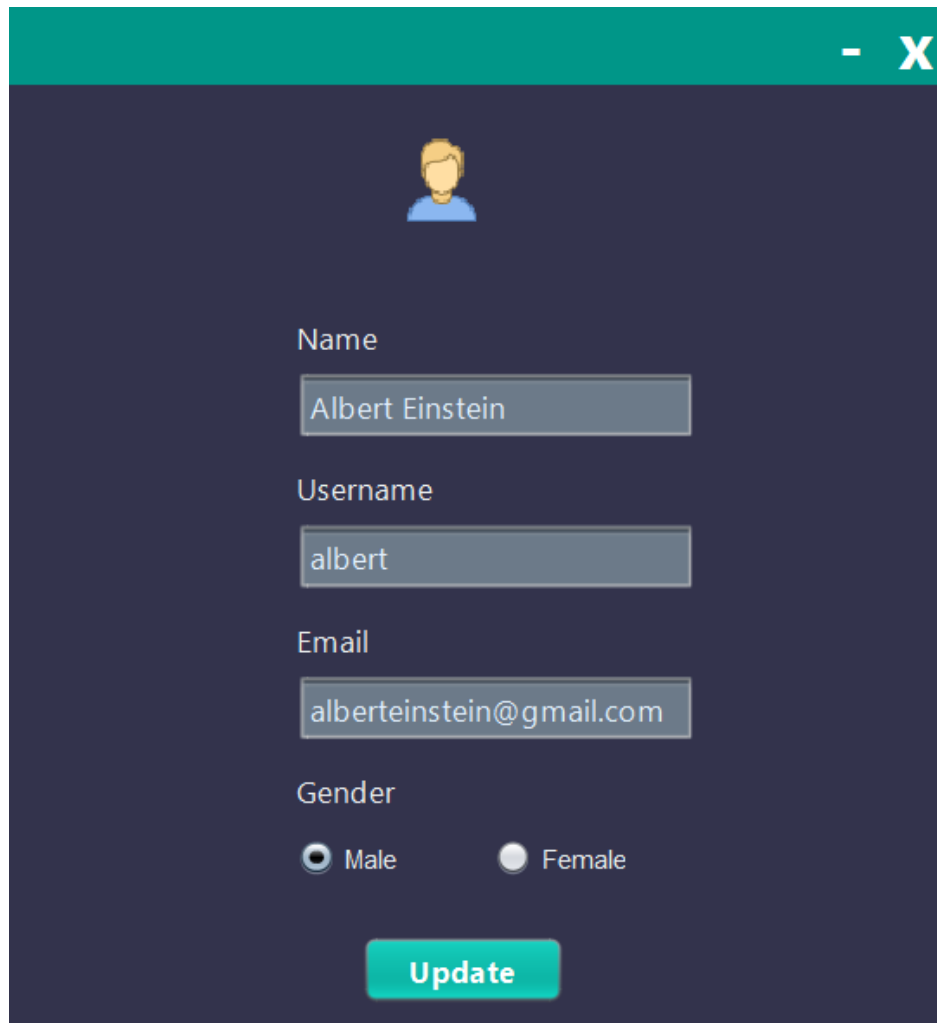
User can see their information in profile setting by clicking on '**Profile**' button.



The screenshot shows a web application interface for 'CITY TRANSPORT'. On the left, there is a vertical sidebar with a dark teal background. It contains five teal buttons: 'Profile', 'Setting', 'Edit Profile', 'Change Password', and 'Delete Account'. At the bottom of this sidebar is a red 'LogOut' button. The main content area has a dark blue background. At the top right of this area is a teal header bar with a white minus sign and a white 'X'. Below the header, the title 'CITY TRANSPORT' is displayed in white. Underneath the title, there are three input fields: 'From' (a grey text box), 'To' (a grey text box), and 'Date' (a white text box with a calendar icon on the right). Below these fields is a teal 'SearchH' button.

Figure 2.6: All Settings

The figure 2.6 shows all the hidden-settings in **Setting** button. Which are '**Edit Profile**', '**Change Password**', '**Delete Account**'.



The image shows a modal window for editing a user profile. It has a teal header bar with a minus sign and a close 'X' button. Below the header is a dark blue background. At the top center is a placeholder icon for a profile picture. Below the icon are four text input fields, each with a label above it: 'Name' (containing 'Albert Einstein'), 'Username' (containing 'albert'), 'Email' (containing 'alberteinstein@gmail.com'), and 'Gender'. The 'Gender' section has two radio buttons, 'Male' (which is selected) and 'Female'. At the bottom center is a teal button with the text 'Update'.

Name

Albert Einstein

Username

albert

Email

alberteinstein@gmail.com

Gender

☒ Male ☐ Female

Update

Figure 2.7: Edit profile

The figure 2.7 shows if user click on '**Edit Profile**' they can update their information.

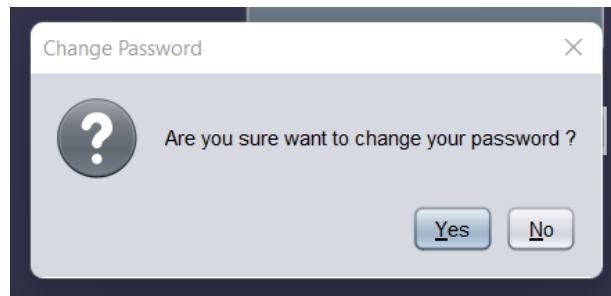


Figure 2.8: Change password (1)

When user click on 'Change Password' button a window will open like figure 2.8. If user click on yes button of the window then a page will open which is given in figure 2.9.

A screenshot of a 'Change Password' form. The form has a dark blue background and a teal header bar with a minus sign and a close button (X). The form contains three input fields: 'New Password', 'Confirm Password', and 'Old Password'. Below the input fields is a teal button with the text 'SAVE'.

Figure 2.9: Change password (2)

Here user's can change their password.

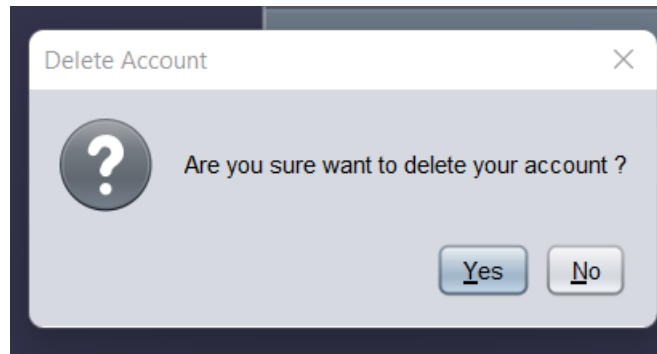
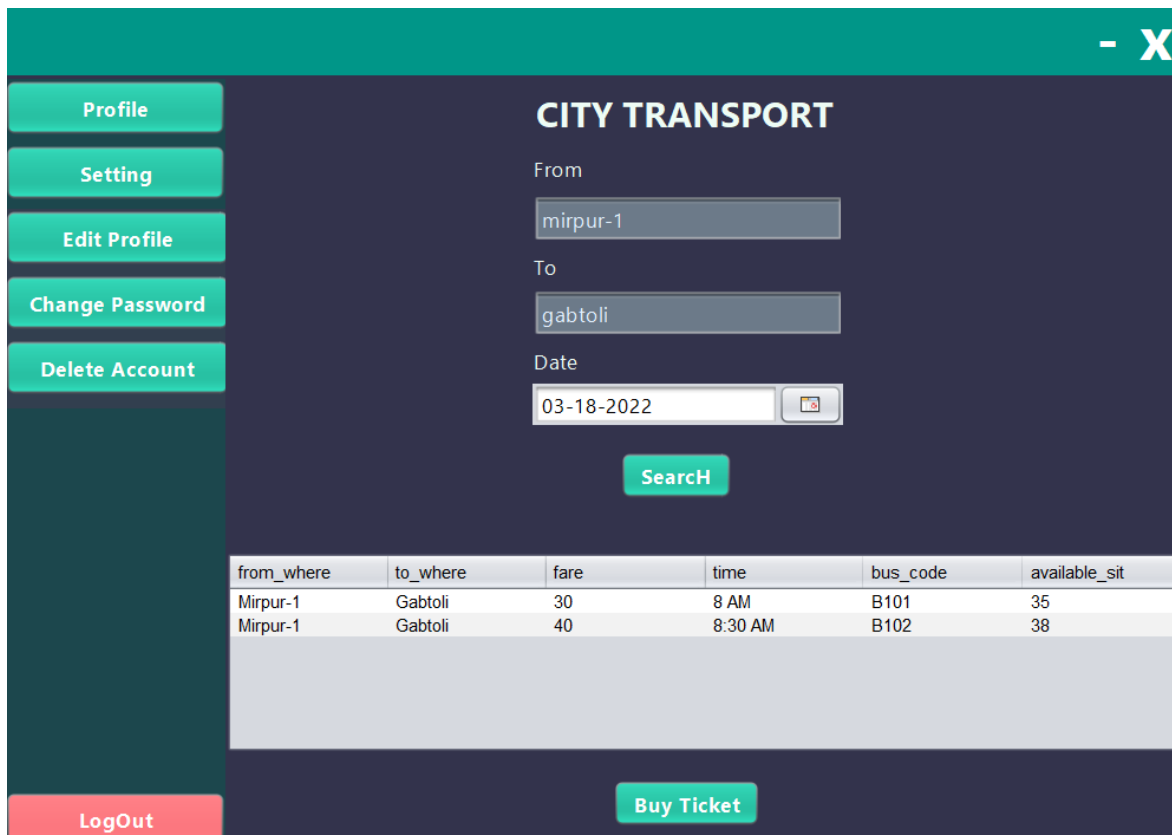


Figure 2.10: Confirmation for delete account

If user's want to delete their account and click on 'Delete Account' button a confirmation message will be pop-up. By clicking on yes they can easily delete their account.



from_where	to_where	fare	time	bus_code	available_sit
Mirpur-1	Gabtoli	30	8 AM	B101	35
Mirpur-1	Gabtoli	40	8:30 AM	B102	38

Figure 2.11: Search for bus

User can easily search for bus if any bus available on the route info given by user.

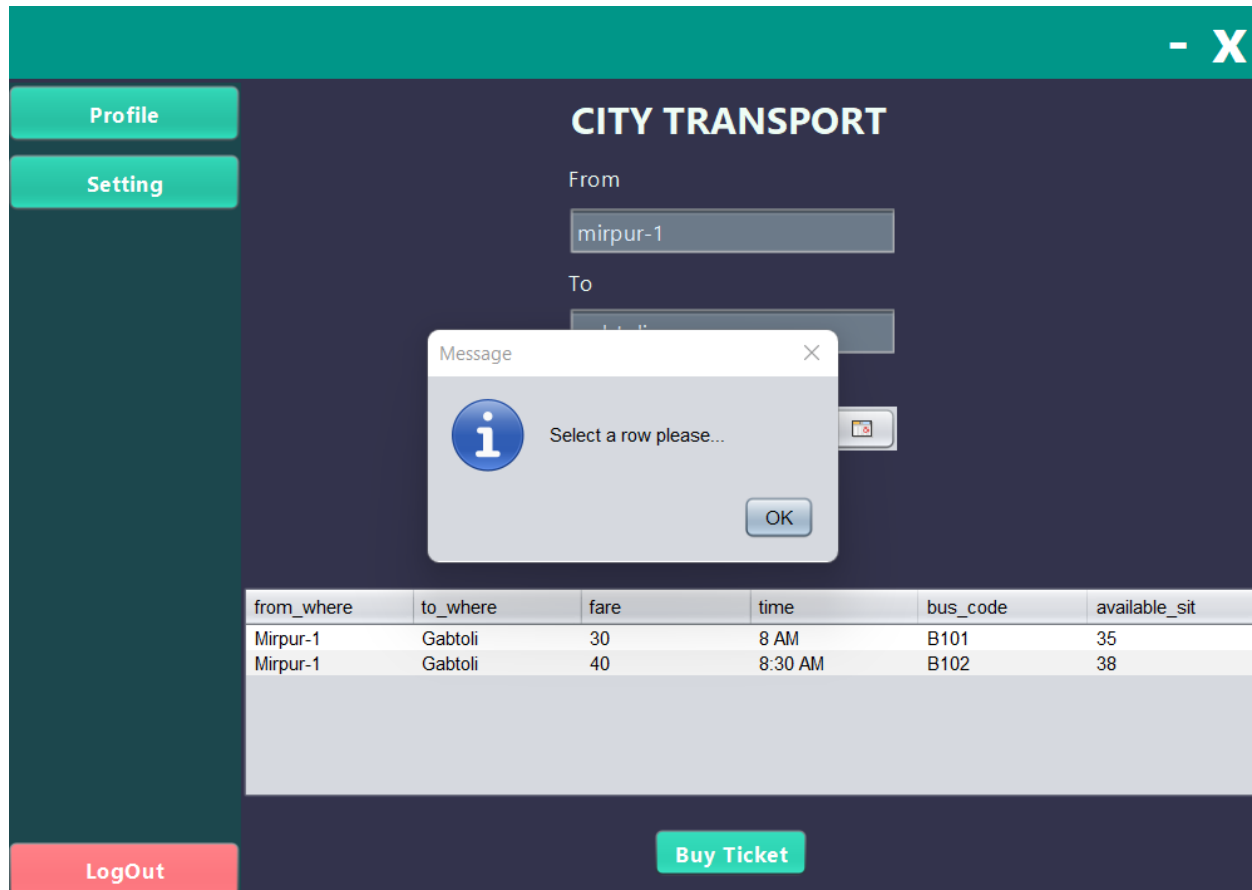
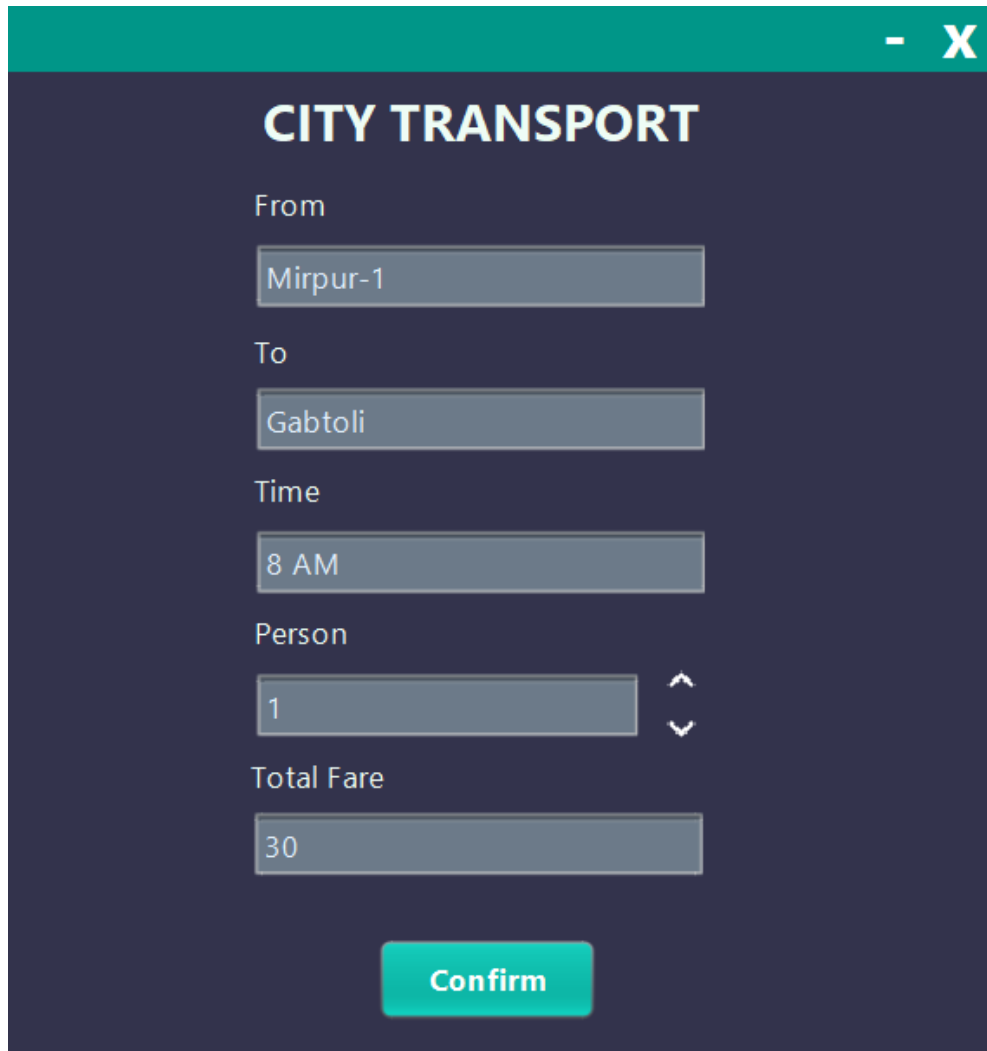


Figure 2.12: Buy Ticket

If sits are available then they can buy ticket for the bus by clicking on '**Buy Ticket**' button. But first they must select a row of their choice.



A dark-themed user interface for a 'CITY TRANSPORT' ticket confirmation. The form is contained within a dark blue-grey rectangle with a teal header bar at the top right containing a minus sign and an 'X' icon. The title 'CITY TRANSPORT' is in large, bold, white capital letters. Below the title, there are five input fields with labels to their left: 'From' (containing 'Mirpur-1'), 'To' (containing 'Gabtoli'), 'Time' (containing '8 AM'), 'Person' (containing '1' and having up/down arrow icons to its right), and 'Total Fare' (containing '30'). All input fields are light grey with rounded corners. At the bottom center of the form is a teal button with the word 'Confirm' in white.

CITY TRANSPORT

From
Mirpur-1

To
Gabtoli

Time
8 AM

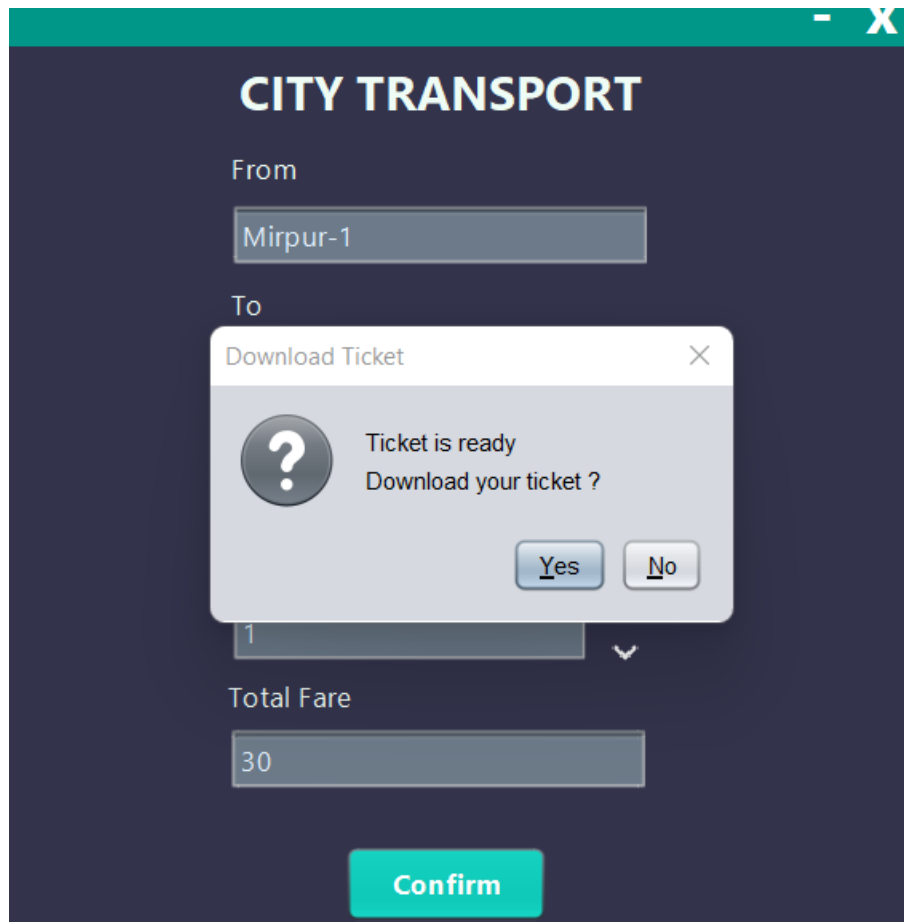
Person
1

Total Fare
30

Confirm

Figure 2.13: Confirm ticket

Here the user can select how many tickets he wants to buy. By clicking on 'Confirm' button they can see a pop-up message like figure 2.14.



The screenshot displays a web application for "CITY TRANSPORT" with a dark blue background and a teal header. The main form includes fields for "From" (Mirpur-1) and "To". A modal dialog titled "Download Ticket" is open, featuring a question mark icon and the text "Ticket is ready Download your ticket ?". It contains two buttons: "Yes" and "No". Below the dialog, a dropdown menu shows the number "1" with a downward arrow. The "Total Fare" is displayed as "30" in a text box. A teal "Confirm" button is located at the bottom of the form.

Figure 2.14: Confirmation message for download ticket

If the user click on yes button they can download their ticket easily.

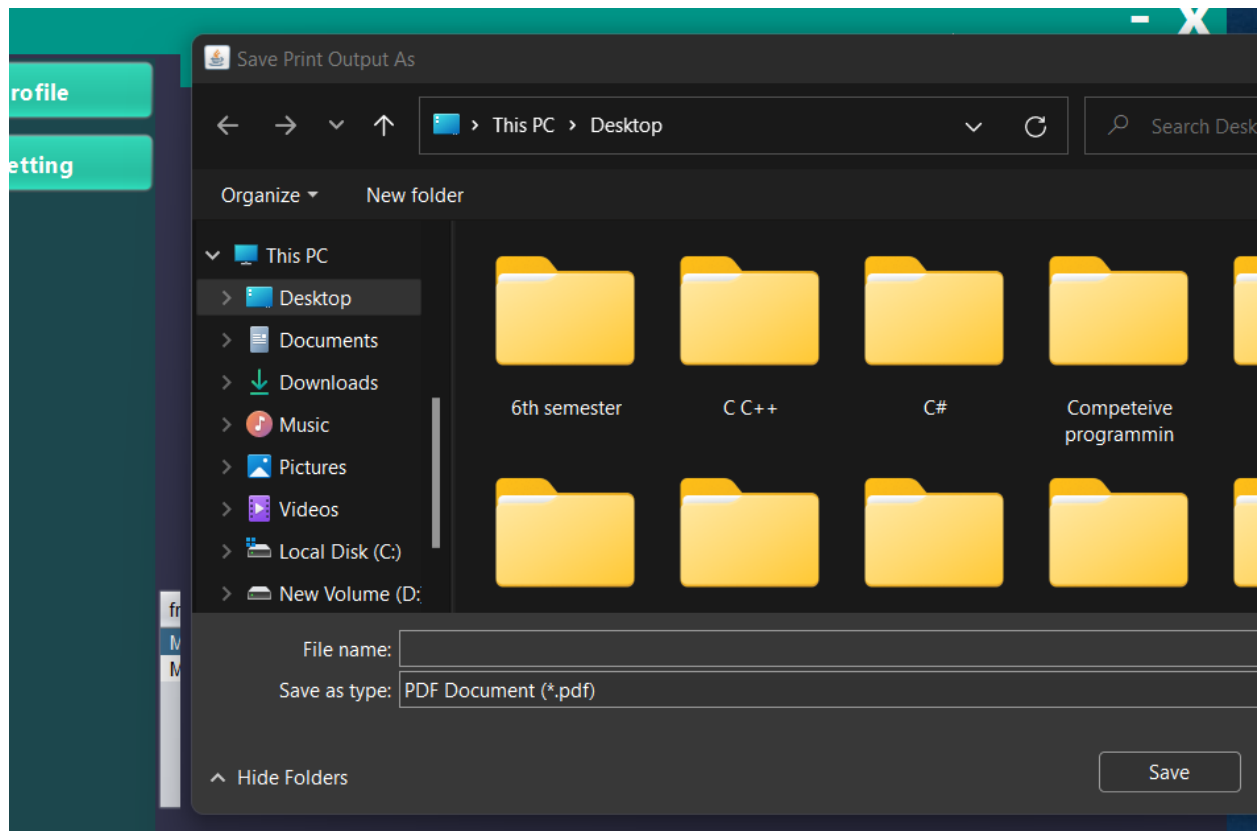



Figure 2.15: Select Path

Here user's can select path where they want to download their ticket.



CITY TRANSPORT MANAGEMENT

Ticket Code: TC37568CT

Issue Date : 03-18-2022

Name : Albert Einstein

Email : alberteinstein@gmail.com

From : Mirpur-1

To : Gabtoli

Total Person: 1

Journy Date : 03-18-2022

Total Fare : 30

THANK YOU COME AGAIN

SOFTWARE BY: Al Emam (Suvo)

CONTACT: city.transport.ltd.242@gmail.com

Figure 2.16: Ticket

The figure 2.16 represents the ticket which is provided from our application. User easily can travel from one place to another by showing the ticket to supervisor.

Implementation of interactions

Implementation of interaction is the most important portion of framework. To make our application system we implement UI for better user experience and their opinion. we plan around carefully that the framework appeals to the user. We think the all sides of transport system user then we developed it. We construct each user's part with the utmost care that no matter what the user needs here. So, this is very user friendly and maintain easy.

Testing Implementation

When we test the specific function of software program that is also called testing. There are many types of software testing here we did two types of testing one is dynamic testing another is static testing. We test our project several times and that are produce batter performance for user. Our testing area user login, user registration, profile view, maintenance part, change password, comparison, download ticket etc.

CONCLUSION & FUTURE SCOPE

Discussion and Conclusion

By the graceful of Almighty ALLAH who is making us to create this project & documentation. After the long time thinking we think about this project to implement. After finishing this project, we also thankful to ALLAH for making us able to solve this. It will be very helpful to all. Our project is only a humble venture to satisfy the needs in course. The system can sufficiently and effectively handle day to day activities of the

NOGOR PORIBOHON and when proper arrangements are met, the system will overcome all the current problems of the manual system. The objective of software planning is to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses.

Scope for Further Developments

We have some extra curriculum to add in this City Transport Management system. Some of plans on this transport management system are

- Want to Develop Admin panel, supervisor panel.
- Make more secure, user friendly and easier.
- Add GPS on route in this City Transport Management System.
- Add more feature for make it more efficient.
- Make market demandable transport management system for using all transportation system in this project.

APPENDIX

Project Reflection

In the second year last(6th) semester journey, we acquired more knowledge and experience to complete our third project. We are three group members in our team, all are support to complete our project successfully. Every group member is hard work to complete the final project and we huge time spend behind this project. When we start our project work, this time we did not know how to complete this project. But proper plan helps us to complete this

project, when we complete our project 50% this time, we face big problem. We did not connect the database properly but we never demotivate when we go to our teacher, he supports us each and every time, and he helps all time and solve our problem easily. When we face any problem, we discuss together and solve this problem. Now I believe everything is possible, if we work together. After hard work, we complete our project properly. I believe this is not easy to complete before group work. Every time our teacher supports us when we face any problem. At last, we are grateful to Almighty ALLAH and our honorable sir **Mamun Hossain** for his endless support and proper guideline throughout the session.

References

1. <https://www.shohoz.com/bus-tickets>
2. https://play.google.com/store/apps/details?id=com.rongdhonuapps.dhaka_bus_route