Bangladesh University of Business and Technology (BUBT)

DEPARTMENT OF Computer Science and Engineering

Bus Ticket Booking System

Submitted By

Sudipto Ghosh	ID: 19202103499
Md.Rezaul Hasan	ID:19202103485
Tahira Akter Tamanna	ID:19202103502
Sabiha Alam Shamu	ID:19202103489
Sahasa Debnath	ID:19202103473

Submitted in partial fulfillment of the requirements of the degree of

Bachelor of Science in

Computer Science and Engineering.

Bangladesh University of Business and Technology(Dhaka-1216)

23, March 2023

Contents

List of Figures

Declaration

We do hereby declare that the project works presented here with entitled as, "Bus Ticket Booking System" are the results of our own works. We further declare that the project has been compiled and written by us and no part of this project has been submitted elsewhere for the requirements of any degree, award or diploma or any other purposes except for this project. The materials that are obtained from other sources are duly acknowledged in this project.

Signature of Developers

_____

Sudipto Ghosh, ID: 19202103499

_____

Md.Rezaul Hasan, ID:19202103485

_____

Tahira Akter Tamanna, ID:19202103502

_____

Sabiha Alam Shamu, ID:19202103489

_____

Sahasa Debnath, ID:19202103473

Approval

I do hereby declare that the project works presented here with entitled as, Bus Ticket Booking System, are the outcome of the original works carried out by Sudipto Ghosh, Rezaul Hassan, Tahira Akter Tamanna, Sabiha Alam Shamu, Sahasa Debnath under my supervision. I further declare that no part of this project has been submitted elsewhere for the requirements of any degree, award or diploma or any other purposes except for this project. I further certify that the dissertation meets the requirements and standard for the degree of Doctor of Philosophy in Computer Science and Engineering.

Chairman

Md. Saifur Rahman

Assistant Professor

Department of Computer Science Engineering

Bangladesh University of Business and Technology

Supervisor

Ms. Humayra Ahmed

Assistant Professor

Department of Computer Science Engineering

Bangladesh University of Business and Technology

Acknowledgement

We are deeply thankful to Bangladesh University of Business and Technology (BUBT) for providing us such a wonderful environment to peruse our project. We would like to express our sincere gratitude to Ms. Humayra Ahmed, Assistant Professor, CSE, BUBT. We have completed our project with his help. We found the project area, topic, and problem with his suggestions. He guided us with our study, and supplied us many articles and academic resources in this area. He is patient and responsible. When we had questions and needed his help, he would always find time to meet and discuss with us no matter how busy he was. We also want to give thanks to our CSE department. Our department provide us logistic supports to complete our project with smoothly. We would also like to acknowledge our team members for supporting each other and be grateful to our university for providing this opportunity for us.

Abstract

Inner city transport service is a project to hire all companies in a single company and run all buses sequentially in several routes. All bus tickets will be sold online.No bus can't wait for passengers. All buses run at the correct time. No passenger can enter without a ticket. At this time the project is only for an online ticketing service. It helps to buy bus tickets easily. and the supervisor can check tickets easily. The admin can add update delete information to several tables. For the BUS Ticket Booking system allows passengers to search for available buses, choose their seats, and purchase their tickets online. You could use a database to store information about the buses, routes, schedules, and ticket sales. When a passenger purchases a ticket, the system should update the database to reflect the ticket sale and reserve the selected seats on the bus. The system should also provide a confirmation SMS to the passenger with the details of their booking. Overall, this project would require a strong understanding of web development, databases, and system design. It would also require careful attention to detail to ensure that the system operates smoothly and reliably, and that all passengers and admin users are able to use it effectively.

1 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,

1.1 Overview

This report discusses the result of the work done in the development of the" INNER CITY BUS SERVICES" on PHP MySQL. It is a part of the project going in Computer Science Department, BUBT and aims at the development of an application for providing a common platform for facilitating the use of methodological approach developed by our team and integration of various tools developed during the execution of the project. Overall description consists of the background of the entire specific requirement. It also gives explanation about actors and function which is used. It gives explanation about the architecture diagram and it also gives what we are assumed and the dependencies. It also supports specific requirements and also it supports functional requirements, and supplementary requirements other than the actor which is used. It also gives index and appendices. It also gives explanation about any doubts and queries.

1.2 Project Description

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 ap-

plication that is being developed for CITY TRANSPORT MANAGEMENT. The project takes HTML,CSS,JS, PHP as development platform and PHP 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.So, our application will give enough support to passenger to manage their travels.

1.3 Objective

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 employee and admin. 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 is easy to find any route information easily.
- To provide a platform to the admin so that they can update all information from anywhere with internet access.

2 Project Review

Our program will contain 3 type of access. One is for owner another two are for admin and user. Our program will be quiet user friendly. Here we are describing our methods by which we defined information in our Bus Ticket Booking System are given below:

2.1 Owner

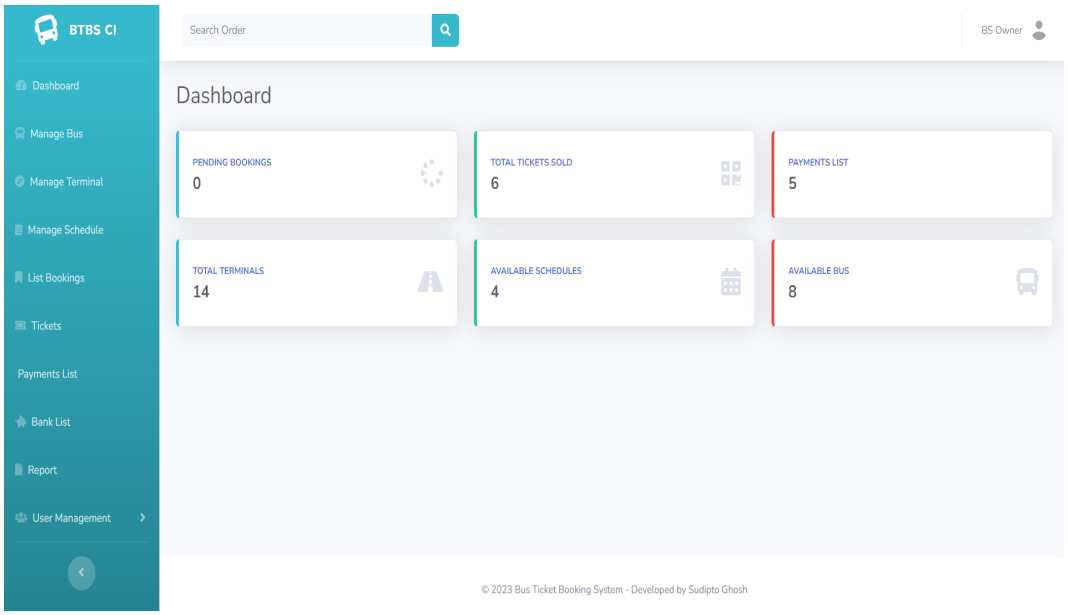


Figure 2.1: **Owner Dashboard**

The owner part of a bus ticket reservation system typically involves the management and administration of the system. Overall, the owner part of a bus ticket reservation system is focused on managing the system's day-to-day operation, ensuring that it runs efficiently, and making strategic decisions to ensure its long-term success.

2.2 Admin

The admin part of a bus ticket reservation system typically involves managing the overall operation of the system, including adding and removing bus routes, setting prices and schedules, managing bus capacities, and handling customer service issues.

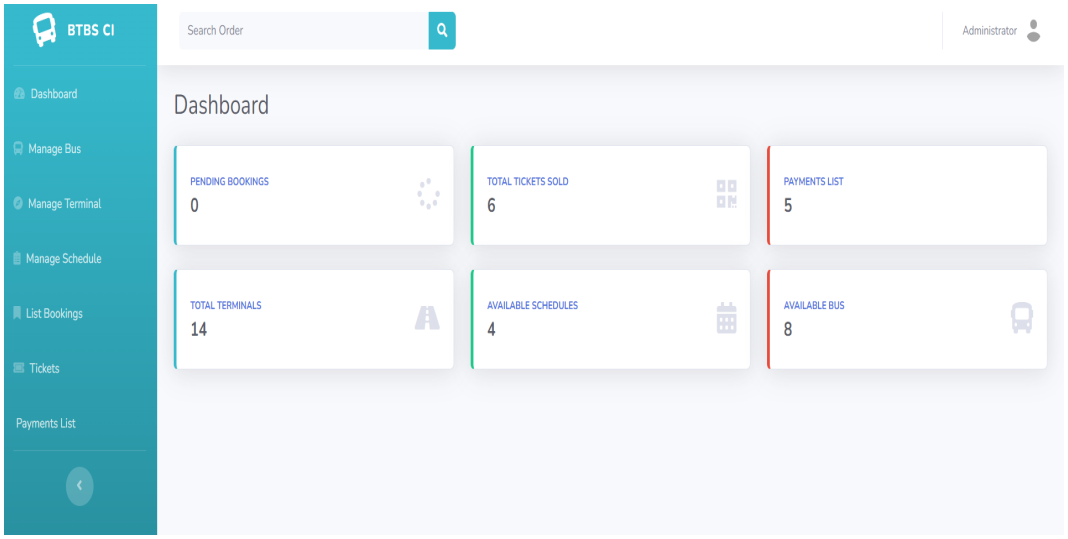


Figure 2.2: **Admin Dashboard**

2.3 User

A bus ticket reservation system is a software application that allows users to book bus tickets online. The user part of the system typically includes a web or mobile interface that allows users to search for available buses, view their schedules and prices, select their preferred seats, and make payments securely online.

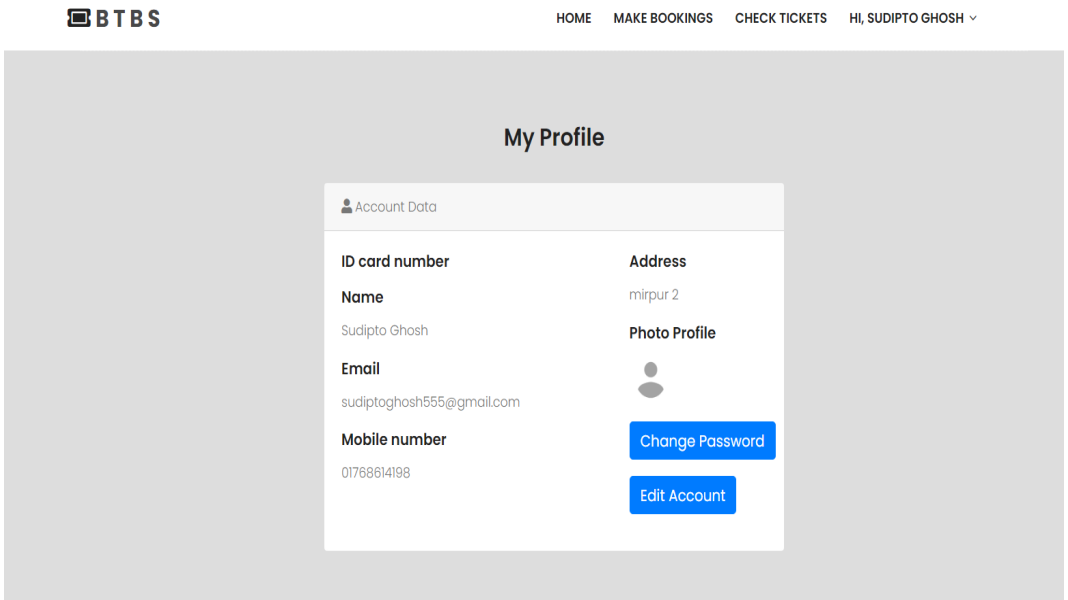


Figure 2.3: **User**

3 Project Planning

3.1 Database design

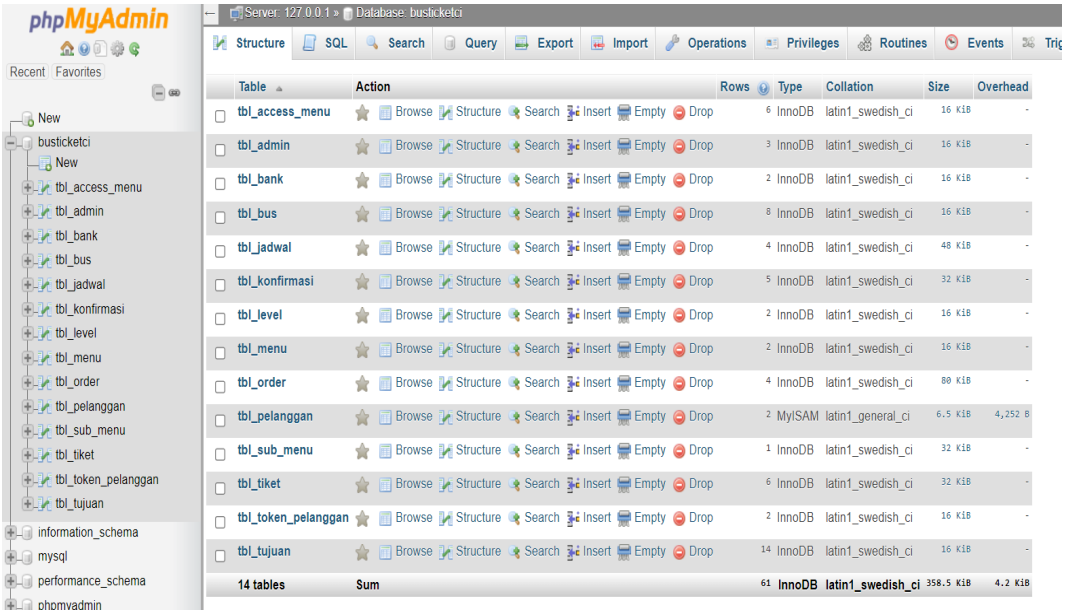


Figure 3.4: **Database**

The goal of database design is to generate a set of relations that allows storing information easily. The database is designed in relational model in which the data are organized into entities and relational between them. In our flow diagrams, we

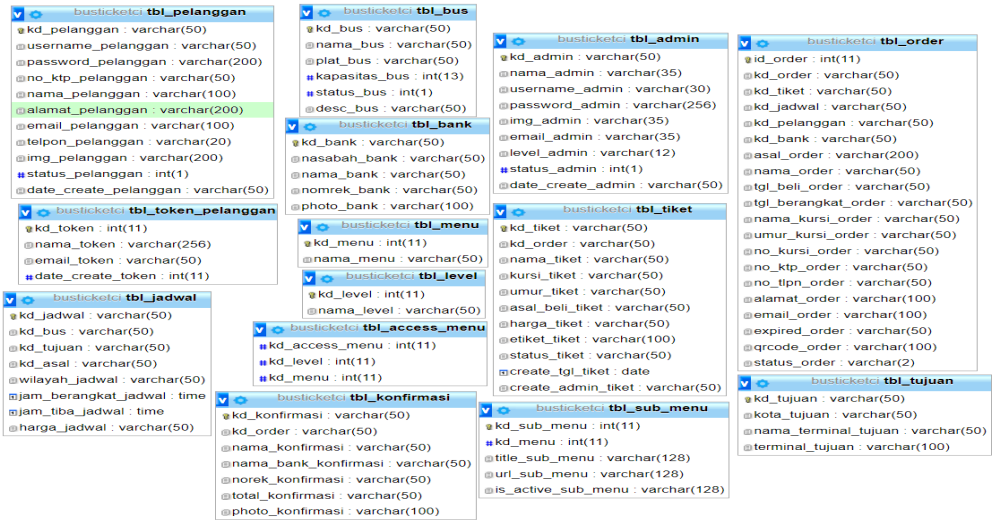


Figure 3.5: **Database Table**

have given names to data flows, process and data stores. Although the names are descriptive of the data, they do not give details. So the following DFD gives the

details of the fields used. A data dictionary has many advantages in improving analyst of user communication by establishing consistent definitions of terms elements and procedures.

3.2 ER Diagram

Here,Entity Relationship Diagram, also known as ERD, ER Diagram or ER model, is a type of structural diagram for use in database design. An ERD contains different symbols and connectors that visualize two important information: The major entities within the system scope, and the inter-relationships among these entities.Our ER diagram is given bellow that shows the relationships between our database entities.

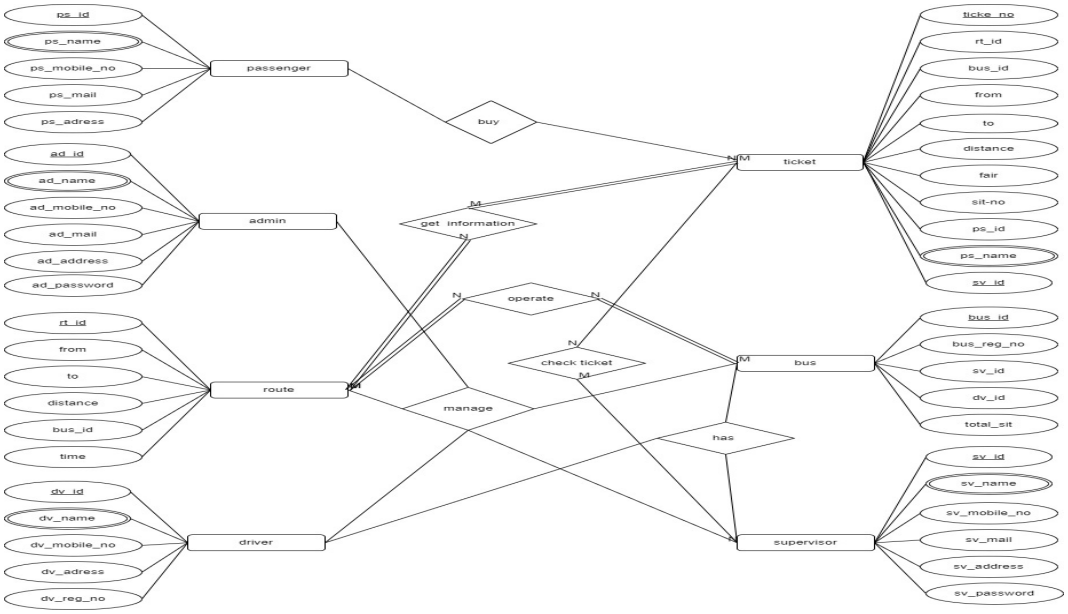


Figure 3.6: **ER Diagram**

An busticketci database contains a group of related pieces of data such as their demographic profile and work-related information that are managed through database management system (DBMS) software. It involves creation and maintenance of access rights which controls users' access.As shown in figure 3.5, the system consists of the following tables: General Information, Educ Background, Prof Examination, Reasons Of Taking Degree,and Training's Taken.

3.3 Use Case Diagram

In this diagram, the main actors are the Passenger, who interacts with the system to search for available buses, purchase tickets, and board the bus. The system provides two main use cases for the passenger: Search Bus, which allows the passenger to search for available buses based on criteria such as date, time, and route, and Buy Ticket, which allows the passenger to select a bus, choose their seats, and purchase their tickets online. Once the passenger has purchased a ticket, they can Board Bus at the designated time and location.

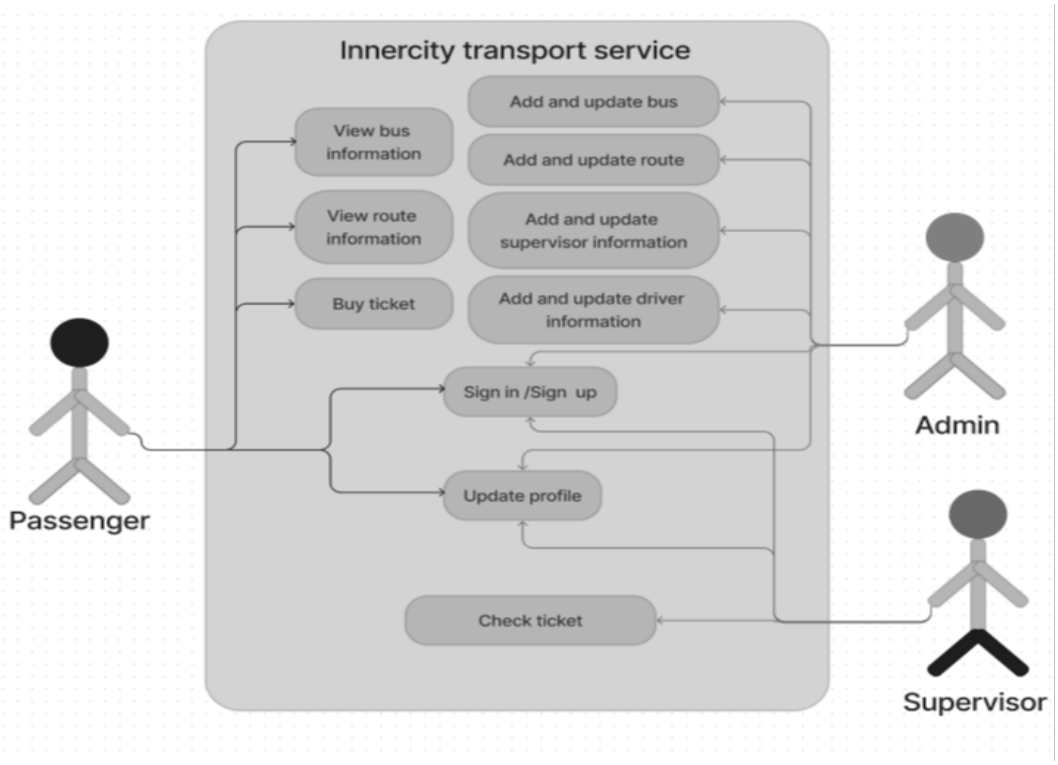


Figure 3.7: **USE CASE**

4 Project management

Project management skills are put to good use for this project. Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria with in agreed parameters. Project management focuses on achieving the objectives by applying five processes presented in Figure below:

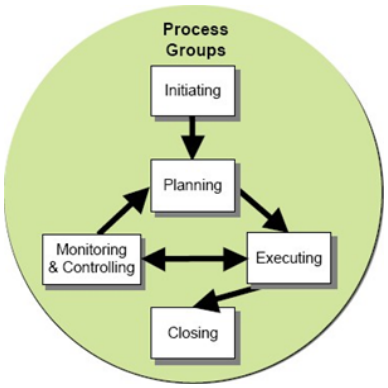


Figure 4.8: **Project management**

4.1 Back-end and Fornt-end management

This project is developed using PHP,MySQL in Back-end and in front-end html,css and Js. PHP is a server-side back-end technology, here we write codes that gets executed on the server like Apache, so to answer your question, you will be using PHP for writing code that will be interacting with the database and for the front end you will be using normal HTML code. Here we used AJAX to build more interactive applications. Generally, AJAX is based on internet standards, and uses a combination of: XML HttpRequest object JavaScript/DOM CSS XML.For password we have used **MD5** encryption decryption .

Figure 4.9: **Back-end and Fornt-end management**

4.2 System Specification

Here ,we used XAMPP for local-hosting our application BUBT ALUMNI ASSOCIATION. XAMPP is an abbreviation where X stands for Cross-Platform, A stands for Apache, M stands for MYSQL, and the Ps stand for PHP and Perl, respectively. It is an open-source package of web solutions that includes Apache distribution for many servers and command-line executable along with modules such as Apache server, MariaDB, PHP, and Perl. XAMPP helps a local host or server to test its website and clients via computers and laptops before releasing it to the main server. It is a platform that furnishes a suitable environment to test and verify the working of projects based on Apache, Perl, MySQL database, and PHP through the system of the host itself. Among these technologies, Perl is a programming language used for web development, PHP is a back-end scripting language, and MariaDB is the most vividly used database developed by MySQL.

4.3 Hardware Specification

Processor	Intel Core i5 Processor
Operating System	Windows 10/8/7
Memory	4 Gb Ram or more
Hard disk Space	Upto 4 gb
IDE	Visual studio
Floppy Drive	1.44MB
Key board	180keys
Brandwith	100mbps

4.4 Software description

Overview of Visual Studio.Net 2005 What is .NET? When .NET was announced in late 1999, Microsoft positioned the technology as a platform for building and consuming Extensible Markup Language (XML) Web services. XML Web services allow any type of application, be it a Windows- or browser-based application running on any type of computer system, to consume data from any type of server over the Internet. The reason this idea is so great is the way in which the XML messages are transferred: over established standard protocols that exist today.

5 System Design

5.1 Home interface

Home interface shows that on the nab-bar there are some options home, manage booking, check ticket status and login options.

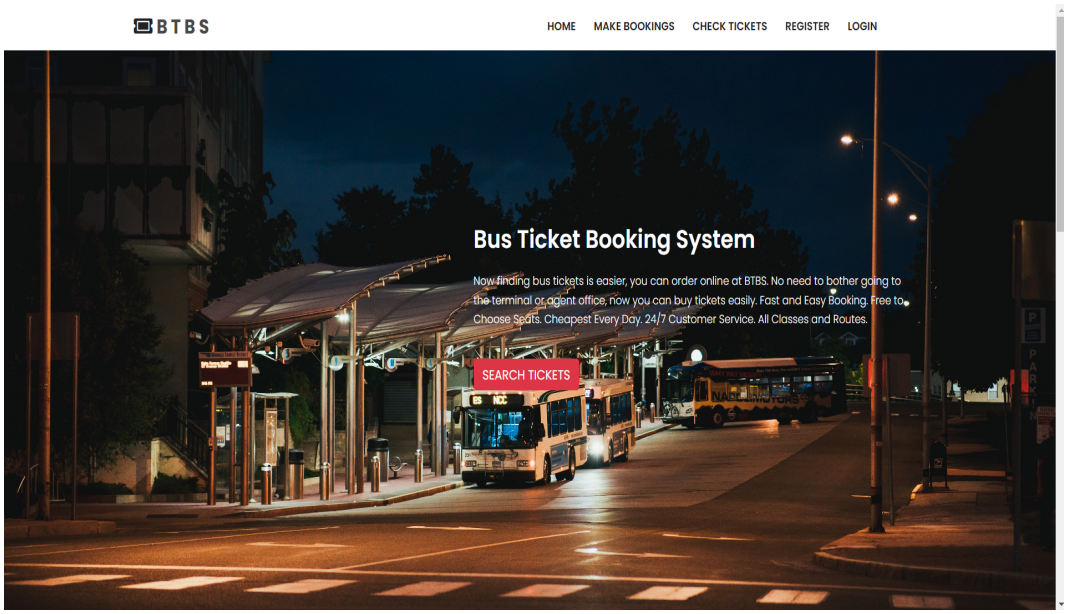


Figure 5.10: **Home Page**

Here is some information about how to book a bus ticket form our website.

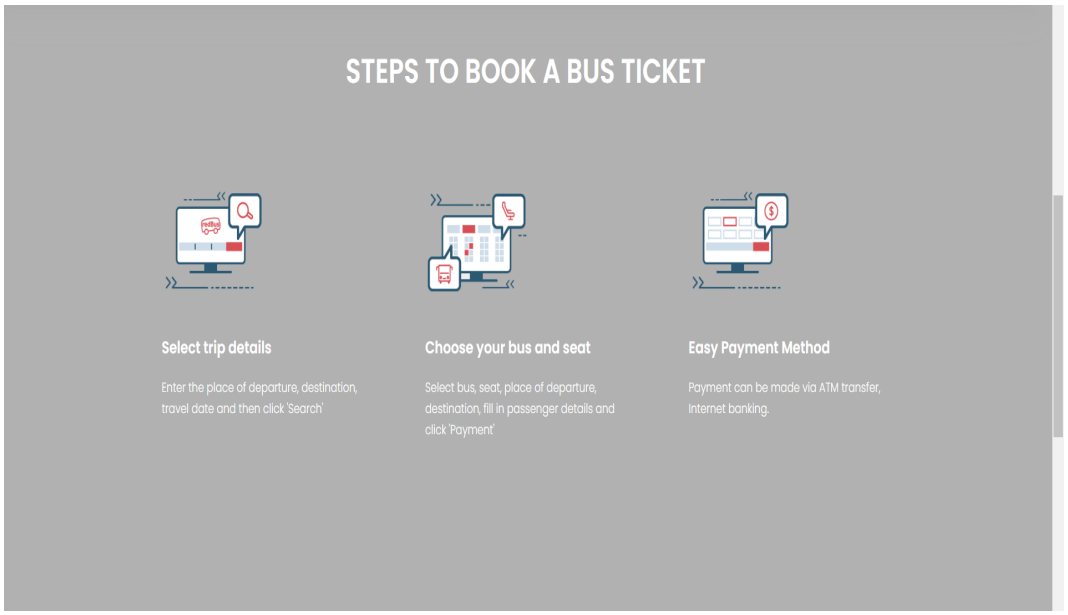


Figure 5.11: **Steps to book a bus ticket**

Here is footer file here we can see the details of our developer.

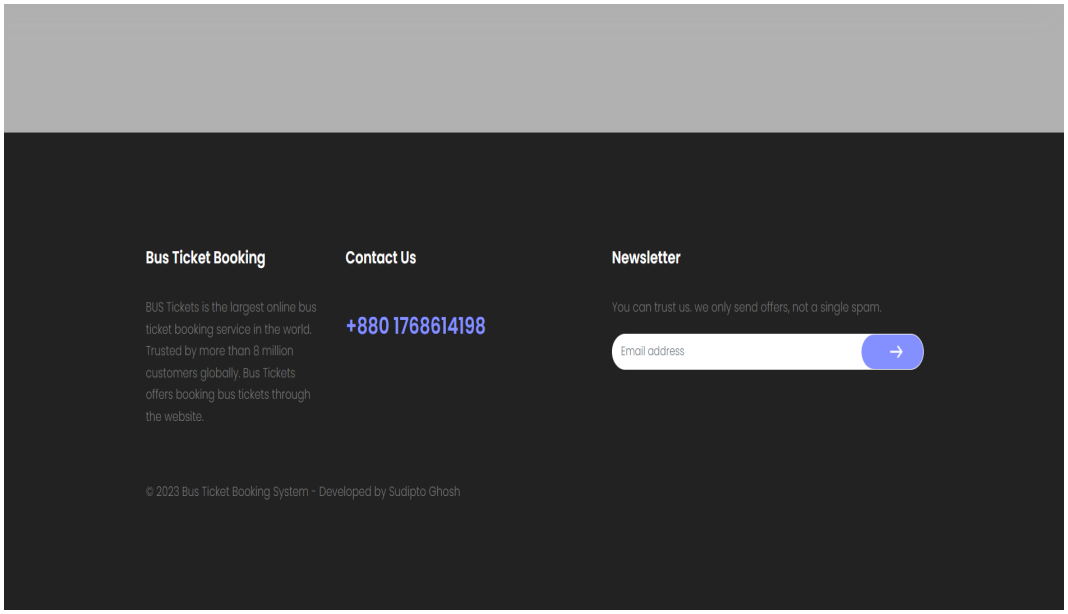


Figure 5.12: **About us**

Here is the section of booking ticket, here we can search and see the ticket is available or not.

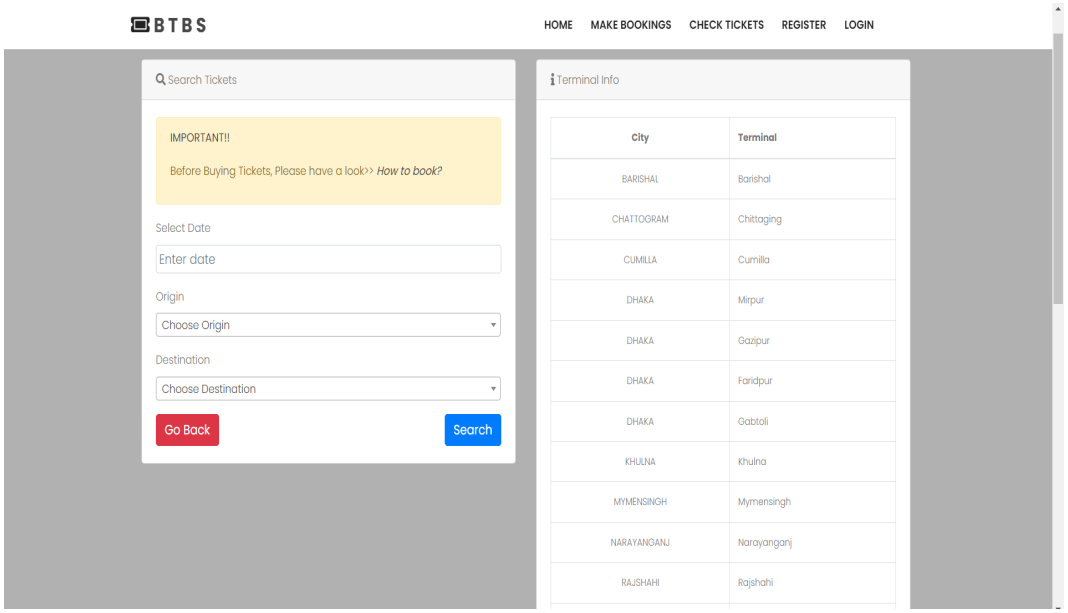


Figure 5.13: **Make booking**

Here we see our ticket status, here we also print our ticket. It is the option where we can track our parches ticket record and see it. Go to the website of the bus company or travel website you booked your ticket through. Look for a section

labeled ”My bookings” or ”Check reservation status”. Enter your booking reference number and any other required information to view the status of your ticket.

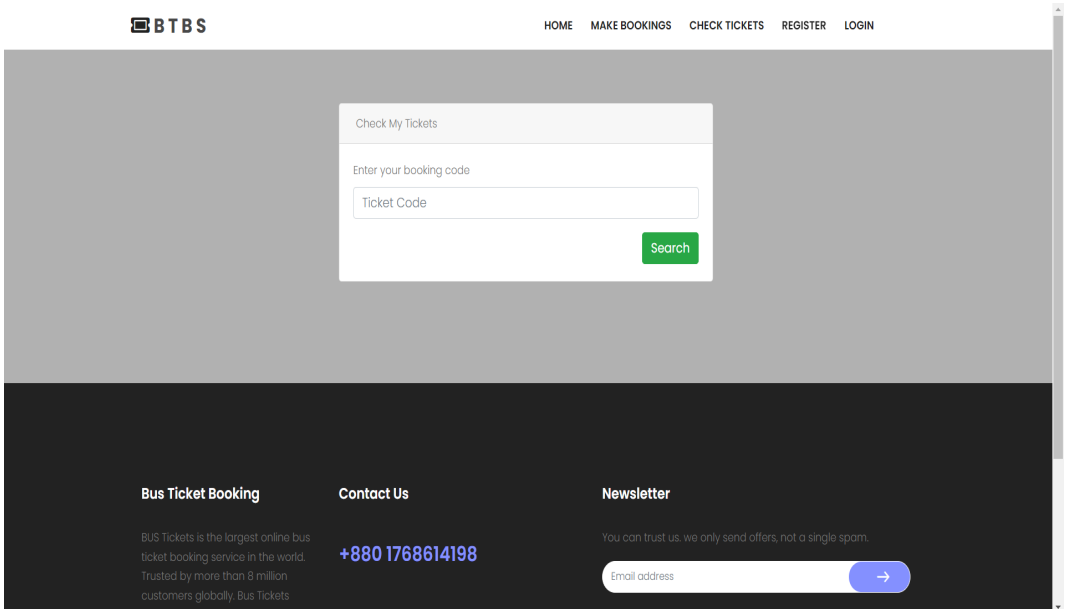


Figure 5.14: **Check Tickets**

Here we can see our login window , there are there are three types of login, user, admin and owner.

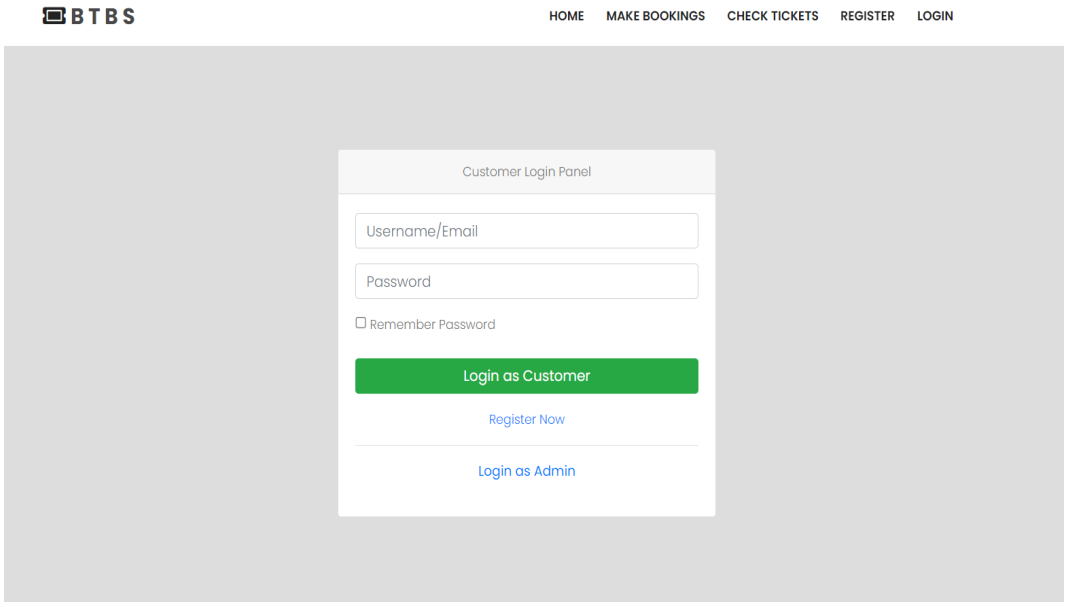


Figure 5.15: **Login**

If we are not a registered user then we can register here as a new user. Register is a phrase referring to the creation of an online account using an e-mail address or

a username and password. The online account is usually for a website or web-based service. Once someone has signed up for a service, they can access their account by logging in.

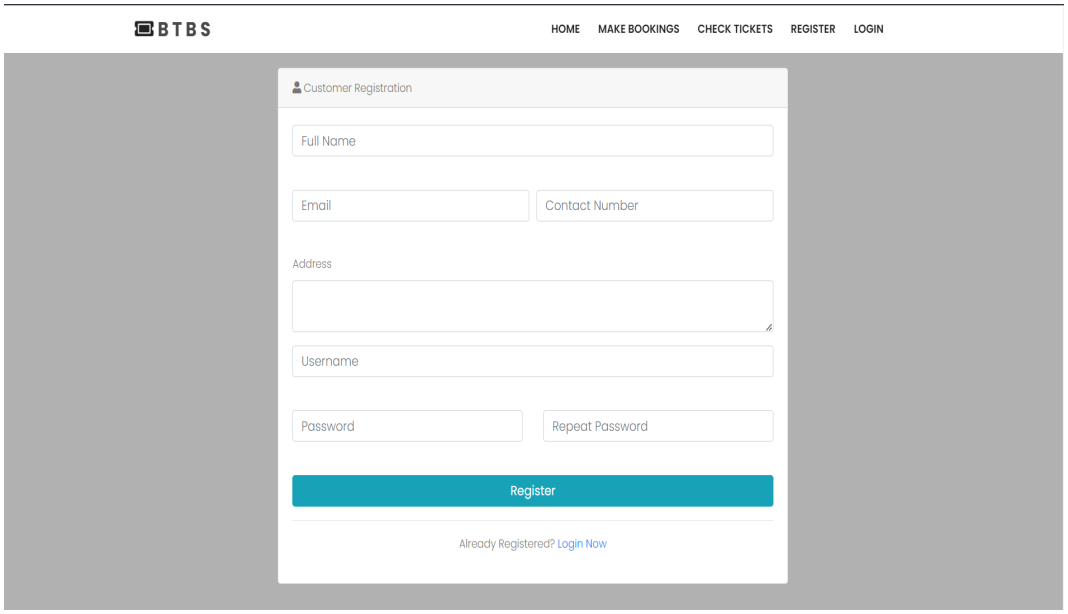


Figure 5.16: **Register**

Login or entry available to the user of a discussion forum or website with special rights to control or restrict the activity of other users.

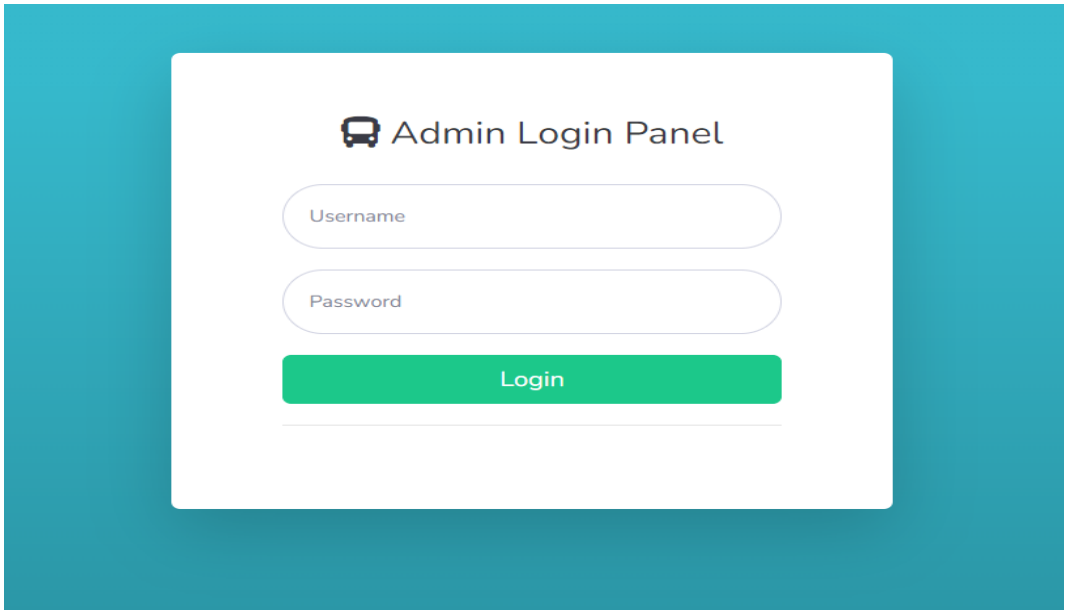


Figure 5.17: **Admin Login**

5.2 Owner Interface

Here is our owner interface, here we can control all data. If we have need any customized then we can do it easily by using the owner panel.

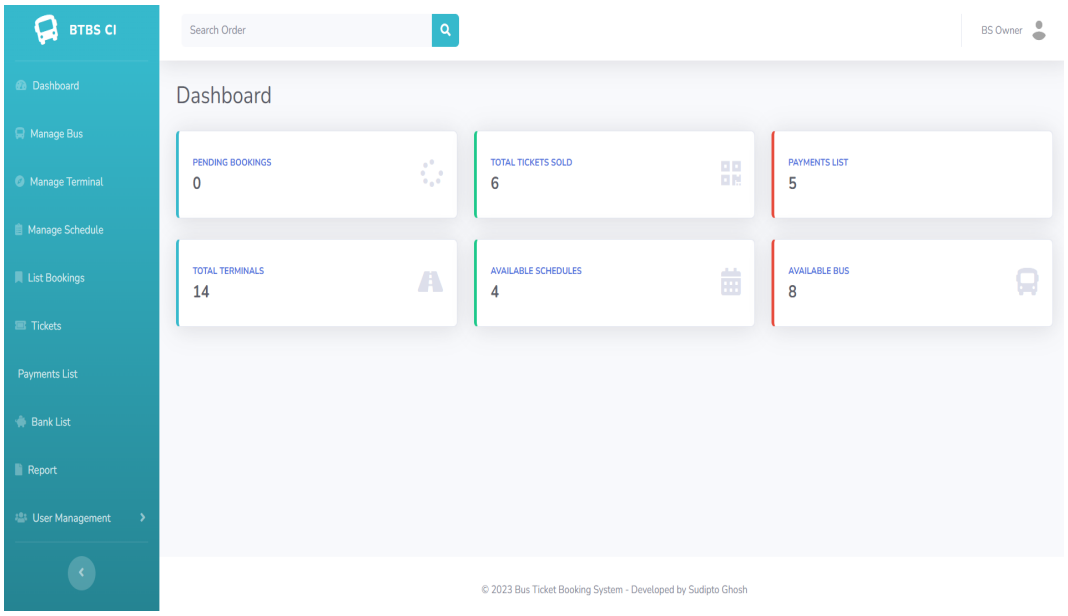


Figure 5.18: **Owner Dashboard**

Here is our owner management potion here are two option one is customer and administrator, here we can easily add and delete customer and admin.

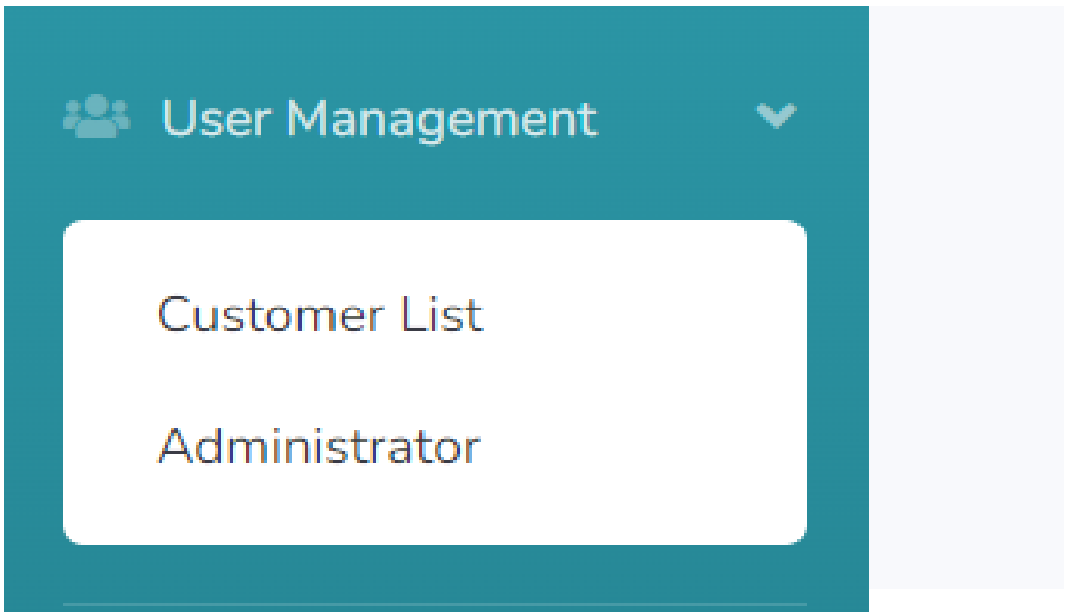


Figure 5.19: **User Management List**

Here is the sold potion here we can see the all sold record.

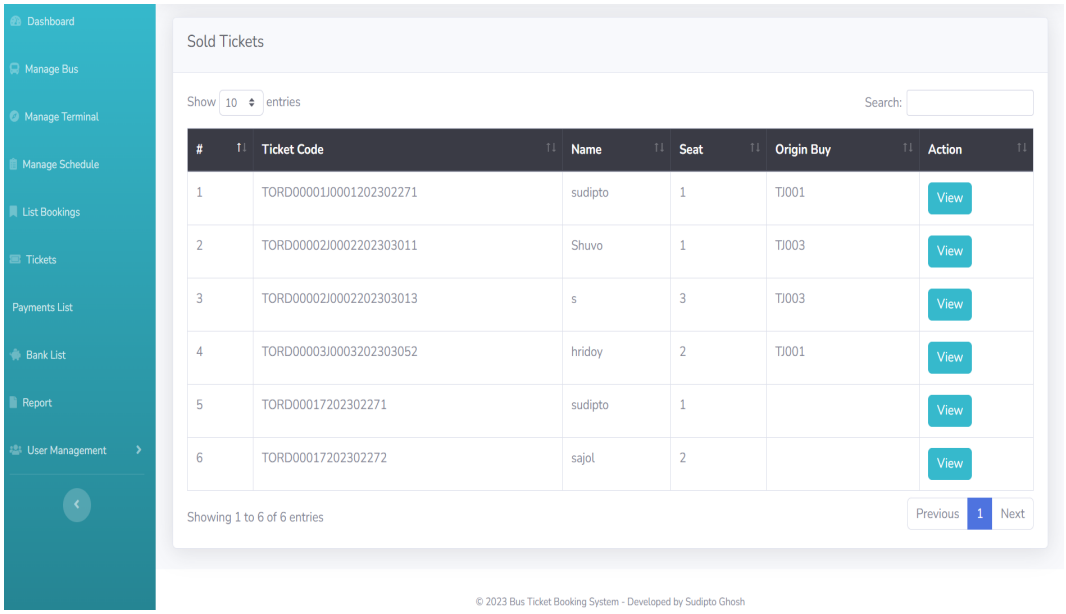


Figure 5.20: **Sold Ticket List**

On the schedule management section we can easily control our bus schedule.

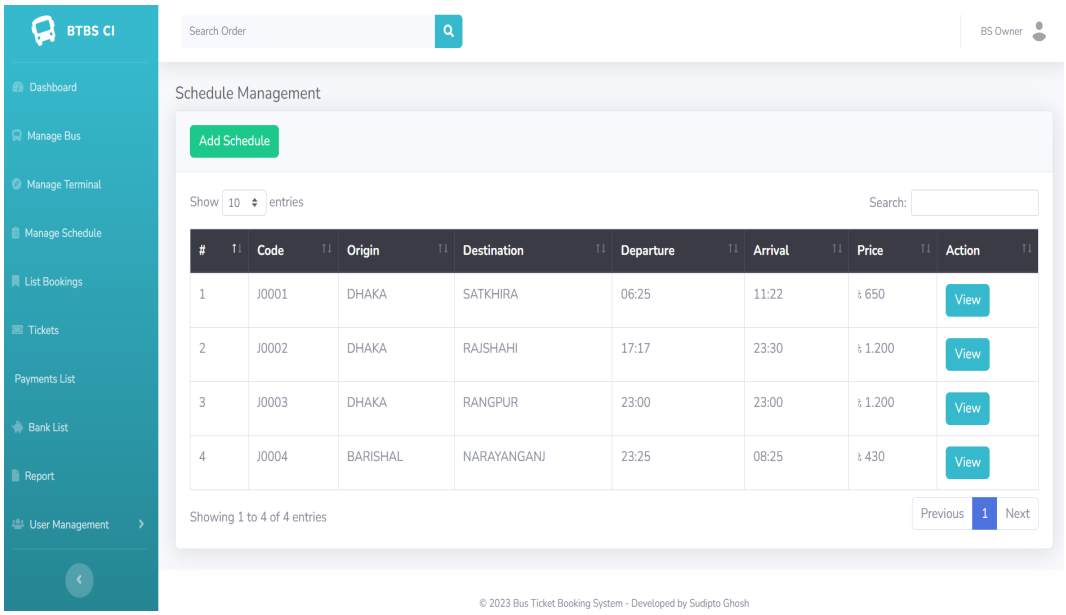


Figure 5.21: **Schedule Management**

It's our report section here all the activity are recorded. A report section is the basic unit of layout in a report. Sections can contain fields, text, and graphics. The sections in a Tabular Reporter document are created automatically. The Form and Page Layout types of report presentation have only detail sections (pages) to which can be added text, fields, and graphics.

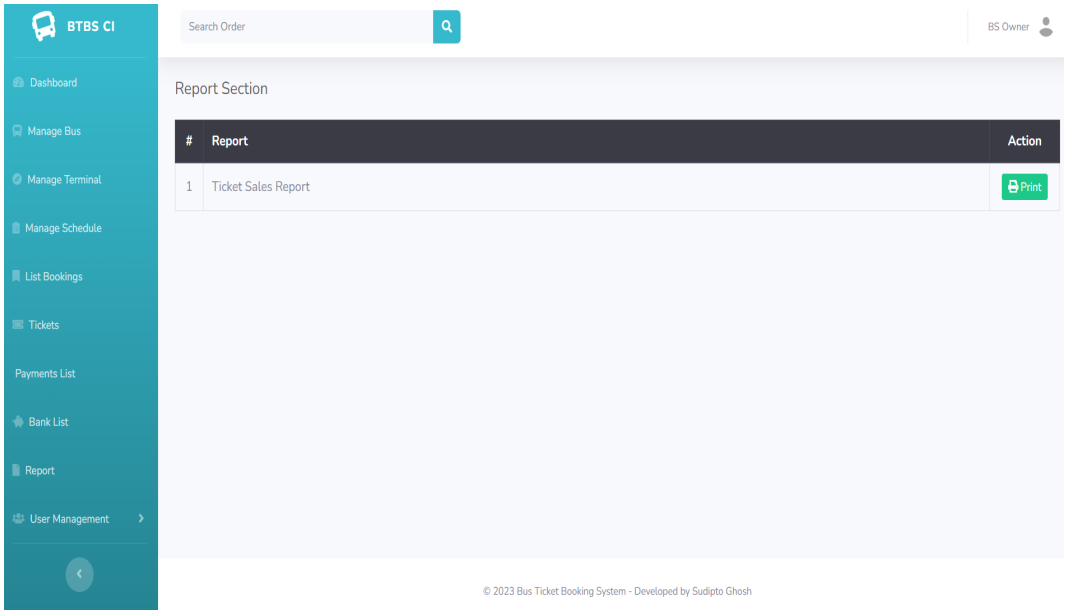


Figure 5.22: **Report Section**

Here the payment list, here we can see the all payment types, we can also add and delete the payment.

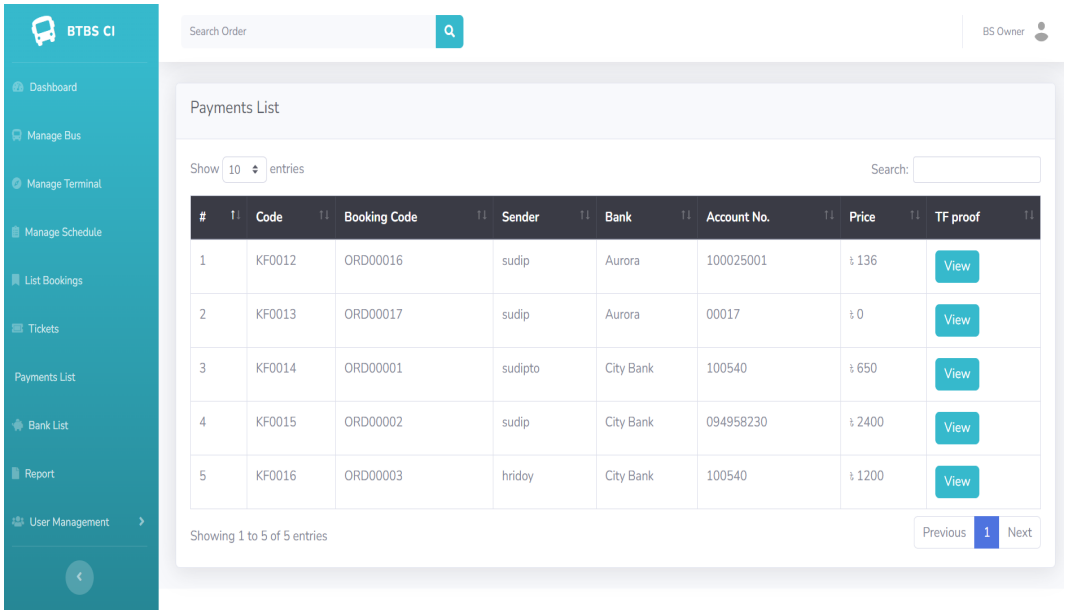


Figure 5.23: **Payment List**

The booking list we can see all the booking list which is recorded previously. Here we can see all sold ticket and who purchase the ticket.

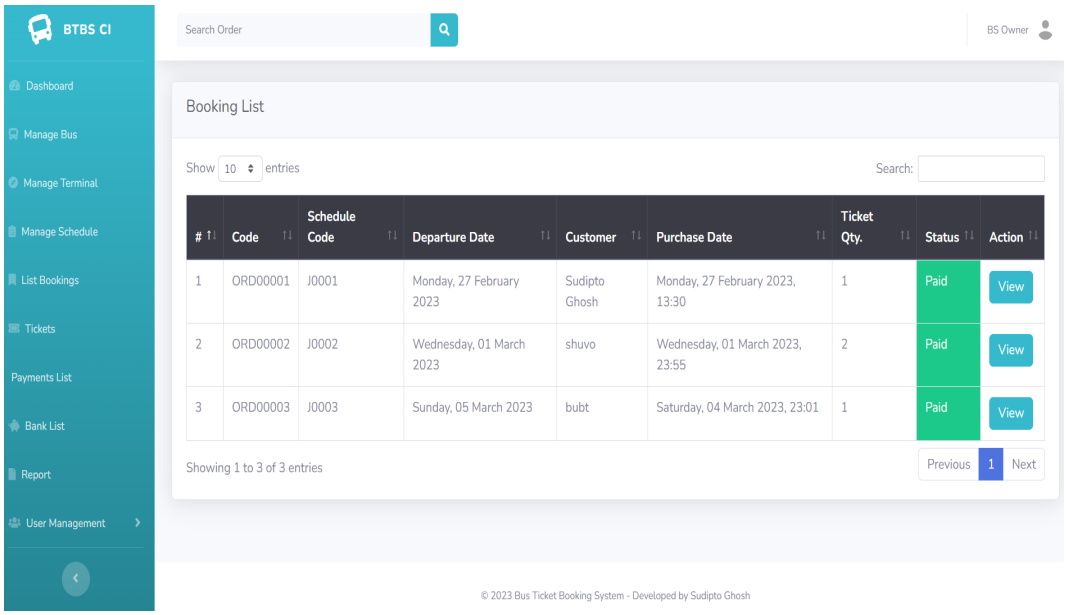


Figure 5.24: **Booking List**

Here the customer potion here we can add delete and modify our customer

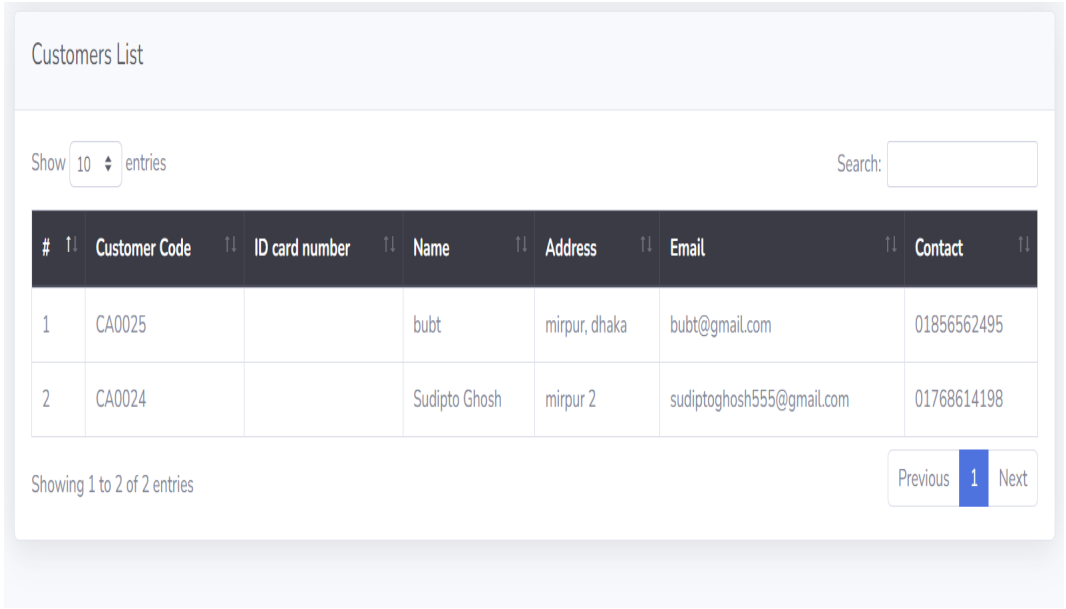


Figure 5.25: **Customer List**

Here is our system admin list potion, we can see the all admin list form here.

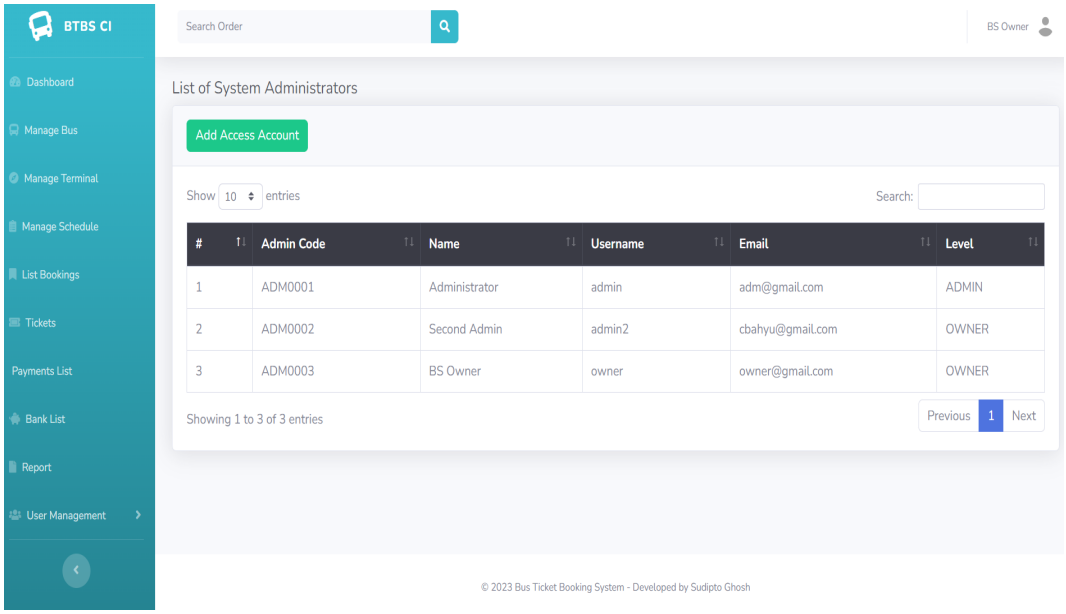


Figure 5.26: **List of System Administration**

Here the bus manage potion in this potion we can easily mange our bus, we can also add bus form here.

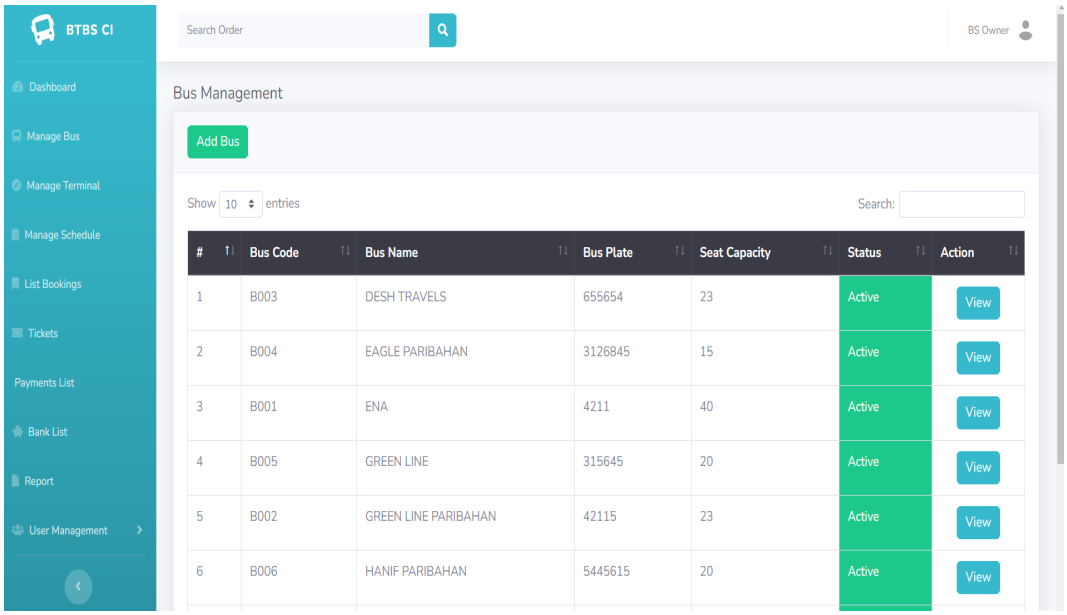


Figure 5.27: **Manage Bus**

Manage terminal in this potion we can control our bus terminal.

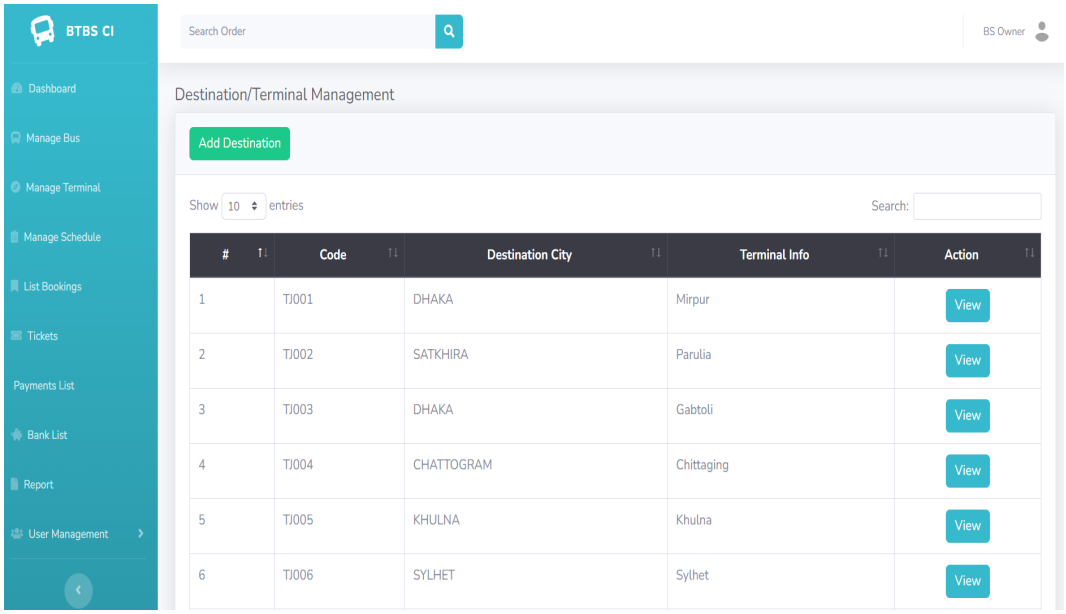


Figure 5.28: **Manage Terminal**

Here is the all bank list, here we can see and customized the bank.

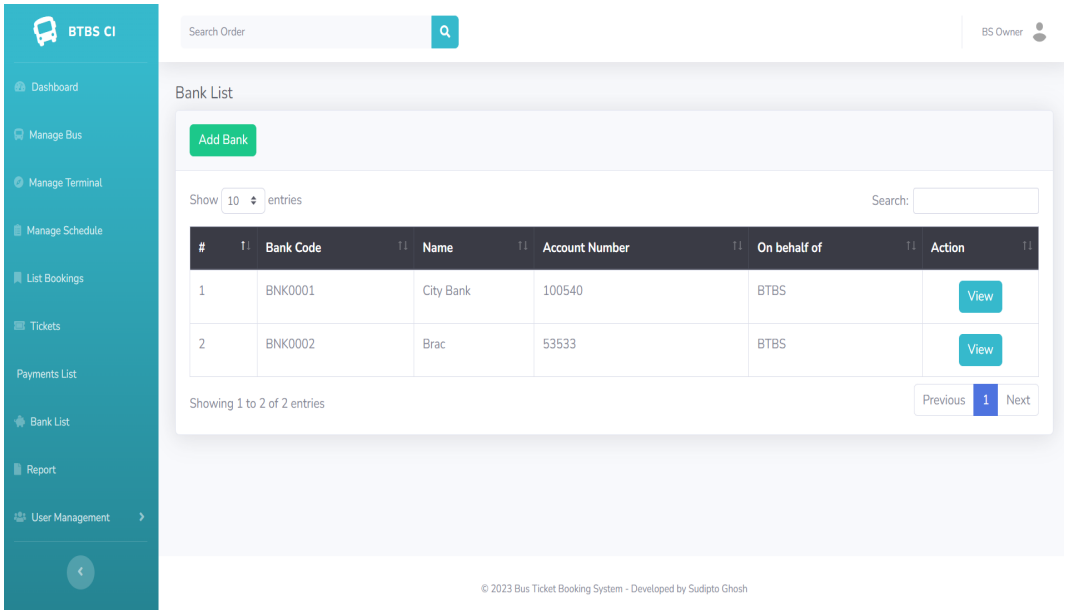


Figure 5.29: **Bank List**

5.3 Admin Interface

Here is the admin dashboard, on the admin access we can't fully controlled our backend, some specific task we can complete.

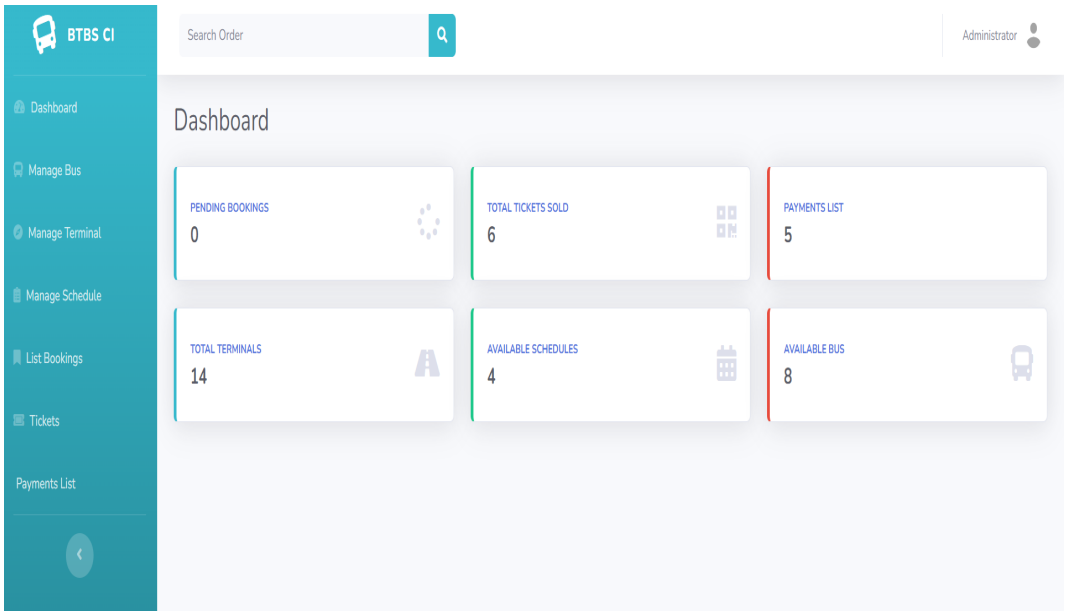


Figure 5.30: **Admin Dashboard**

5.4 User Interface

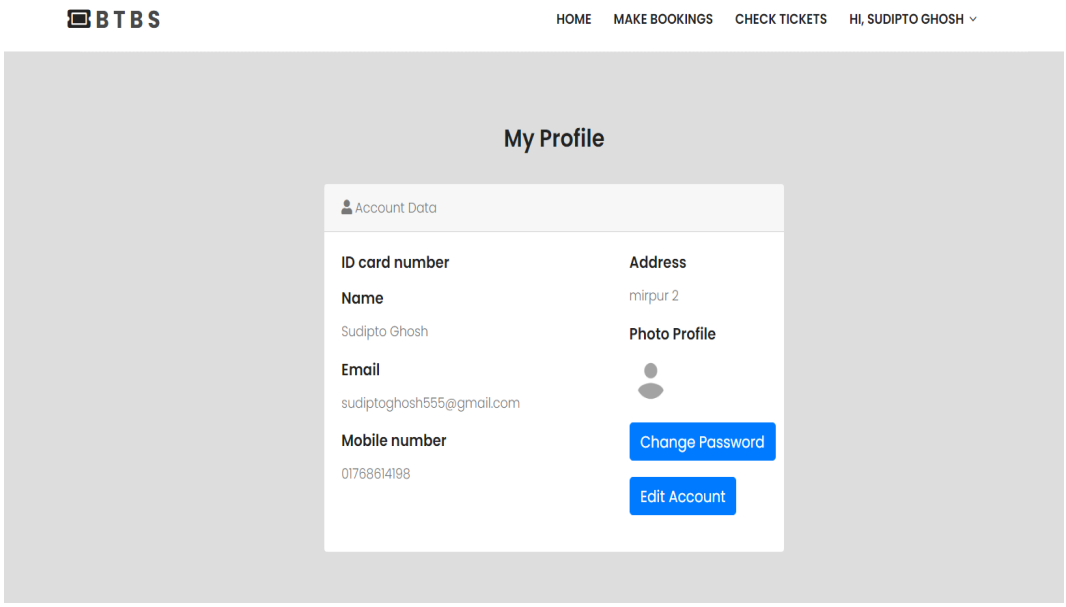


Figure 5.31: **user After Login**

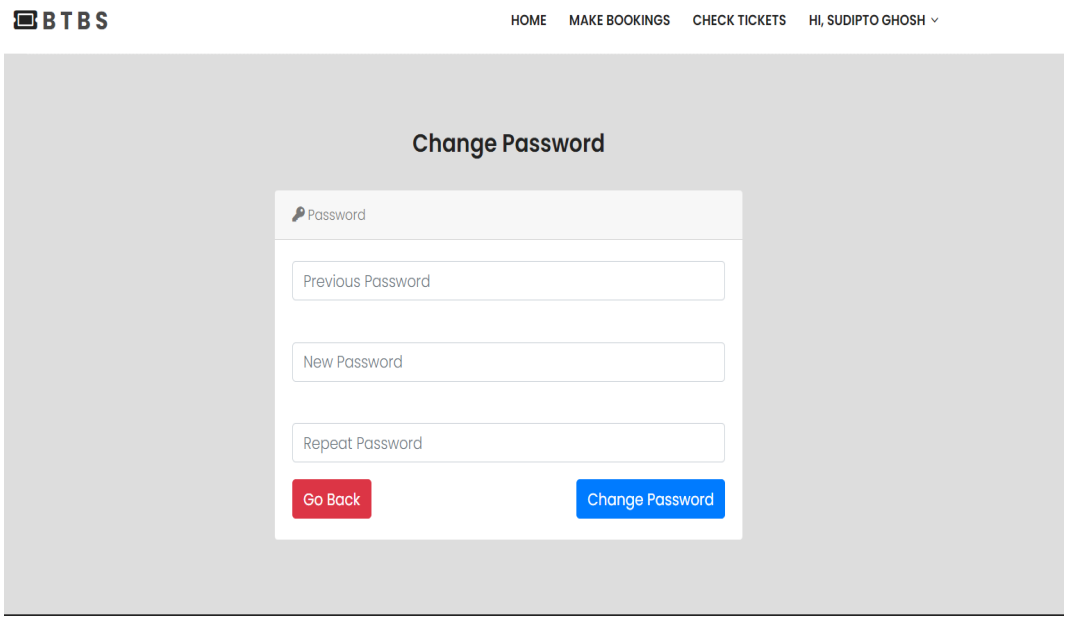


Figure 5.32: **Change Password interface**

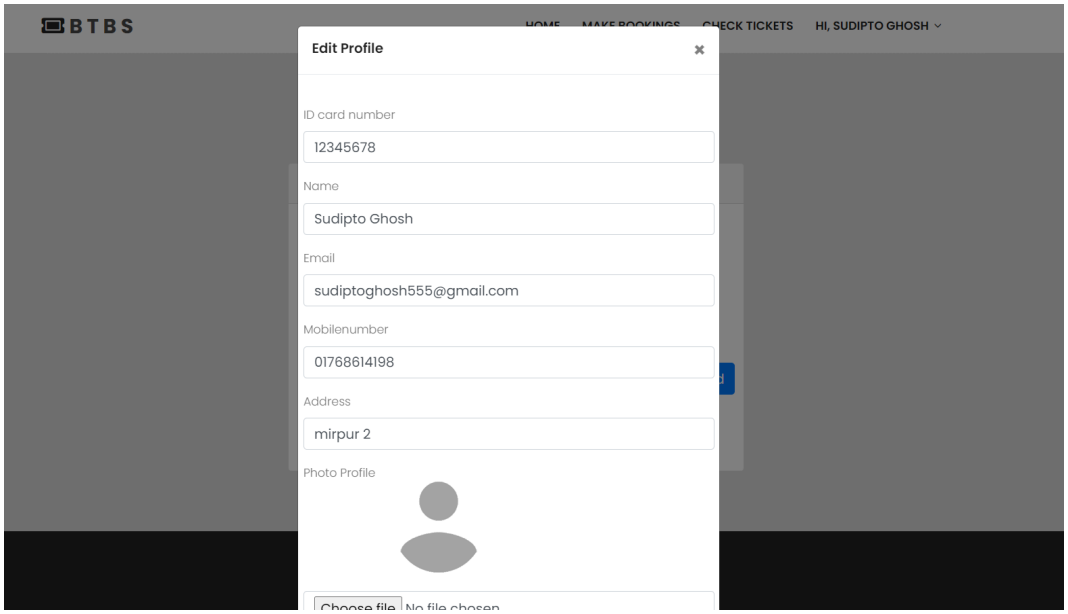


Figure 5.33: **Edit Profile Details**

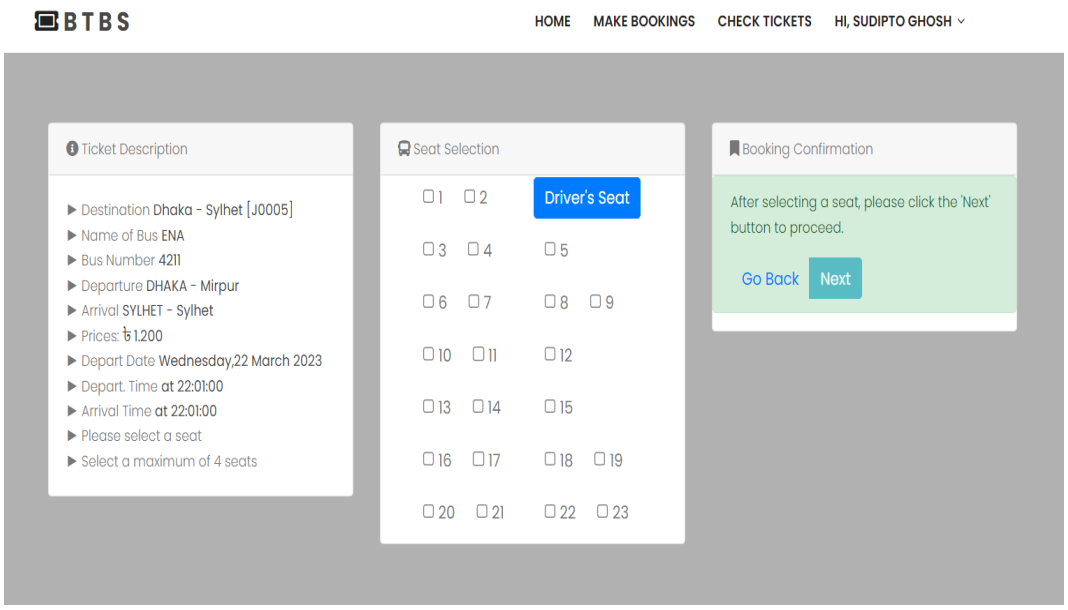


Figure 5.34: **User Ticket Menu**

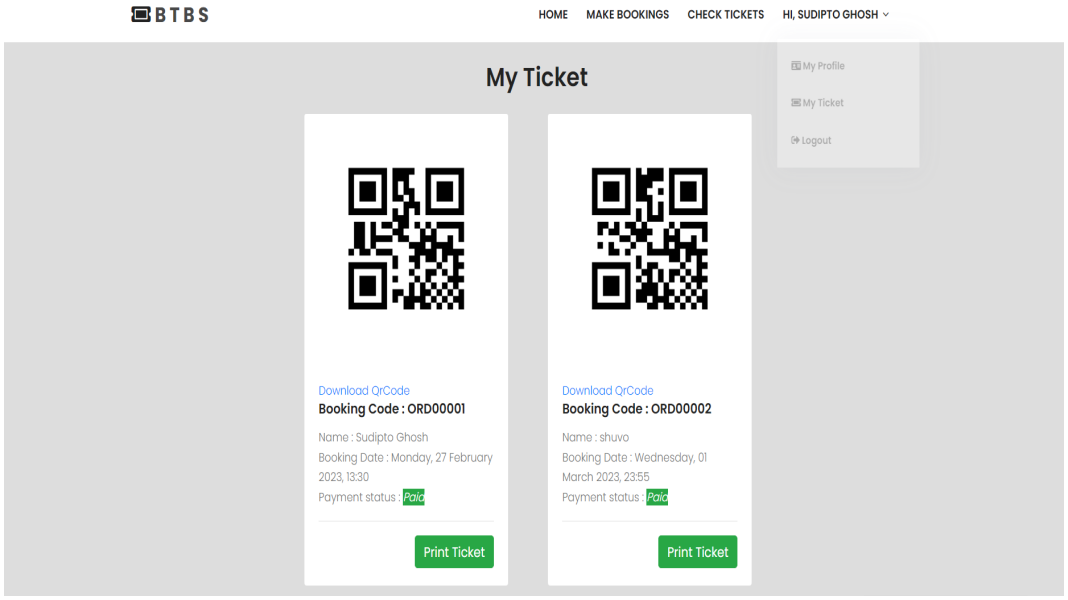


Figure 5.35: **User Ticket List**

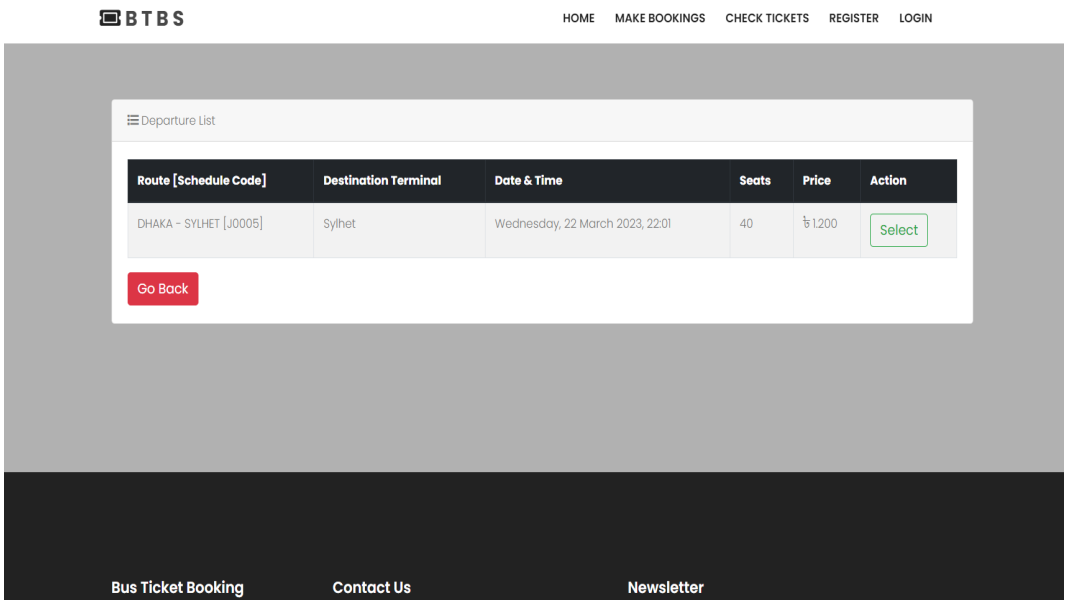


Figure 5.36: **User Departure List**

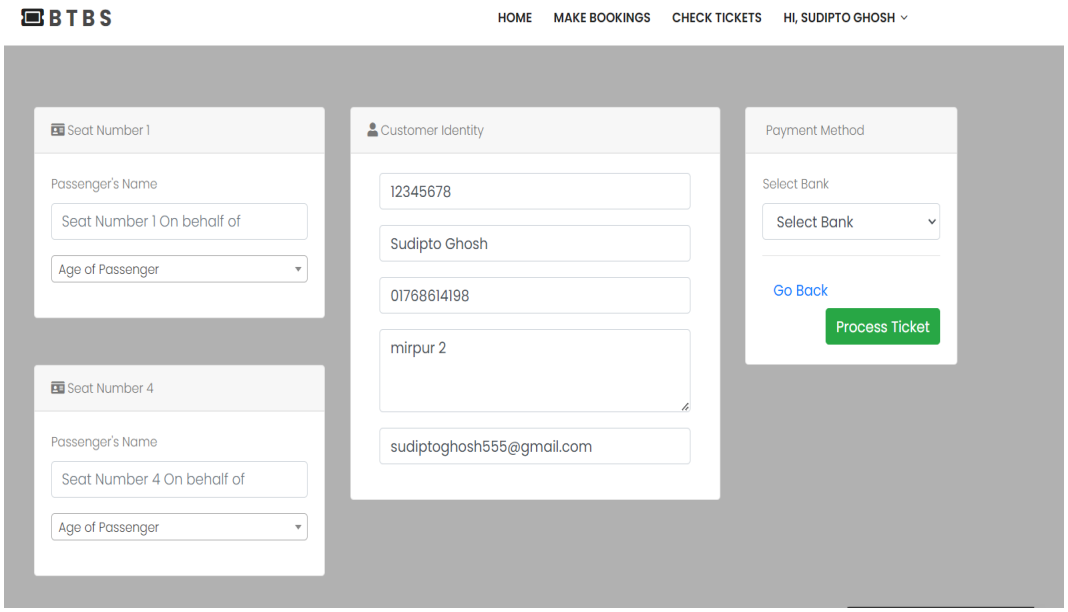


Figure 5.37: **User seat confirm**

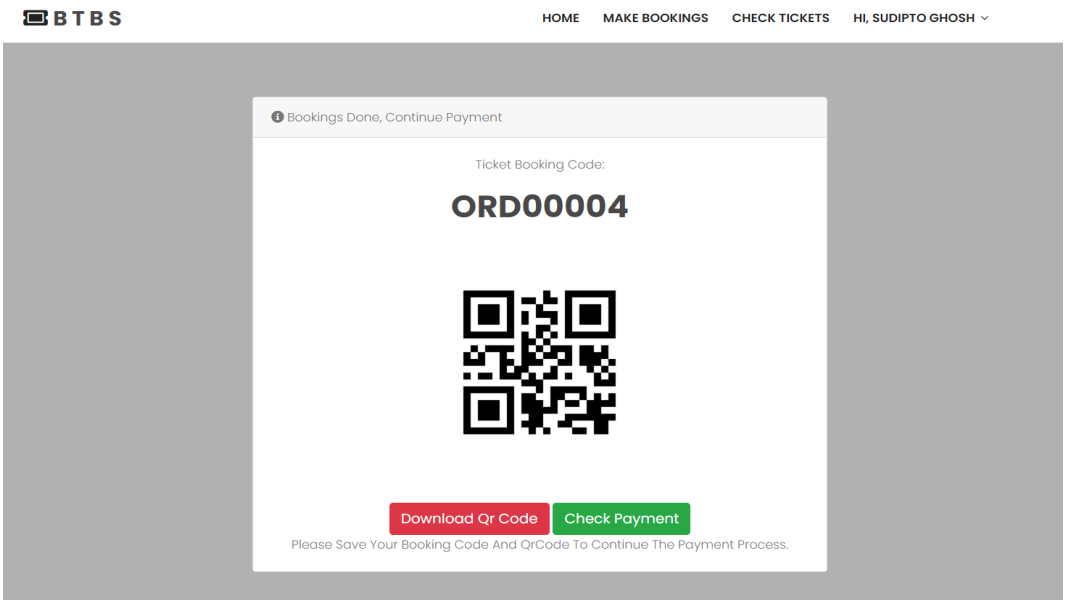


Figure 5.38: **Booking seat done**

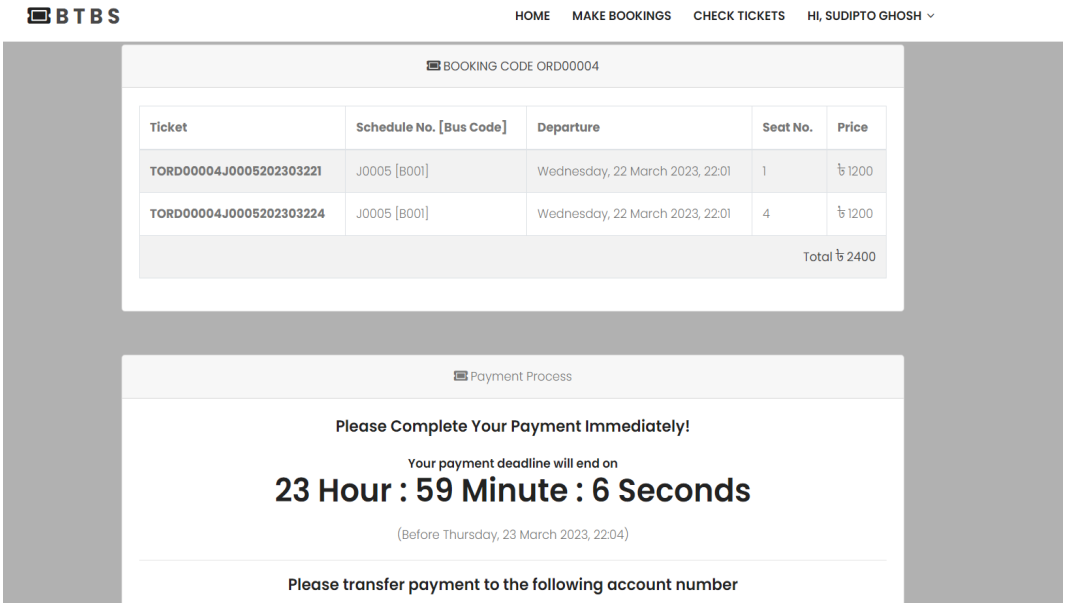


Figure 5.39: **Booking seat confirmation**

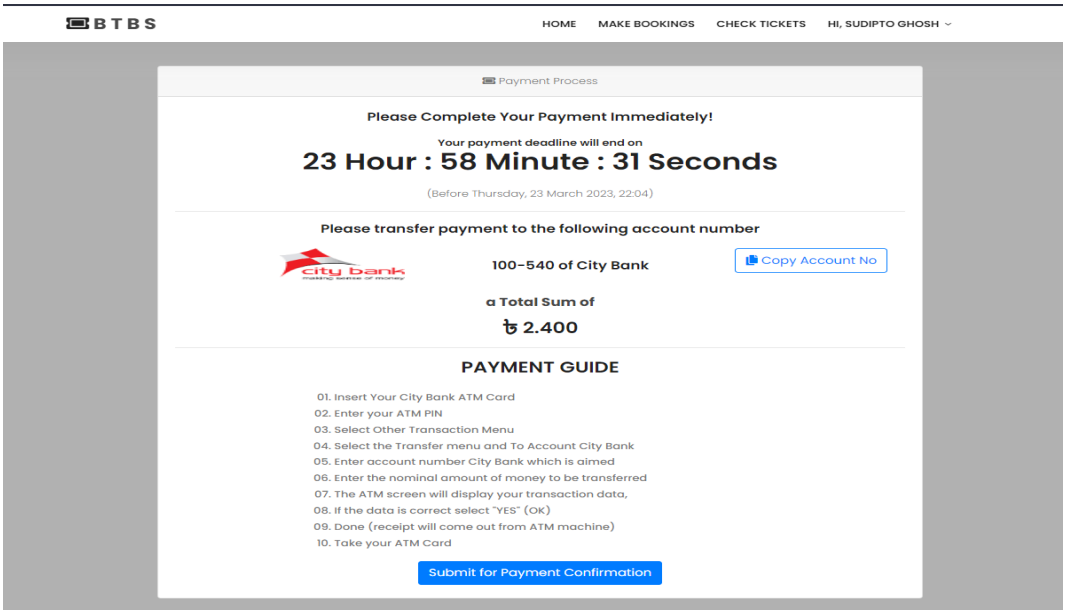


Figure 5.40: **User Payment Confirm**

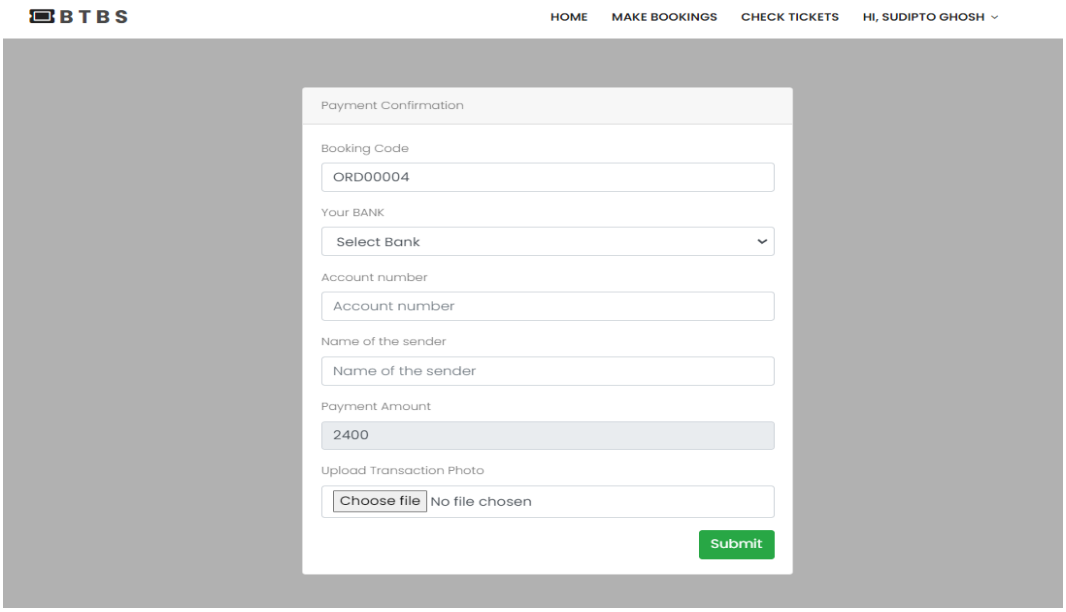


Figure 5.41: **User seat payment confirm**

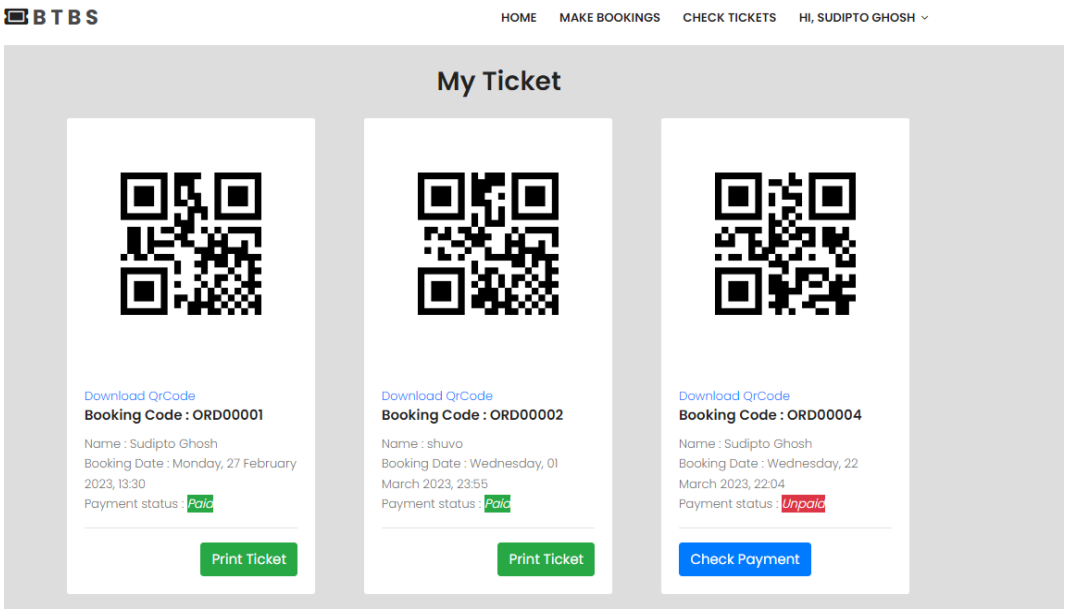


Figure 5.42: **Ticket Status After Payment**

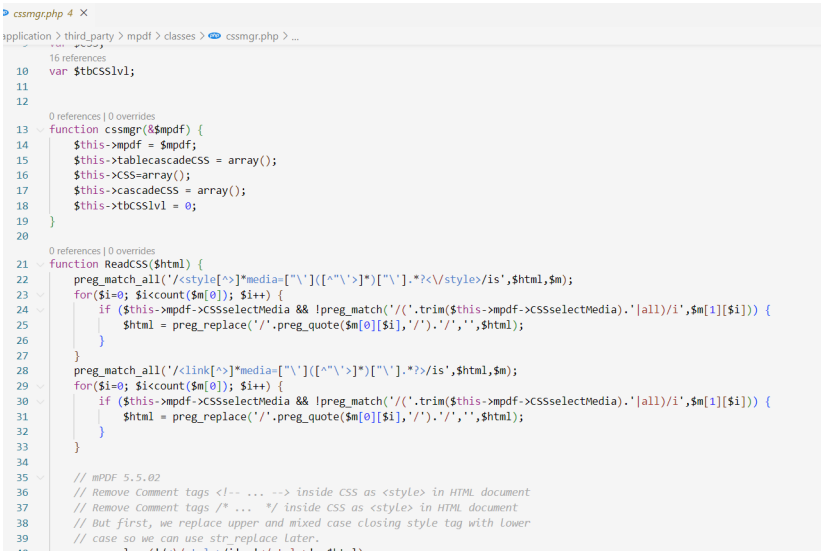
5.5 code

Figure 5.43: database

Figure 5.44: home

```
0 references | 0 overrides
public function cekuser(){
    $username = strtolower($this->input->post('username'));
    $password = $this->input->post('password');
    $sqlCheck = $this->db->query('select * from tbl_pelanggan where username_pelanggan = "'.$username.'" OR email_pelanggan =
    // die(print_r($sqlCheck));
    if ($sqlCheck) {
        if ($sqlCheck->status_pelanggan == 1) {
            if (password_verify($password,$sqlCheck->password_pelanggan)) {
                    $sess = [
                        'kd_pelanggan' => $sqlCheck->kd_pelanggan,
                        'username' => $sqlCheck->username_pelanggan,
                        'password' => $sqlCheck->password_pelanggan,
                        'ktp'     => $sqlCheck->no_ktp_pelanggan,
                        'nama_lengkap'     => $sqlCheck->nama_pelanggan,
                        'img_pelanggan' => $sqlCheck->img_pelanggan,
                        'email'    => $sqlCheck->email_pelanggan,
                        'telpon'   => $sqlCheck->telpon_pelanggan,
                        'alamat'    => $sqlCheck->alamat_pelanggan
                    ];
                    $this->session->set_userdata($sess);
                    if ($this->session->userdata('jadwal') == NULL) {
                        redirect('tiket');
                    }else{
                        redirect('tiket/beforebeli/'.$this->session->userdata('jadwal').'/'.$this->session->userdata('asal').
                    }
                }else{
                $this->session->set_flashdata('pesan', '<div class="alert alert-danger" role="alert">
                Wrong Password
                </div>');
                redirect('login');
            }
        }else{
            $this->session->set_flashdata('pesan', '<div class="alert alert-danger" role="alert">
            Account Not verified yet!!
                </div>');
```

Figure 5.45: login



```
cssmgr.php 4
application > third_party > mpdf > classes > cssmgr.php > ...
16 references
var $tbCSSlvl;


0 references | 0 overrides
function cssmgr(&$mpdf) {
    $this->mpdf = $mpdf;
    $this->tablecascadeCSS = array();
    $this->CSS=array();
    $this->cascadeCSS = array();
    $this->tbCSSlvl = 0;
}

0 references | 0 overrides
function ReadCSS($html) {
    preg_match_all('/<style[^>]*media=["\']([^"\'>]*)["\'].*?<\/style>/is',$html,$m);
    for($i=0; $i<count($m[0]); $i++) {
        if ($this->mpdf->CSSselectMedia && !preg_match('/('.trim($this->mpdf->CSSselectMedia).'|all)/i',$m[1][$i])) {
            $html = preg_replace('/'.preg_quote($m[0][$i],'/').'/','',$html);
        }
    }
    preg_match_all('/<link[^>]*media=["\']([^"\'>]*)["\'].*?/is',$html,$m);
    for($i=0; $i<count($m[0]); $i++) {
        if ($this->mpdf->CSSselectMedia && !preg_match('/('.trim($this->mpdf->CSSselectMedia).'|all)/i',$m[1][$i])) {
            $html = preg_replace('/'.preg_quote($m[0][$i],'/').'/','',$html);
        }
    }

    // mPDF 5.5.02
    // Remove Comment tags <!-- ... --> inside CSS as <style> in HTML document
    // Remove Comment tags /* ...  */ inside CSS as <style> in HTML document
    // But first, we replace upper and mixed case closing style tag with lower
    // case so we can use str_replace later.
```

Figure 5.46: customer manager

```sql
--

CREATE TABLE `tbl_admin` (
  `kd_admin` varchar(50) NOT NULL,
  `nama_admin` varchar(35) DEFAULT NULL,
  `username_admin` varchar(30) DEFAULT NULL,
  `password_admin` varchar(256) DEFAULT NULL,
  `img_admin` varchar(35) DEFAULT NULL,
  `email_admin` varchar(35) DEFAULT NULL,
  `level_admin` varchar(12) DEFAULT NULL,
  `status_admin` int(1) DEFAULT NULL,
  `date_create_admin` varchar(50) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `tbl_admin`
--

INSERT INTO `tbl_admin` (`kd_admin`, `nama_admin`, `username_admin`, `password_admin`, `img_admin`, `email_admin`, `level_admin`
('ADM0001', 'Administrator', 'admin', '$2a$12$FLkQoEku1WDlJFFt.bPcBuHBvAniuU6HP8s2hbulexRs6Uzq3Fw6C', 'assets/backend/img/defaul
('ADM0002', 'Second Admin', 'admin2', '$2a$12$FLkQoEku1WDlJFFt.bPcBuHBvAniuU6HP8s2hbulexRs6Uzq3Fw6C', 'assets/backend/img/defaul
('ADM0003', 'BS Owner', 'owner', '$2a$12$FLkQoEku1WDlJFFt.bPcBuHBvAniuU6HP8s2hbulexRs6Uzq3Fw6C', 'assets/backend/img/default.png

-- --------------------------------------------------------

--
-- Table structure for table `tbl_bank`
--

CREATE TABLE `tbl_bank` (
  `kd_bank` varchar(50) NOT NULL,
  `nasabah_bank` varchar(50) DEFAULT NULL,
  `nama_bank` varchar(50) DEFAULT NULL,
  `nomrek_bank` varchar(50) DEFAULT NULL,
  `photo_bank` varchar(100) DEFAULT NULL
```

Figure 5.47: sql

ttfontsuni.php 9+ laporan.php 4

application > views > backend > laporan.php

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="utf-8">
        <meta http-equiv="X-UA-Compatible" content="IE=edge">
        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
        <meta name="description" content="">
        <meta name="author" content="">
        <title><?= $title ?></title>
        <!-- css -->
        <?php $this->load->view('backend/include/base_css'); ?>
    </head>
    <body id="page-top">
        <!-- navbar -->
        <?php $this->load->view('backend/include/base_nav'); ?>
        <!-- Begin Page Content -->
        <div class="container-fluid">
            <!-- Page Heading -->
            <!-- Log on to codeastro.com for more projects -->
            <h1 class="h5 mb-4 text-gray-800">Report Section</h1>
            <table class="table table-bordered table-condensed"  id="mydata">
            <thead class="thead-dark">
                    <tr>
                        <th style="text-align:center;width:40px;">#</th>
                        <th>Report</th>
                        <th style="width:100px;text-align:center;">Action</th>
                    </tr>
```

Figure 5.48: loporan

Figure 5.49: login

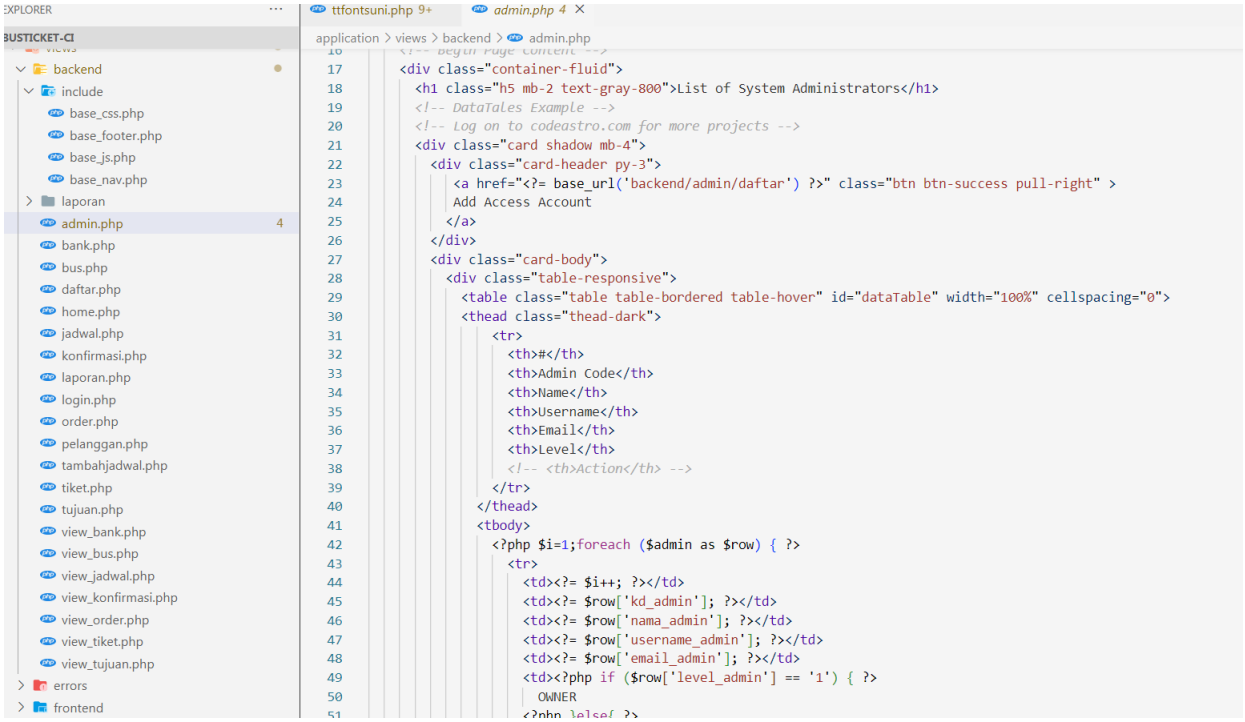


Figure 5.50: admin

6 Testing

testing objectives: Testing is mainly done for rectifying the error from the program that is design for particular problem.

- Testing is a process of executing a program with the intent of finding an error.
- A good test case is one that has a high probability of finding an as-yet UN discovered error.
- A successful test is one that uncovers an as-yet undiscovered error.
- Exhaustive testing is not possible.
- All tests should be traceable to customer requirement.
- Testing Principle: Before doing the testing,some point kept in mind.
- Tests should be planned long before testing begins.
- Testing should be begun in "small" and progress toward large.

6.1 testing and Debugging:

After programming the program has many logical errors we test our system program our system does not run successfully and does not achieve the user's requirement. If the user requirement cannot be fulfilled, we use the debugging tools in the project and debug our project in statements by statements and found error and correct the testing process focusing on logic internals of the software, ensuring that all statements have been tested.

6.2 Function Testing:

System design may have so many functions. Each program has been defined into number of functions. Each function has its own task. We can each function to perform an accurate result. We must debug each function. Function is a block of code that performs a particular task, returns a particular value.

6.3 Structural Testing

Each program has a structure, and contains the function, variable, controls, statement, decision-making loops. We can test program structure these are defined properly in our program. So,the programmer set the structure of the program.

- **Condition Testing:** Condition Testing is a test case design method that exercises the logical conditions contained in a program module.
- **Loop Testing:** Loops are mainly used in all the module of the project, there are different type of loops in the project that I use.
- **Simple loops:** In the simple loop in which the statement is executed inside the single loop.
- **Concatenated loops:** Concatenated loops can be tested using the approach defined for simple loops, if each of the loops is independent of the other. However, if two loops are concatenated and the loop counter for loop 1 is used as the initial value for loop 2 then the loop are not independent. When the loops are not independent, the approach applied to nested loops is recommended.

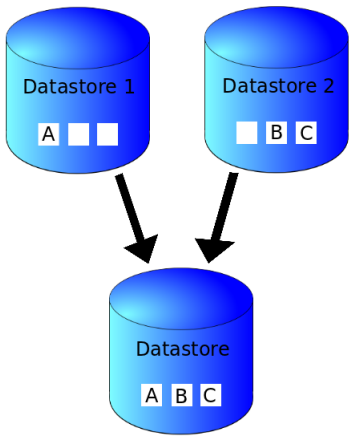


Figure 6.51: Structural Testing

7 Conclusion and Future Scope

7.1 Conclusion

At last, this application will help the daily passenger and students a strong platform to save time and travel. We hope this project will successfully help the users a lot and save their valuable time also. From this application, the bus company and passengers can be benefited. Because all ticket will be sold online and all bus runs under one company. So that there is no way to hide money from the supervisor. We wish we could improve the system and reduce the limitation of the system in a short time. We have tried our best to make it perfect still there are some lickings on it. It is time consuming for creating question.User has to use it on desktop.

7.2 Future Scope

The future vision of this application system is to develop more. This system can be used as the official city service program. Our next goals are

1. App system: So that the supervisor does not need to wait more time. he will just scan the ticket. it is more time-saving.
2. Open management panel: Here have two types of users i.Owner ii. Management employee. here the Owner can monitor his bus. and the management employee manage money information.
3. Adding a new system: So that the current system can build a route according to ticket sales automatically.
4. Transformation: Transform it into intercity transport services.
5. User interface: We will build a more user-friendly interface.