# DIU TRANSPORT BOOKING PLATFORM

BY

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

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#### **APPROVAL**

This Project/internship titled "DIU-Transport Booking Platform", submitted by Md. Rakib ID No: 201-15-13978 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 19 January 2023.

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declare that neither this project nor any part of this project has been submitted elsewhere for

award of any degree or diploma.

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#### **ABSTRACT**

With its large number of students and offices, Daffodil International University is currently a top university in Bangladesh. They typically need to use the University Transport office because a certain percentage of the students come from off-campus. However, there are several problems with the DIU's current bus management system that affect the students. The understudies will receive all information on transportation schedules, curriculum, and driver information in a dispersed manner. Unexpected upgrades and other data can cause a few issues. To maintain the finest management of transportation and everyone associated with it, administrators must contend with a number of challenges. In this way, an application can be a solution for the majority of the problems mentioned above by providing a wide range of transportation-related data, placing the board, and being easy to use and maintain for both admin and user. A Webbased application that operates within a centralized network is called the Web Based DIU-Transport Booking Platform. This project reviews the "DIU-Transport booking platform" software as it should be utilized in a bus transportation system, including a seat reservation feature, reservation cancellation functionality, and various route inquiry methods for getting speedy reservations. It keeps track of every consumer detail as well as bus and reservation information. It was decided to use the Systems Analysis and Design Methodology (SSADM). Additionally, the front end of the software was created using MySQL while the back end was created using PHP Hypertext Preprocessor (PHP) with the Laravel framework language. The system should be expanded to include new features like an online payment option and the use of email to convey tickets and notifications to customers.

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## **CHAPTER 1**

#### Introduction

#### 1.1 Introduction

The DIU Bus Management System Application was created for the transport executives of DIU. An administrator enters all of the data in this framework. Advanced mobile phones, PCs, and other associated devices can access the data online from anywhere in the world. The customer can view the entire transport timetable, accessible transportation, driver, helper, and bus information in this framework, as well as make travel arrangements.

Bus management system with automated process that maximizes accuracy and minimizes errors and controls all types of transportation information. By using this approach, users can gain advantages in addition to admins. This facility includes a significant portion of operations, such as bus records, driver and assistant records, timetable records, and improved systems.

The pupils receive all bus schedule, route, and driver information in a dispersed manner. I created and installed my bus management system to take the place of that one. The following information is controlled by my system: departure time for the transportation, updating the new type of transportation, adding or updating routes, adding or updating the information for the buses and drivers, identifying which bus is on which route, booked trip, location, and time, etc. This system's primary goal is to make excessing simple for both administrators and users.

#### 1.2 Project motivation

Bangladesh is a developing country, and every sector is going digital. The ICT division is aware of this and is working to expand swiftly, and our college is also IT-based. Each semester, the Department of Computer Science and Engineering graduates a sizable number of understudies with their final project. Diverse students choose their assignments for a variety of reasons, each with a unique thought process. It is wise to choose an effective project. Since completing an assignment isn't just for academic credit but also for doing your part for the community. If I look at my existing diversified framework, I can see that a big amount of it is manual, distributed, and has various problems. Therefore, I believe that I can convert a scattered framework into a single location using automated mechanization for everyone. Despite the fact that many students have tried it before without success,

1

As a result, I'm making an effort to move forward legally and have chosen the term "Improvement of DIU Bus Management System Application" for my project. I might want to show off my shrewd ideas. In my deeper heart, I believe that it is my duty to take on an endeavor that is both effective and doable for my country and college overall.

#### 1.3 Objectives of this project

The major goal of this project is to make it easier to reserve bus tickets for each trip taken through DIU-Transport by automating the currently manual processes. Customers can choose their own seats, and the system is believed to be automatic. The specific goals of this initiative will include There are several goals for this project. The following list includes the most crucial goal:

- Every piece of information will be delivered efficiently,
- users will receive updates immediately,
- the bus schedule will be correctly maintained,
- an online bus reservation system will be available,
- better trip management will be made possible,
- and customers will have the option to cancel their reservations.
- The ability to edit and delete records for payments, routes, and vehicles as an admin user.

#### **1.4 Expected Outcome**

- Due to being online-based, students may simply purchase a ticket.
- The transport authority can easily sell it.
- Authorities can be released from ticket selling gatherings.
- Students pick up tickets from "ticket collecting Booths," saving them time.

#### 1.5 Project management and finance

I am the sole participant in this initiative. This is the end product of my careful planning and effort. I initially had a few ideas for what I wanted to accomplish for my capstone project. I couldn't decide what my project would be. I then observed that my university offered everyone access to buses. However, we lacked a reliable source from which to gather all bus-related information. We lacked precise knowledge of the bus timetable, the number of buses, the routes, and the buses that would be available at any given moment. Additionally, we had no idea how to reserve a bus for the excursion. As I observed this circumstance, I had a thought for my endeavor. Following discussions with the relevant parties and my supervisor, I chose this specific project since, in my opinion, it is desperately needed by both users and administrators. Then I got to work on my assignment. My boss had provided me with appropriate, reliable direction and information.

#### 1.6 Report Layout

A transportation report layout typically includes a title page, introduction, main body of text and supporting figures, tables, and graphs. The introduction may provide the purpose of the report, and the main body may contain an overview of the transportation system and its components, a description of any problems or issues, an assessment of the system's performance and/or effectiveness, and a summary of the findings and recommendations. Supporting figures, tables, and graphs are used to illustrate and support the main body of text. The report should also include an appendix or addendum section if necessary to provide additional information and to present detailed data.

## **CHAPTER 2**

# **Background**

#### 2.1 Introduction

DIU-Transport Booking Platform is a web Application that anyone can sign in with a unique E-mail Address and password, Any Registered User can use this application perfectly.

#### 2.2 Related Work

Many web applications serve the University Transportation System, and some of these are utilized for managed public transportation. Here, a few of Them are named.

**WUB Transport:** This website are cover all about Route and Arrival and Departure date and time, and many rules and regulation for using university transport [1].

**IUBAT TRANSPORT:** This website are Also cover all about Route and Arrival and Departure date and time descriptively, and many rules and regulation for using university transport. And here also mentioned Total number of busses on the root [2].

**DUET Transport:** This website includes information on the route, arrival and departure times, and transport employees. Additionally, have a plan to provide the university with smart transportation services. [3].

- To deliver timely, effective, and smart transportation services to the stakeholders.
- To utilize the newest transportation technology for maintenance and the smooth operation of vehicles.
- To create a conducive atmosphere for the provision of some efficient transportation facilities.

**AIUB Transport:** This website is cover only the University bus Schedule for Student and teacher, and the total number of Buses [4].

#### 2.3 Comparative Studies

This system will provide very useful and comprehensive information on IUBAT transportation.

It will be the most helpful companion for every Student to, during, and after Student Life. There are several current systems that include IUBAT Transportation, as well as additional services.

After reviewing all of the materials, we believe that none of the existing works or applications are as useful as ours. In our system, Student will be automatically checks the roots as well as the date and time of the Arrival and departure of the buses. In addition, Student can check the Available buses and free and fill-up sit layout. And they can book a sit by only a one click and if they are can easily can cancel the booking A comparison of different features along with our propose app is shown in table 2.1.

Table 2.1: Summary of the examination of current systems

Features	AIUB Transport	WUB Transport	IUBAT Transport	DUET Transport	DIU- Transport Booking Platform
User Registration	Yes	Yes	Yes	Yes	Yes
Admin Registration	No	Yes	Yes	Yes	Yes
Available Root	Yes	Yes	Yes	Yes	Yes
Root Recommendation	No	No	No	No	Yes
Booking	No	No	Yes	Yes	Yes
Cancel Booking	No	No	No	No	Yes
Employee Info	Yes	Yes	No	Yes	Yes
Sit Layout	No	No	No	No	Yes
Invoice Creation	No	No	No	No	Yes
Payment Gateway	No	No	No	No	Yes

# 2.4 Scope of the Problem

The scope of the problem for the University Transport Website is to provide an easy to use, efficient, and cost-effective solution for the university's transportation needs. The website

should enable students and faculty members to book, manage and pay for their transport needs quickly and easily. It should also provide users with up-to-date information on routes, schedules and fares. The website should also be able to integrate with the university's existing systems, such as student and faculty databases, and be able to provide analytics and reporting capabilities. The scope of the University Transport problem can include a variety of issues such as inadequate transport services, inadequate infrastructure, lack of safety, overcrowding, and environmental concerns. All of these issues can have an impact on the overall efficiency and effectiveness of the transportation system for students, faculty, and staff. In order to address these issues, University transportation policies and procedures must be developed and implemented. Additionally, investments may be necessary in order to improve existing infrastructure and services, as well as to develop new ones.

#### 2.4.1 Time Scheduling

Table 2.2 displays my project's time scheduling.

Table 2.2: Time Scheduling

Planning	2 Week
Design And Analysis	1 Week
Coding	4 Month
Evaluation and Application	2 Month
Total	7 Month 2 Week

# 2.5 Challenges

Users can acquire their desired services, such as how to booking their ticket on the and how they find out their root, and then how can cancel their booking by using DIU-Transport Booking Platform. Our primary goal is to improve the usability of our system, particularly for the Student and Faculty Member. Users can also ask their questions, and anyone cannot answer this query only can Admin Do this. This is one of our more difficult problems.

## **CHAPTER 3**

# **Requirement Specification**

#### 3.1 Business Process Model

The current framework, as well as its links to other parts of the framework, allows for a point-by-point analysis of the various activities carried out. Investigating the constraints of the framework and making a decision about them is one aspect of determining whether a competitor framework should take into account other comparable frameworks. Information is obtained during the inquiry period about a readily available document, decision points, and exchanges handled by the current framework. It is the procedure of identifying what should be done before how it ought to be finished. Keeping in mind the end goal to achieve this, the designer alludes the current frameworks and records. Along these lines, it is a specialty of revelation essentially. We have completed the framework investigation by looking at the input, yield, and information of the current framework. We had followed the accompanying waterfall improvement approach during the examination's crucial phase. [11].

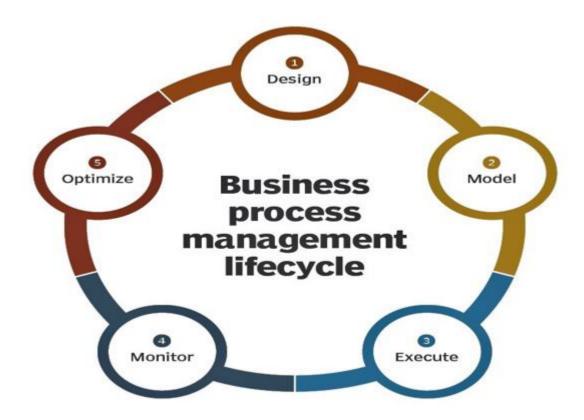


Figure 3.1 Business Process Model [11]

#### 3.1.1 The Waterfall Model

Any project must go through stages known as Development Life Cycles in order to be finished. Understanding how an Information System (IS) may meet business goals, designing the system, creating it, and delivering it to users are all parts of the System Development Life Cycle (SDLC). The Planning, Analysis, Design, and Implementation phases make up the SDLC. This project will be built using the System Structured Analysis and Design Methodology as the methodology. The SSADM falls under the category of a waterfall development. Analysts and users move progressively through each step using Waterfall Development, and each phase can be planned out and assessed (Hevner, 2004). A waterfall methodology diagram is shown in picture 3.2 below.

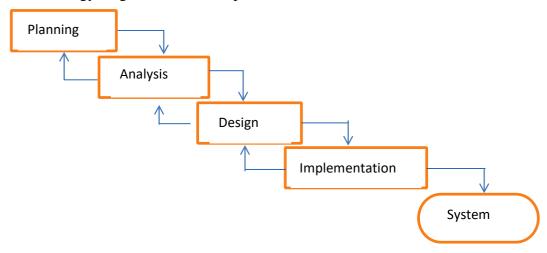


Figure 3.2 The Waterfall Development Methodology

#### 3.2 Requirement Collection and Analysis

A feasibility analysis's purpose is to fairly and objectively highlight a company's or project's advantages and disadvantages, as well as potential risks and possibilities, resources needed to succeed, and success prospects. Simply said, the work necessary and the motivation to complete the activity are the two elements used to assess achievability.

An authentic foundation of the business or task, a description of the product or administration, bookkeeping declarations, points of interest of the activities and administration, and encouragement of research should all be included in a well-written feasibility study and approaches, financial data, legal requirements, and responsibility commitments. In most cases, possibility considerations come before technical improvement and task performance.

A potential consider evaluates the task's progress potential; as a result, saw objectivity is a critical aspect in the examination's credibility for possible financial specialists and lending

foundations. It should then be directed with a specific, fair approach to deal with the facts so that decisions can be made [14].

There are a few factors in Feasibility and some normal are takes after:

- 1. Technical practicality
- 2. Economic practicality
- 3. Legal practicality
- 4. Operational practicality
- 5. Schedule practicality

#### 3.2.1 Technical practicality

An outline of the framework's needs for input, processes, output, fields, programs, and procedures serves as the foundation for the evaluation. The new framework's ability to function effectively can be evaluated in terms of data volumes, patterns, refresh frequency, and other factors. Daffodil International University is creative If a corporation has the capacity to finish a project in terms of programming, equipment, labor, and knowledge, it is determined by its plausibility [15].

#### 3.2.2 Economic attainability

The most popular method for evaluating another framework's applicability is a monetary analysis. The method, which is often referred to as a cost-benefit analysis, involves identifying the common benefits and reserve funds from an applicant framework and contrasting them with costs. The choice to plan and implement the framework is taken when the advantages outweigh the disadvantages. A businessperson should carefully consider the advantages and disadvantages before making a decision [15].

#### 3.2.3 Legal plausibility

Determines whether the proposed framework conflicts with legal requirements, such as the requirement that an information handling framework adhere to local Data Protection Acts. Since every product we use is free, we are not breaking any anti-theft laws [15].

#### 3.2.4 Operational attainability

Operational attainability is a metric for how successfully a proposed framework addresses problems, takes use of opportunities identified during scope design, and satisfies requirements identified during the prerequisite's examination period of framework improvement [15].

#### 3.2.5 Schedule attainability

If it takes too long to finish a task in any way before it is useful, it will fizzle. Typically, this requires applying techniques like payback period to estimate how long the structure will take to construct and whether it can be finished in a given day and age. A task schedule's practicability is measured by its calendar attainability. Are the timeframes for the assignments acceptable given our specialized knowledge? A few projects are begun with certain completion dates in mind. You must decide if the deadlines are required or preferred [15].

# 3.3 Use Case diagram

Actors

Admin: Admin has the ability to update data.

Students: Students have access to all transportation-related information.

A use case is a description of how a system behaves in response to a request coming from somewhere else than the system itself (the user). Figure 3.4 depicts a usage instance of the operations in a bus transportation system.

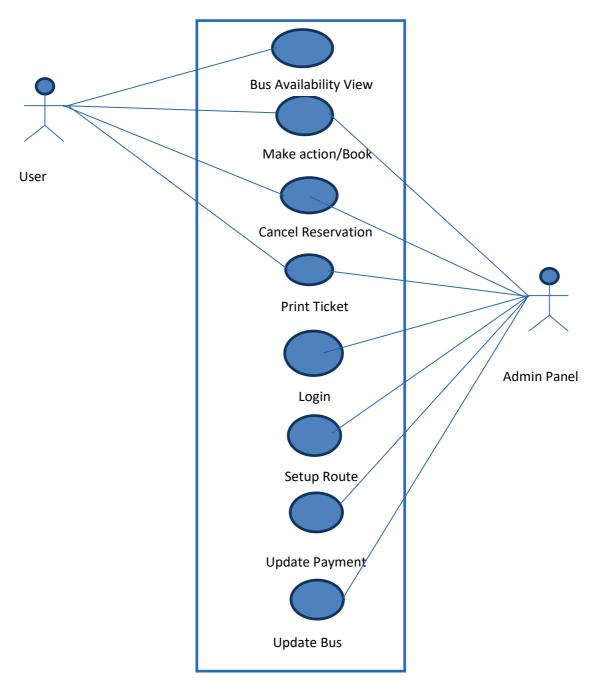


Figure 3.3: Use case diagram of the system.

A use case, then, explains "who" can utilize the system in question to "do what." By describing scenario-driven threads through the functional requirements, the use case technique is utilized to capture a system's behavioral requirements.

# 3.4 Entity relationship model and Diagram

A graphic representation of entities and their connections to one another is an element relationship model. To accurately capture this current reality in a database is the primary goal of ER demonstrations. We don't really get a database representation from the ER display. It gives us a little advance that makes describing a database not too complex. Usually, an ER display is actualized as a database. Each field in a table refers to a trait type in a basic social database, and each column speaks to one instance of a substance type.

A connection between items in a relational database is established by storing the primary key of one element as a pointer, or "foreign key," in the table of another element.

Figure 3 below lists the E-R diagram's main elements.

Entity set is represented by 2 rectangles.

Ellipse, a symbol for characteristics.

Diamonds are a symbol for relational sets.

Line, which connects relationship sets to entity sets and attributes to entity sets.

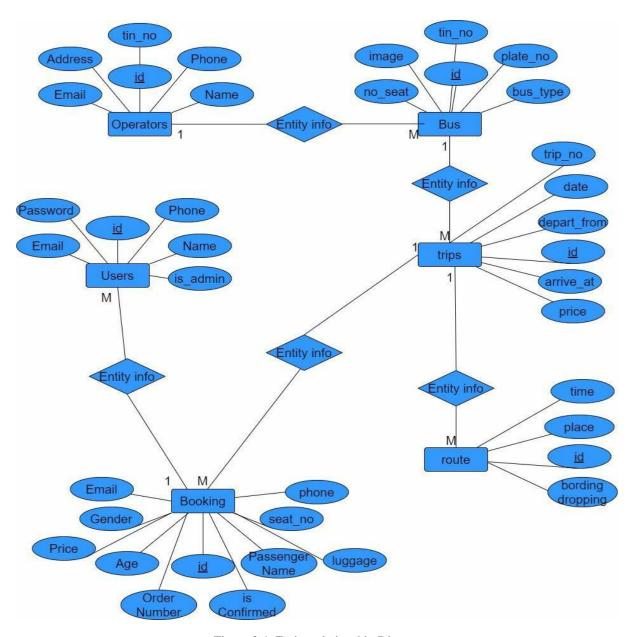


Figure 3.4: Entity relationship Diagram

#### 3.5 Structure Design

A bird's-eye view of the complete system may be seen on the web portal for the online bus ticketing system. The Online Bus Ticketing System web interface typically makes it simple to retrieve information. Customers can access a variety of information by visiting the website, including bus timetable details, the newest news, feedback and tip updates, and recommendations. The administrator, on the other hand, would be able to evaluate the system for updating the portal with information regarding bus schedules, the most recent news, feedback, and report generating. The web gateway for the online bus ticketing system has been given a structure diagram. As illustrated in Figure, the Online Bus Ticketing System's primary system is split into two main sections: The Customer part and the Admin portion.

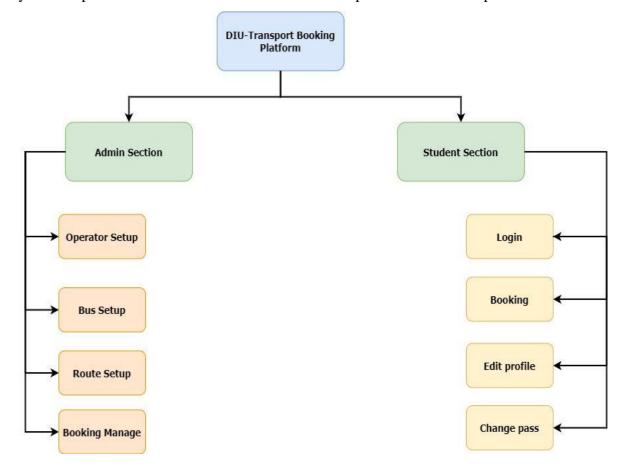


Figure 3.5: structural chart for the system.

#### 3.5.1 Structure Chart for the Admin Section

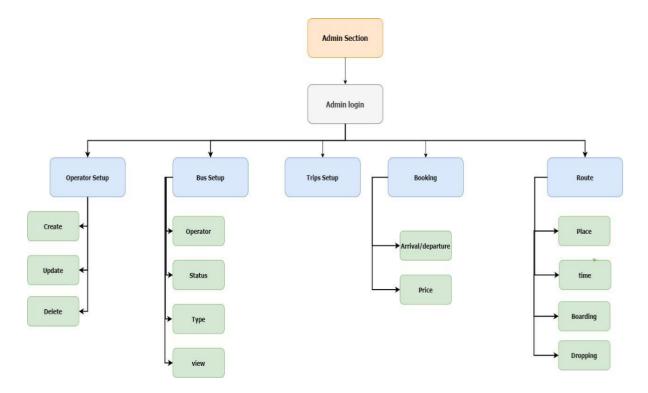


Figure 3.6: structural chart for the Admin.

## 3.5.2 Structure Chart for the Student Section

There are ten in the section for customers. It's the modules. Figure depicts the organization chart for the Customer division.

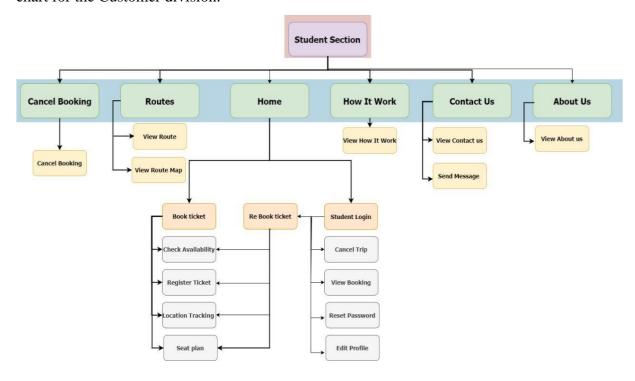


Figure 3.7: structural chart for the Student.

#### **CHAPTER 4**

# **Application Design and Specification**

## 4.1 Front-end Design

The "Diu-Transport Booking Platform Application System" was created to manage the buses at our university in the simplest manner possible and the travel schedule in the most effective manner possible, allowing both students and faculty/administrators to travel between campuses of this university with ease. If the system administrator wishes to add or remove any bus, route, or schedule, he or she can do so with ease. I created this system with the intention of using it in numerous transportation-related fields as well as to support the transportation department at my institution with an online system. In fact, this might be used as a general transportation system.

#### 4.2 Back-end Design

I developed this app using a number of different technologies. As follows: Framework for Laravel

- Laravel Framework
- PHP
- Bootstrap
- HTML and CSS (Markup language)
- MYSQL (Database Engine)
- Website Server
- Icons from Font Awesome

#### 4.2.1: Laravel Framework

The web application framework Laravel features a sophisticated, expressive language structure. We think that for improvement to be truly gratifying, it must be a delightful, artistic experience. By promoting common tasks employed in the majority of online activities, like checking, coordinating, sessions, and holding, Laravel seeks to remove the tension from progress. Without sacrificing application usability, Laravel hopes to make the improvement process fantastic for the planner. The best code is written by playful architects. To do this, we've attempted to combine the most straightforward elements of existing web structures, combining frameworks written in other languages, such as Ruby on Rails, ASP.NET MVC, and Sinatra [1].

Accessible yet revolutionary, Laravel provides enormous resources demanded of enormous, ground-breaking applications. You have the tools you need to build any application you are qualified to build thanks to a great inversion of control holder, expressive movement structure, and meticulously prepared unit testing reinforcement.

#### 4.2.2 PHP

A strong mechanical assembly for creating a dynamic and lifelike IB website is PHP, a server programming language. An Ib server using a PHP processor module decodes PHP code, creating the resulting Ib page: Instead of using an external archive to process information, PHP headers can be integrated clearly into an HTML smyce record [2, 8].

#### 4.2.3 Bootstrap

Bootstrap was created in 2011 as a result of a gathering of Twitter engineers who wanted an internal solution to their coding problems. In reality, their strategy was to create a mechanical assembly free of a certain code structure.

Each programmer may have a different method for creating his gems. This generally results in a few weaknesses when a different product engineer, let's say a student, tries to look over the code. In order to get programming designers to tie together their examples of constructing the code and avoid making contrasts at the same time, Mark Otto and Jacob Thornton from Twitter created Bootstrap. Simply put, the focus points that Bootstrap transferred to their daily work were crucial.

As soon as Twitter employees saw its true potential, they made it available as an open-source project. It just took a few months to establish Bootstrap as the most popular front-end improvement tool for creating responsive, flexible web experiences, thanks to GitHub and countless programming engineers [3].

#### 4.2.4 HTML & CSS

The preferred markup language for creating IB pages and applications is HTML. JavaScript and Cascading Style Sheets (CSS) combine to form a trio of World Wide Web development standards. Ib programs turn HTML records into visual and aural Ib pages by obtaining them from an Ibserver or local collection. HTML elements are the building blocks of HTML pages. As HTML evolves, simple structures can be included into images and many types of content, for instance. By illustrating essential semantics for content, such as headers, areas, records, linkages, refers to, and various objects [6], it provides a method for creating ordered records. The beginning of a report written in a markup language is represented using CSS, a template

language. The majority of IB locales employ CSS, along with HTML and JavaScript, as a foundational technology to create ostensibly attractive IB pages, UIs for IB applications, and UIs for some flexible applications. The primary purpose of CSS is to support the unit of report content from record presentation, including aspects like the design, colors, and text styles. [7].

#### 4.2.5 **DBMS**

A database is used to manage data collection. Usually, relevant aspects of reality are indicated by the data in a way that supports the shapes that need this data. For instance, displaying hotel room availability in a way that encourages booking a hotel given the situation.

Database management systems (DBMSs) are amazingly designed programs that collaborate with the client, other programs, and the database itself to collect and segregate data. An item structure that is intended to permit the definition, creation, addressing, revival, and association of databases is known as a totally valuable database management system (DBMS). I utilized MySQL for my application. [15].

#### 4.2.6 Web server

A Web server is a program that makes use of HTTP (Hypertext Transfer Protocol) to provide the data that makes up Web pages to users in response to requests submitted by HTTP clients on their PCs. Committed PCs and devices could also be interpreted as web servers.

A customer/server illustrate example is the strategy. Every PC with a web district needs to have web server software. Driving Web servers include Microsoft's Internet Information Server (IIS) from NGNIX and Apache, the most widely used Web server. Other web servers include the NetWare server from Novell, the Google Web Server, and the collection of Domino servers from IBM.

We enlisted the aid of a virtual server called XAMPP in order to replicate this application.

#### 4.2.7 Font Awesome Icons

Content style Awesome provides us with adaptable vector pictures that may quickly alter in terms of size, color, drop shadow, and everything else that should be possible thanks to the power of CSS [4].

For business-related topics, modules, and efforts, the primary Font Awesome is currently open source and completely free. [5].

#### 4.3 Interaction Design and User Experience

The information system and the user are connected through the input design. It entails creating specifications and protocols for data preparation, which are necessary to convert transaction data into a form that can be used for processing data entry, whereas output design is a process that entails creating the necessary reports that must be provided to users in accordance with the requirements. Below are a few screenshots showing the proposed system's input and output designs.

#### 4.1 Home Reservation Module

The ability to choose a journey's departure date, origin, and destination is available on the home page. We can also choose a payment method and purchase a ticket. Bus travel options are also available on the home page. From the home page, we can also check the fare and the Web Based Online Bus Ticket Booking Management System cancellation. We can also rent a bus for our trip or reserve a bus for the airport. Therefore, we may choose bus, root, and the location of the departure and destination using the home page. We can pay for our ticket using the PHP-based web-based online bus ticket booking management system after choosing the bus and the route. An SMS is sent to the provided cellphone number for confirmation of the ticket booking when the payment is successful. Alternatively from the homepage, the user can print the ticket.

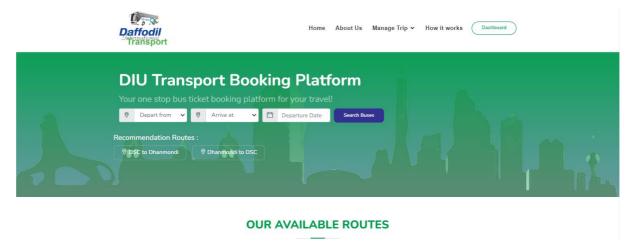


Figure 4.1: Home Reservation Module

#### **Ticket Detail Functions**

- A new ticket can be created, allocated tickets can be modified.
- log-in and log-out detail functions can be used.
- Producing reports, etc.

#### **System:**

Local Ticket Booking: In this sector of ticketing, the agency offers the local services offered by its agency in the area.

Non-local Ticket Booking: In this area, the company offers the services offered by non-local companies. Asp.net bus ticket booking system However, non-local employees of the same agency handled the client care.

Shared Booking: In this area, the travel agency can book tickets for clients using the resources of other tour operators. In this instance, the other agency is in charge of client service.

#### 4.2 Why Book with Module

Here Describe Why Book with this Module, because of multiple bus operator and multiple bus platform, here ensure Superior Customer Service.

WHY BOOK WITH US?

# MULTIPLE BUS OPERATORS Several bus service providers available on our platforms FOUR PLATFORMS Tickets are available for booking through website, mobile app, USSD and call center Superior and professional customer service from booking to boarding the bus

Figure 4.2: Why Book with Module

#### 4.3 Home Page Screen

This is Our Home page and here User can Search Bus. And User can see recommendation of root, and available route, more feature of the platform.

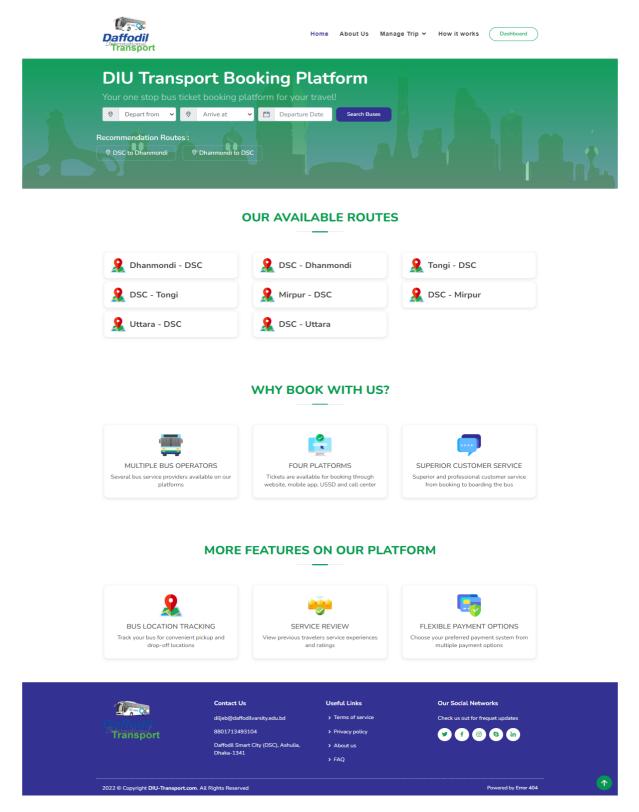


Figure 4.3: Home Page Screen

## 4.4 About Project Screen

In About section everything are described about DIU transport Booking Platform.

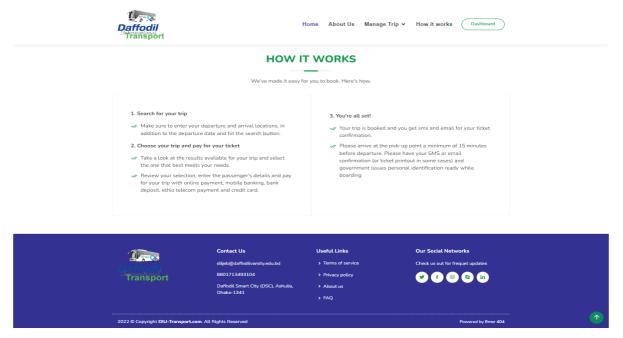


Figure 4.4: About Project Screen

#### 4.5 Bus Booking Page Screen

After searching User can see total number of available buses and Buses information.

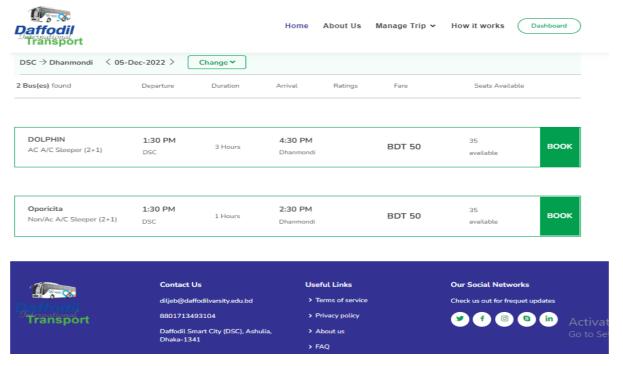


Figure 4.5: Bus Booking Page Screen

#### 4.6 Change Booking Page Screen

In the change Booking Page User can modify the searches option.

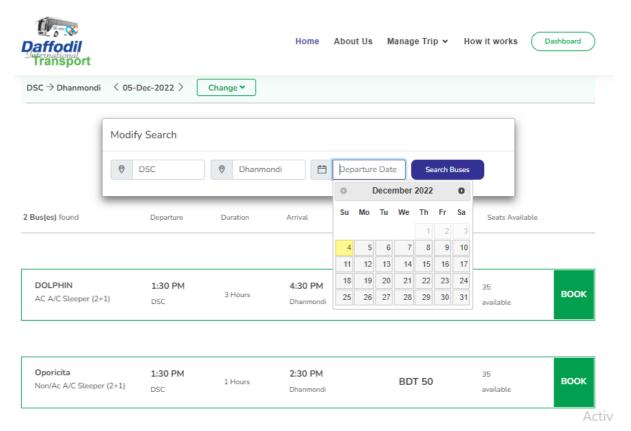


Figure 4.3.6: Change Booking Page Screen

## 4.7 Seat Layout Screen

In the seat layout page user can see total number of seat, and which are already fill-up and which number of seat are available.

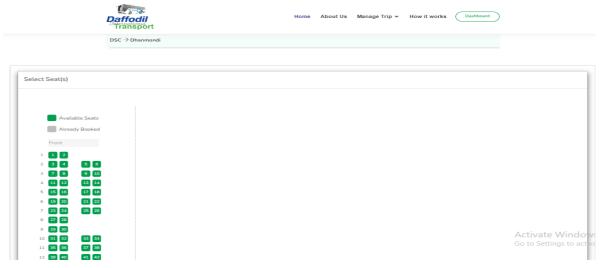


Figure 4.7: Seat Layout Screen

# 4.8 Seat Booking Screen

After booking the seat student can see which seat are fill-up, and new eely book the seat student need to give Passenger information, and click on book now button.

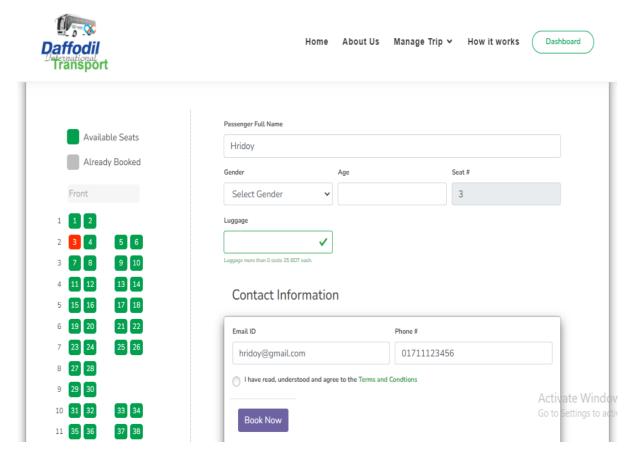


Figure 4.8: Seat Booking Screen

#### 4.9 Booking Details Screen

After booking student Order has been submitted successfully, and an email has been sent. And user can see order summary. Payment status and make payment option.

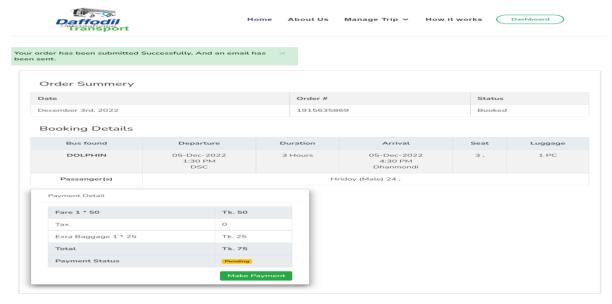


Figure 4.9: Booking Details Screen

## 4.10 Cancel Booking Screen

Form the cancel booking screen User can easily cancel the booking.

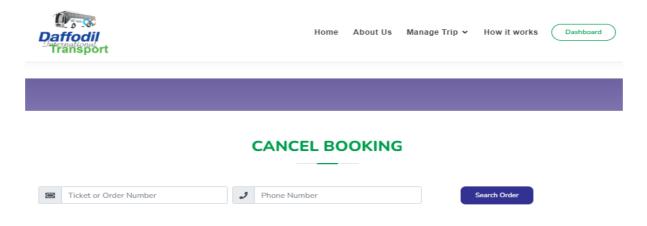


Figure 4.10: Cancel Booking Screen

# 4.11 Sign in Module

If a user already register user need to sing in.

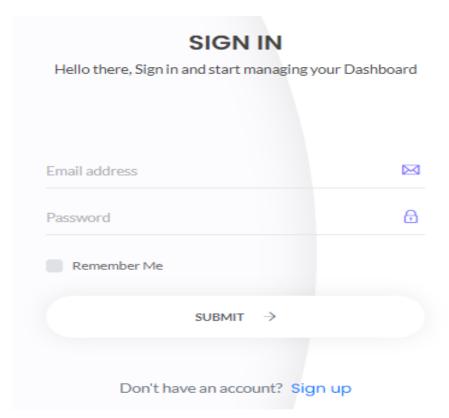


Figure 4.11: Sign in Module

# 4.12 Sign Up Module

If he or she not a register user firstly need to sign then sign In.

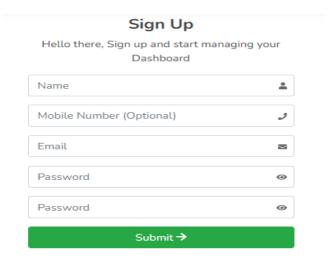


Figure 4.12: Sign Up Module

#### 4.13 Admin Dashboard Screen

This is admin dashboard screen, here an admin can summary of the total ticket sold, gross profit order and new customer. And admin also need to sign in with valid User address and password.

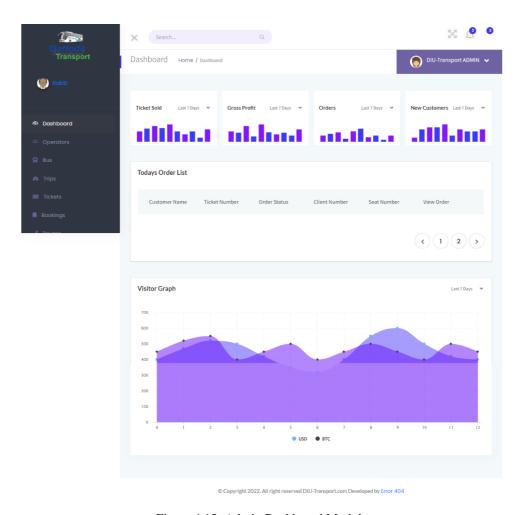


Figure 4.13: Admin Dashboard Module

# 4.14 Admin Operator Screen

In here admin can set operator, contact person and status.

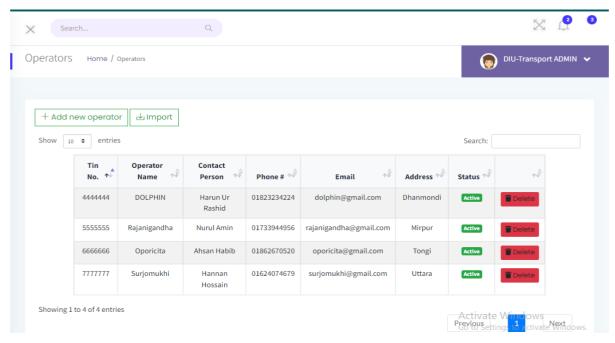


Figure 4.14: Admin Operator Screen

#### 4.15 Admin All Buses Screen

In here admin can added buses, buses type, total number sit and so many things.

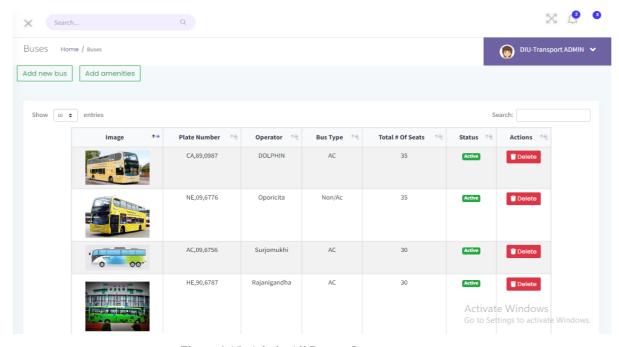


Figure 4.15: Admin All Busses Screen

### 4.16 Admin Trips Screen

In here admin can add a new trip, trip number arrival date and time and departure date and time, and also add a fare.

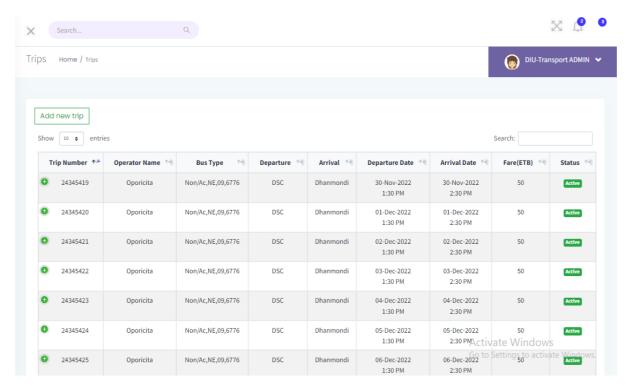


Figure 4.16: Admin Trips Screen

### 4.17 Admin Available Ticket Screen

In here admin can see total number of available ticket.

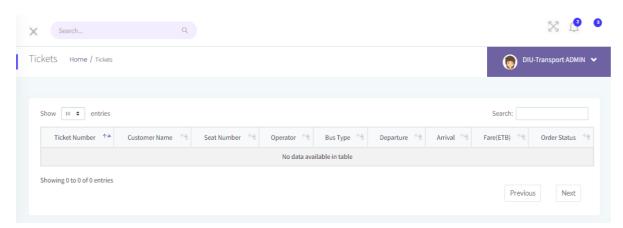


Figure 4.17: Admin Available Ticket Screen

### 4.18 Admin Booking Screen

In here admin can see total number of order, and order information, seat number bus type order status and so many things.

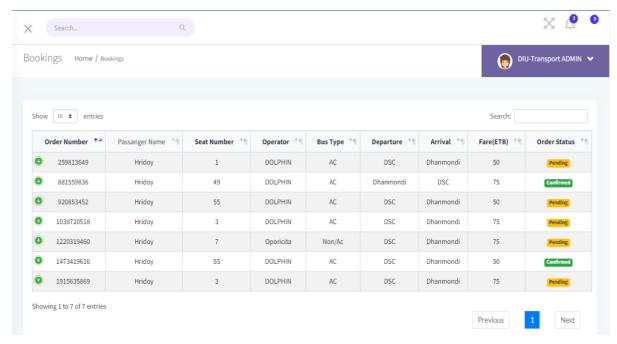


Figure 4.18: Admin Booking Screen

### 4.19 Admin Routes Screen

Here admin can set the root boarding and dropping place and time.

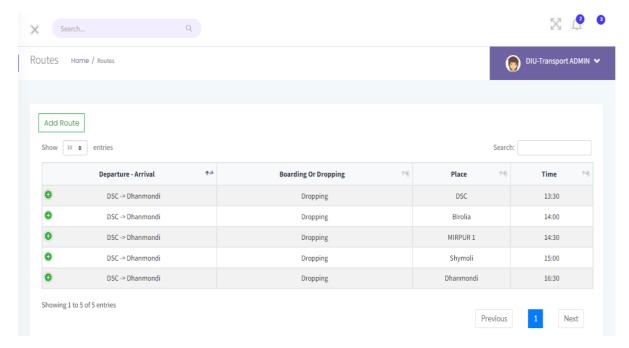


Figure 4.19: Admin Routes Screen

#### 4.20 User Profile

in the user profile interface user can see his booking, can edit profile and change the password and can sign out form here.

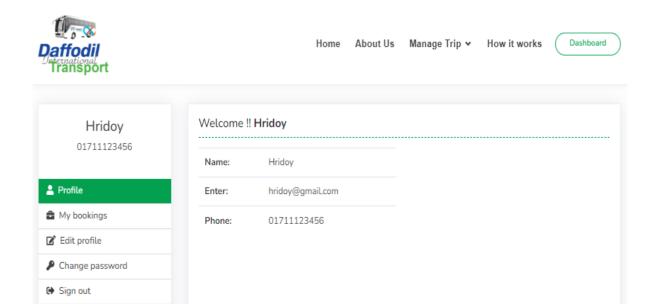


Figure 4.20: User Profile

### **4.21 User Booking List**

Form User booking User can delete his booking, and also see other information.

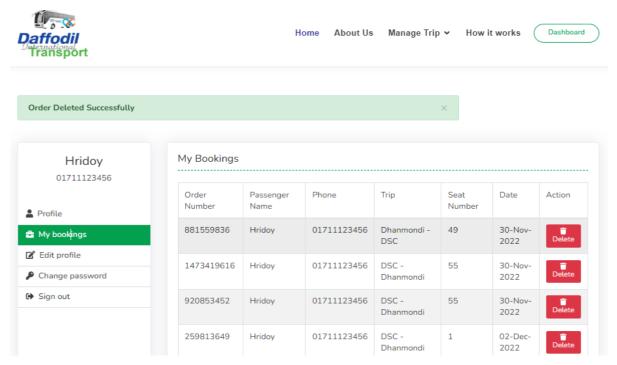


Figure 4.21: User Booking List

### 4.22 User Edit Profile Screen

From edit profile User can easily edit his profile. And update his profile.

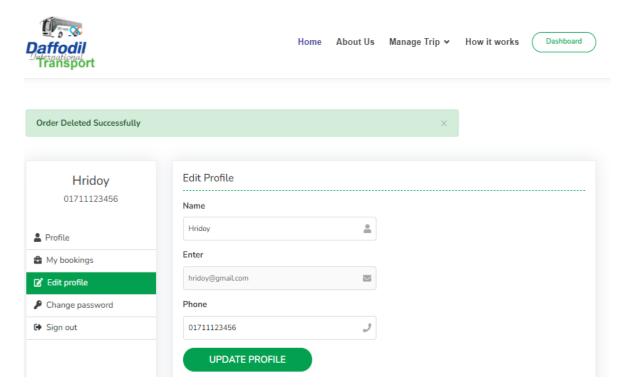


Figure 4.22: User Edit Profile Screen

## 4.23 User Change Password Screen

Form User Change Password Option User can easily change his password by giving new password and confirm password field. and quickly update his password.

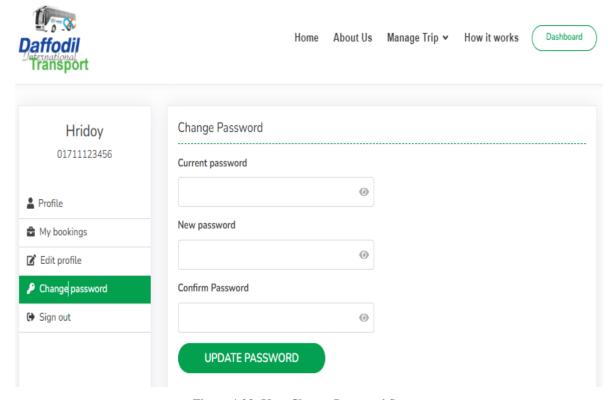


Figure 4.23: User Change Password Screen

### **4.4 Implementation Requirements**

- Windows-Based Requirements, Section 4.4
- The following minimal hardware and software specifications must be met by computers running Microsoft Windows.
- 8 GB of memory, a dual-core 64-bit processor, and up to 24 GB of internal storage
   (Kony Visualizer: 4GB, Android SDK: 2GB, Windows SDK: 4GB, BlackBerry NDK:
   4GB, plus ample space for multiple complex projects)
- Windows 10, Windows 8.1 Update, Windows 8, and Windows 7; network interface card; and
- Mac-Based Requirements, Section 4.4.
- The following minimal hardware and software specifications must be met by Apple computers..
- The x86-64 processor (64-bit Mac with an Intel Core 2 Duo, Intel Core i3, Intel Core i5, Intel Core i7, or Xeon processor)
- 150 GB of internal storage; 8 GB of RAM (Kony Visualizer: 4GB, Storage for multiple, complex projects: 10GB, Apple Xcode: varies, depending on the features and simulators you install, and the number of earlier versions of iOS your app needs to support)
- Network adapter card
- Versions of Mac OS X 10.7 and later
- Runtime for Java SE 7 (Eclipse requires this. When you launch Kony Visualizer for the first time, an offer to install Java SE 7 runtime appears.)

### **CHAPTER 5**

# **Implementation and Testing**

## **5.1 Implementation of Database**

#### 5.1 Tables User

Table 5.1: User Table Creation

Field Name	Data Type	PrimaryKey	DefaultValue	Description
Id	Int.	Primary key		
Name	Varchar			
Email	Varchar			
Password	Varchar			
Created at	Timestamp			
Updated at	Timestamp			
Phone	Varchar			
Email Verified	Varchar			

In User table, there are seven columns. They are; Id (data type int), Name (Datatype Varchar) Email (data type varchar), password (data typevarchar), Remember\_token (data type varchar), Phaone Number (data type Integer) and Roll\_at (data type Check) where Id is primary key. Existing admin information is shown in Figure 5.1.



Figure 5.1: User Database

Table 5.2: Bus.

Table 5.2: Bus table

Field Name	Data Type	Primary Key	Default Value	Description
Id	Int.	Primary key		Bus identification
Bus Type	Varchar			
Plate no	Varchar			
Image Url	Varchar			
Status	Varchar			
Seat	Double			
Created at	Timestamp			
Updated at	Timestamp			

In Bus table, there are eight columns. They are; Id (data type int), Bus type varchar(255), plate NO varchar(255), Image Url, varchar(255) Status varchar(255), Operator Id (data type varchar), Number of Seat (data type double), Created\_at (data type Timestamp) and Updated\_at (data type Timestamp), where Id is primary key. Existing bus information is shown in Figure 5.2

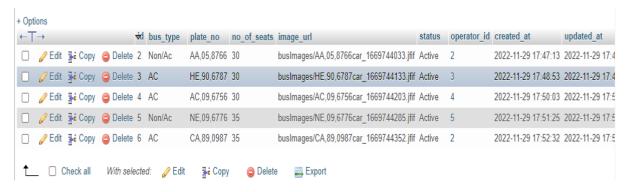


Figure 5.2: Bus Database.

Table 5.3: Operator.

5.3: Operator table.

Field Name	Data Type	Primary KeyDefault Value	Description
Id	Int.	Primary key	Operator identification
Name	Varchar		
Contact	Int.		
Phone	Int.		
Address	Varchar		
Tin no	Varchar		
Status	Varchar		
Created at	Timestamp		
Updated at	Timestamp		

In Operator table, there are eight columns. They are; Id (data type int), Name (data type varchar), Contact Person (data type varchar), and Phone (data type Varchar), Email (data type Varchar), Address (data type Varchar), Tin no(data type int), Status (data type varchar), Created at (data type Timestamp) and Updated at (data type Timestamp), where Id is primary key.

Existing driver information is shown in Figure 5.3

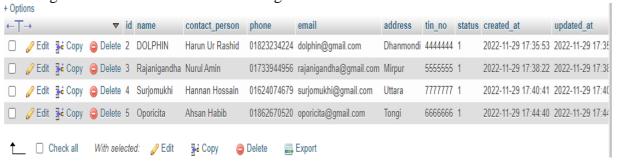


Figure 5.3: Operator Database.

#### Table 5.4: Route

Table 5.4: Route Table

Field Name	Data Type	Primary Key	Default Value	Description
Id	Int.	Primary key		Route identification
Boarding Drop	Varchar			
Time	Varchar			
Place	Varchar			
Trip Id	Int.			
Created at	Timestamp			
Updated at	Timestamp			

In Route table, there are three columns. They are; Id (data type int), Boarding Dropping (data type varchar), Time (data type varchar), Place (data type varchar), Trip Id (Unsigned) Created\_at (data type Timestamp) and Updated\_at (data type Timestamp), where Id is primary key.

Existing route information is shown in Figure 5.4.

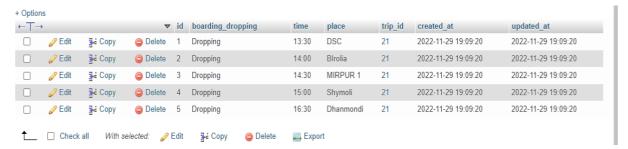


Figure 5.4: Route Database

**Table 5.1.5: Trip.** 

Table 5.5: Trip Table

Field Name	Data Type	Primary Key	<b>Default Value</b>	Description
Id	Int.	Primary key		Trip identification
Trip no	Varchar			
Travel_Date	Varchar			
Arrival Date	Varchar			
Depart Form	Varchar			
Arrival At	Varchar			
departure time	Varchar			
Arrival Time	Int.			
Price	Double			
Status	TinyInt			
Available_seat_form	Int.			
Available sit Upto	Int.			
Allow_Luggage	Int.			
Extra_luggage_fee	Double			
Total_trip_day_For	Double			
Bus id	Bigint			
Created_at	Timestamp			
Updated_at	Timestamp			

In Trip table, there are eighteen columns. They are; Id (data type int), Trip no (data type Varchar), Travel\_Date (data type Varchar), Arrival Date (data type Varchar), Depart Form (data type Varchar), Arrival At (data type Varchar), departure time(data type Varchar), Arrival Time (data type Varchar), Price (Double), Status (tiny int), Available\_seat\_form (int), Available sit Upto (int), Allow\_Luggage (int), Extra\_luggage\_fee (Double), Total\_trip\_day\_For (double), Bus id (data type int), Created\_at (data type Timestamp) and Updated at (data type Timestamp), where id is primary key.

Existing schedule information is shown in Figure 5.5



Figure 5.5: Trip Database.

#### Table 5.6: seat maps Table

Table 5.6: Set Maps Table

Field Name	Data Type	Primary Key	Default Value	Description
Id	Int	Primary key		seat maps identification
seat maps	Int			
Seat value	Varchar			
Created at	Timestamp			
Updated at	Timestamp			

In seat maps Table, there are five columns. They are; Id (data type int), seat maps (), Seat Value (), . Created at (data type Timestamp) and Updated at (data type Timestamp), where Id is primary key.

Existing seat maps Table information is shown in Figure 3.7



Figure 5.6: Seat maps Database

Table 5.7: Booking Table

Field Name	Data Type	Primary Key	Default Value	Description
Id	Int.	Primary key		Booking identification
User_Id	Int.			
Passenger Name	Varchar			
Age	Varchar			
Field Name	Data Type	Primary Key	<b>Default Value</b>	Description
Gender	Varchar			
Contact_	Varchar			
person				
Phone	Varchar			
Seat no	Int			
Status	Varchar			
Email	Varchar			
Is Confirmed	Tinyint			
Order number	Varchar			
Luggage	Varchar			
Price	Double			
Trip Id	Bigint			
Created at	Timestamp			
Updated at	Timestamp			

In Booking table, there are Fiftin columns. They are; Id (data type int), User Id (data type Bigint), Passenger Name (data type varchar), Age (), gender (data type varchar), Seat\_no (int), Contact Person (data type varchar), and Phone (data type Varchar), Email (data type Varchar), (data type Varchar), Is confirmed (tiny int), Order number (type varchar), Luggage (type varchar), Price (Double), Trip\_id (Begin), Created at (data type Timestamp) and Updated at (data type Timestamp), where Id is primary key.

Existing driver information is shown in Figure 5.7

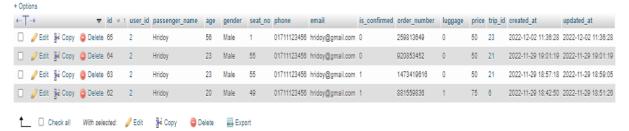


Figure 5.7: Booking Database

#### **Table 5.8: Change Password Table**

Table 5.8: Change Password Table

Field Name	Data Type	Primary Key	Default Value	Description
Email	Varchar	Primary key		seat maps identification
Token	Varchar			
Created at	Timestamp			

In Change Password Table, there are Three columns. They are; Email (data type int), Token (Varchar), . Created at (data type Timestamp)

Existing Change Password Table information is shown in Figure 5.8



Figure 5.8: Change Password Database

### 5.2 Testing and Implementation

Software testing is just as crucial as software development. We've made every effort to make using our web-based system simple and safe. As a result, we tested our system by putting specific scenarios into practice. Table 6.1 in the next section displays the results of our tests.

**Table 5.9 Testing report** 

Table 5.9 Testing Report

Test	Description	Test Data	Expected	Actual
No			Outcome	Outcome
01	By pressing the login button while using an elaborate email and an incorrect secret phrase	Email:Shahin@gmail. com Pass: 6876	Invalid User Id and Pass Word	Pass
02	Now enrolled during enrollment check is the information mail.	hridoyroy@gmail.co m Pass:5768	This email Already Exist	Pass
03	by pressing the login button while using a compromised password, email, or both.	Email: <u>Toriqulislam@</u> gmail.com Pass:0978	No User are Find Here	Pass
04	utilizing the login button and a password and email that are both genuine	Email:mdrakib50511 1@gmail.com Password:"1234567"	Direct Go to Home Page	Pass

## **5.3 Test Results and Reports**

Users who tested the project as part of Black Box Testing provided both favorable and negative comments. These comments are below.

### **Positive Feedback:**

- i. The application's interface is clear and functional.
- ii. The search function is extremely straightforward and highly efficient.
- iii. User-friendly.

## **Negative Feedback**:

- i. An offline control form is required.
- ii. Should include more services,

### **CHAPTER 6**

# Impact on Society, Environment and Sustainability

### **6.1 Impact on Society**

University transportation can have a significant impact on the university society by providing students with a convenient and reliable way to get around. This can help students travel to and from classes, work, and social engagements with ease. Additionally, university transportation can help reduce pollution and traffic congestion, making the university campus a healthier and more enjoyable place to be. Finally, university transportation can help foster a sense of community.

### **6.2 Impact On Environment**

University transportation can have a positive and negative impact on the university environment depending on how it is managed and implemented. If done properly, university transportation can reduce traffic congestion and pollution levels, as well as provide a convenient and economical option for students and faculty to get around campus. Additionally, it can be used to increase access to the university's amenities and services, such as libraries, gyms and restaurants.

# **6.3 Ethical Aspects**

Ethical aspects of university transport refer to that the transportation provided meets the needs of the university community, is safe and accessible, and takes into account environmental concerns. Ethical considerations also include providing reasonable and affordable fees for transportation services, ensuring that students are adequately informed of the transportation options available, and that the university is providing equal access to transportation regardless of race, gender, or socio-economic status.

## 6.4 Sustainability Plan

- Expand and improve infrastructure: Invest in infrastructure such as bike lanes and parking lots, and improve public transportation systems to make them more efficient and reliable.
- Monitor progress: Develop a monitoring system to track the university's progress in meeting its transportation goals and making improvements.

#### **CHAPTER 7**

#### **Conclusion and Future Scope**

#### 7.1 Conclusion

This modern life puts the entire world in your hands. The site page plan and its online process are becoming increasingly widely recognized as everything has been digitalized. Currently showing human wards on hold They have to fulfill all of their online requests. Furthermore, I believe my task will continue to be valuable because our college is well-known and it is becoming more and more important in IT. I'm attempting to do as much more for my country as is conceivable. My best intentions, ideas, and knowledge are being applied to this effort. Despite the fact that I founded my business with the goal of serving the "DIU" transport sector, It usually gets delivered effectively to use anywhere there is transportation in our country. It's a very creative and effective way to gather the information you need. With the aid of technologies, human needs are progressively expanding. I am therefore developing my website in preparation for tomorrow's realities. In the future, I might want to put both of these tasks' additional features in the android application as well, so that it becomes straightforward to access. Finally, in response to requests, I will work to add additional highlights to this site in the future.

## 7.2 Scope of further development

- In the future, we can utilize tracking devices to track the bus and route position.
- We are also working on the integration of the online payment system.
- We will attempt to add additional options and facilities for user and admin.

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# DIU TRANSPORT BOOKING PLATFORM

	ALITY REPORT	KI BOOKING PL			
	0% ARITY INDEX	17% INTERNET SOURCES	0% PUBLICATIONS	9% STUDENT	PAPERS
PRIMAR	Y SOURCES				
1	dspace.d	laffodilvarsity.e	du.bd:8080		12%
2	Submitte Student Paper	ed to Daffodil Ir	ternational U	niversity	2%
3	docs.kon				1%
4	Submitte Student Paper	ed to University	of East Londo	on	1%
5	Submitte Student Paper	ed to SASTRA U	niversity		<1%
6		ed to Ghana Int ic Administratio		gement	<1%
7	Submitte College Student Paper	ed to Ghana Teo	chnology Univ	ersity	<1%
8	Submitte Brunei Student Paper	ed to Kensingto	n College of B	usiness -	<1%