

TITLE PAGE

Web application for bus ticket booking

By

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ABSTRACT

The distance bus ticket reservation has been one of the major concerns in transports commissions in new world. There is a growing demand and trend in moving to online bus ticket reservation system. With the evolution of these new coming systems it will cause the traditional bus ticket reservation space to be changed. The Online Bus Reservation System is a web based application that agree passengers to check bus ticket availability and buy bus ticket through the online payment. The main aim for developing this project is to provide bus transportation facility, a facility to reserve seats, cancellation of seats, check availability of seat, check bus routes and pay the bus ticket online.

ACKNOWLEDGEMENT

I would like to thank each and every person for all the things throughout my journey and exploration to complete this project.

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I have deepest appreciation towards my family especially my parents for their support. Last but not least, I would like to thank all my friends for helping me in this project.

APPROVAL

We have examined this dissertation and verified that it meets the program and school requirements for the Bachelor of computer science (BCS)

Signature :

Supervisor : Prakash Chandra

Date : 10/08/2020

AGREEMENT LETTER

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I certify that this PROJECT PAPER and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledge in accordance with the standard referring practices of discipline.

OCTOBER, 2020

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LIST OF ABBREVIATIONS

HTML	-	Hypertext Markup Language
CSS	-	Cascading Style Sheet
PHP	-	Hypertext Preprocessor
OTP	-	One Time Password
BTB	-	Bus Ticket Booking

CHAPTER 1

INTRODUCTION

1.1 Introduction

A big growing company in all countries is the use of the bus in traveling. Therefore, the system of bus ticketing deals with the maintenance record of each passenger who reserved a seat for a trip. In addition, the ticketing system involves the maintenance of the timetable, the fare, the online payment and the details of each bus journey. There are, however, numerous bus operations that are manually operated. It takes a lot of time for the manual or traditional system to cause many operation errors. Due to this lot of problems occur and they are facing many disputes with customers and each branch works separately.

The bill generation bus ticketing system plays an important role in solving the above problems and maintaining further records of items, seat availability for customers and the price per seat. The project will include the admin and customer side where it can CRUD (create update and delete recovery) and manage customers, buses, routes, seats, reservations, and much more. The administrator plays a major role in system management, and all the main functions are performed from the admin side. Bookings, buses, routes, seats, and availability can be checked by the client. In order to book, a customer must enter the full name, phone number, select bus, number of seats and date. The administrator can view summary reports, such as system availability reports, routes, status, booking reports, clients, and seat reports.

1.2 Problem Statement

- Existing system do not have online payment facilities which has resulted fraud while booking bus tickets.
- Existing system doesn't store accurate email and phone number of passengers due to lack of OTP feature.
- The existing system do not have mailing and notification facilities for booking conformation.

1.3 Objective

- To provide booking bus ticket through the online system and payment facilities will be added for conformation.
- The proposed system will integrate OTP feature for both mail and phone for accuracy.
- Mailing and conformation letter along with ticket will be sent through mail and notify through SMS.

1.4 Scope

1.4.1 User Scope

- User will be able to search for the buses available.
- User will be able to see the seat availability.
- User will be able to print the document.
- User will be able to update, delete the booking.
- Admin will be able to edit, update and delete the user details.
- Admin will be able to add the buses along with its route.
- User will be able to pay the money through online.

1.4.2 System Scope

- System will send the conformation letter along with the ticket through mailing.
- System will provide the information about the availability of seats along with the route.
- System will provide the arrival and departure time of the buses.
- System will provide OTP link in the mail for password conformation.
- System will receive payment through the online payment gateways.

1.4.3 Constraint

- The system does not provide the chat facility.
- The system does not support all the only online payment app.
- Payment need to be done before booking.

1.4.4 Targeted Groups (Age)

This system is generally used by the admin and the user all over the world with the help of internet. This system required an email address and phone number in order to book the ticket so it is targeted for the age group (16 - 40).

1.5 Methodology



Figure 1.1

- For the fast and early development of the project.
- It helps us to predict the cost and time of the project.
- It helps us to get the high quality product with the help of different testing used in this method.
- It helps to meet the customer changing requirement.

1.6 Development tool



Figure 1.2

Sublime text

The Sublime Text Editor is an advanced text editor that is widely used by developers. It includes wide features such as Syntax Highlight, Auto Indentation, File Type Recognition, Sidebar, Macros, Plug-in and Packages that make it easy for working with code base. It is written in C++ and Python available on windows, Mac and Linux. It supports many programming languages, markup languages, and features that can be added, typically under free software licenses, by users with plugins.



Figure 1.3

XAMPP

It is a software distribution that provides all in one package for the apache web server, MYSQL Database, php and Perl (as command-line executables and apache modules). It lets you build an offline WordPress site on your computer's local web server. For its installation, XAMPP provides two essential components: Apache, which is used to create the local server, and MySQL, which you can use as your website's database. Php Myadmin, which provides a GUI tool for managing your MySQL database, is also provided.



Figure 1.4

MySQL

MySQL is a Structured Query Language based relational data base management system. The application is used for a wide variety of purposes, including applications for data warehousing, e-commerce, and logging. However, for the purposes of a web database, the most popular use for MySQL is. It can be used to store anything from a single information record to an entire inventory for an online store of available products. It is possible to create websites that interact in real time with a MySQL database in conjunction with a scripting language such as PHP or Perl, to quickly display categorized and searchable information to a website user.

1.7 Conclusion

Currently, bus agencies play a significant role in transport, and they need a strong system to make reservations easier, faster and safer to make reservations reliable. This project is intended to satisfy the requirements of the reservation system for buses. It will be developed in HTML, PHP, CSS, JAVASCRIPT, and MySQL has built a database. The company can provide reservation services and information to its customers by using this application without limiting office hours or manpower. Not only does it allow customers to book trips from any place with an internet connection around the clock, but it is also intended for the company's use to manage their business processes internally; minimizing human errors and overcoming the problems and problems that arose in the previous system.

CHAPTER 2

Literature Review

2.0 Theoretical Framework

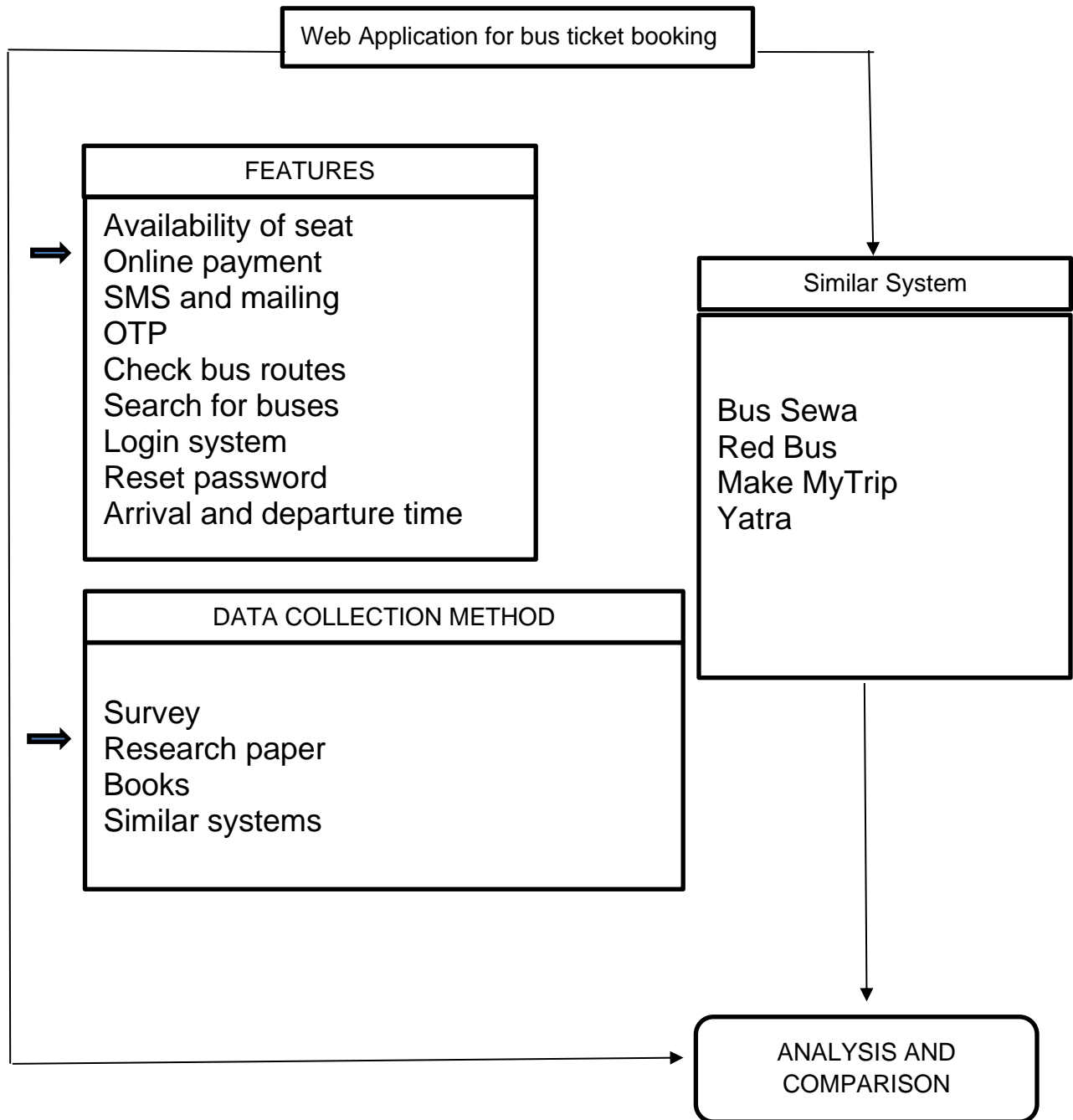


Figure 2.1 Theoretical Framework

2.1 Introduction

This chapter describes a background study of the ticket booking system with common features and similarities to the current system. The comparison between a similar system and the proposed system helps to understand and add the uniqueness of the system to the existing features and technologies being used.

In the background study, the goals, challenges and benefits of the system and the current state of ticket booking will be discussed. We will study a number of similar systems and compare the proposed system with the current systems.

2.2 Background study

In various global circles, the prevalent view is that man currently lives in an age of information collection, processing and dissemination, commonly called the age of information. For this reason, information managers and other users, particularly in the transport sector, are demanding more types of information to support management and operations. Therefore, they must respond to the growing need for information and data management.

Currently, employees at the bus ticket counter use an internal system to sell tickets at the counter and it would be necessary for customers who are unable to buy bus tickets online at this time to go to the counter to buy a bus ticket. Sometimes, to buy bus tickets and ask for information, customers need to queue up a long queue and this brings customers a lot of inconveniences. The Online Bus Ticket Reservation System, however, allows customers to easily buy bus tickets, make payments and request information online. In addition, after checking the availability of the bus ticket for the customer, employees can sell bus tickets using the Bus Ticket Reservation System and print the customer's bus ticket.

2.3 Research similar system

1. BusSewa

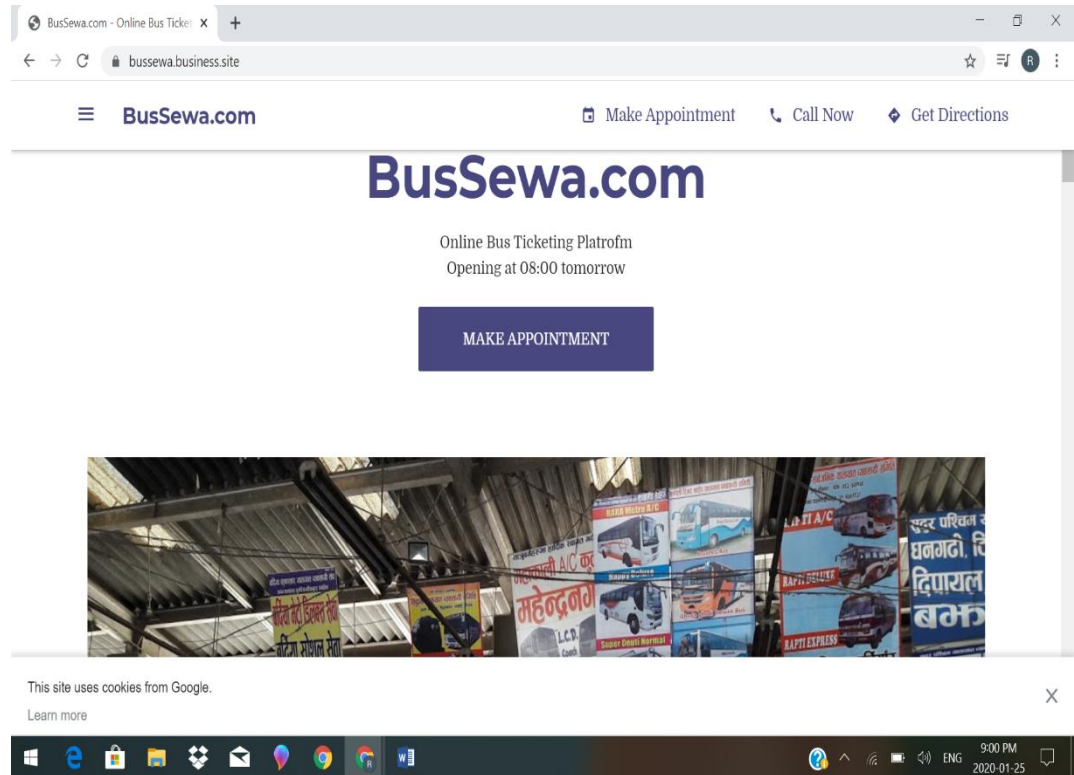


Figure 2.2

Nepal's first real-time online bus ticket booking platform, powered by Diyalo Technologies Pvt. Ltd, ltd. The vision of Travel Operators' innovative business processes in Nepal to provide quality service to road passengers came into being with Bus Sewa. Bus Sewa ensures passenger-friendly reservation of tickets at transparent prices with zero booking fees. Among the list of operators, passengers can obtain the most accurate real-time data on the availability of bus seats.

2. Red Bus

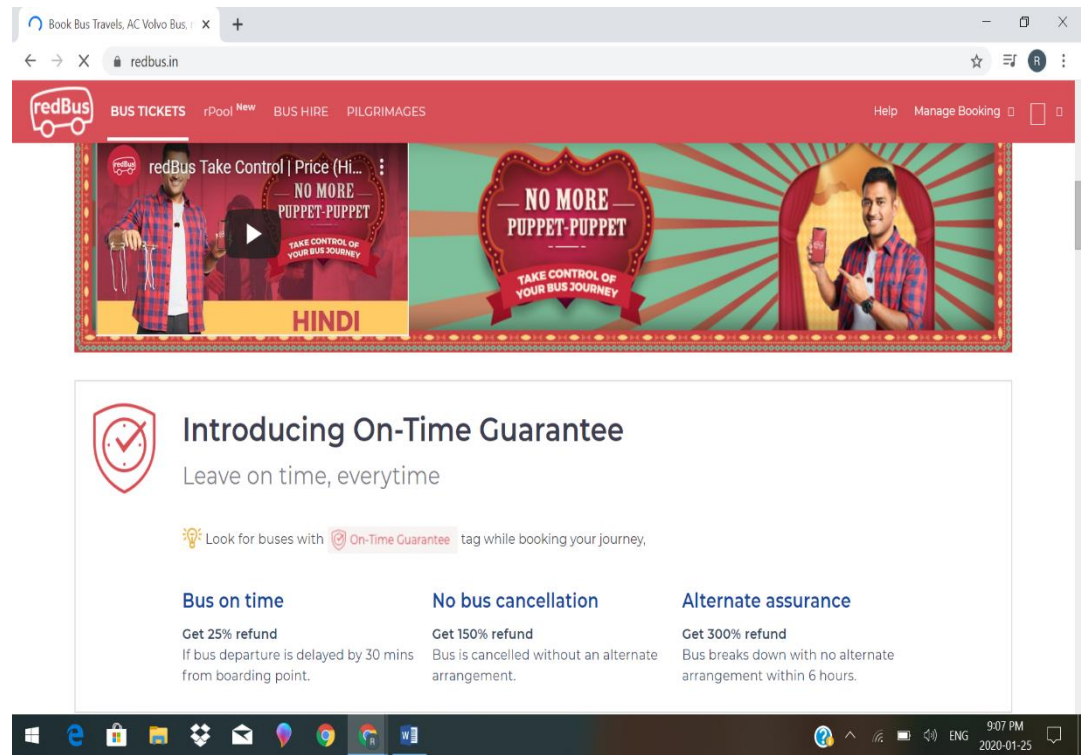


Figure 2.3

Red bus is India's largest online bus ticketing platform that has transformed the country's bus travel by providing millions of Indians who travel using buses with ease and convenience. Red Bus was established in 2006 and is part of India's leading online travel agency, MakeMyTrip. Red Bus has served over 8 million customers by providing the widest selection, superior customer service, lowest prices and unmatched benefits. Red Bus has a global presence, apart from India, with operations throughout Indonesia, Singapore, Malaysia, Colombia and Peru.

3. Make My Trip

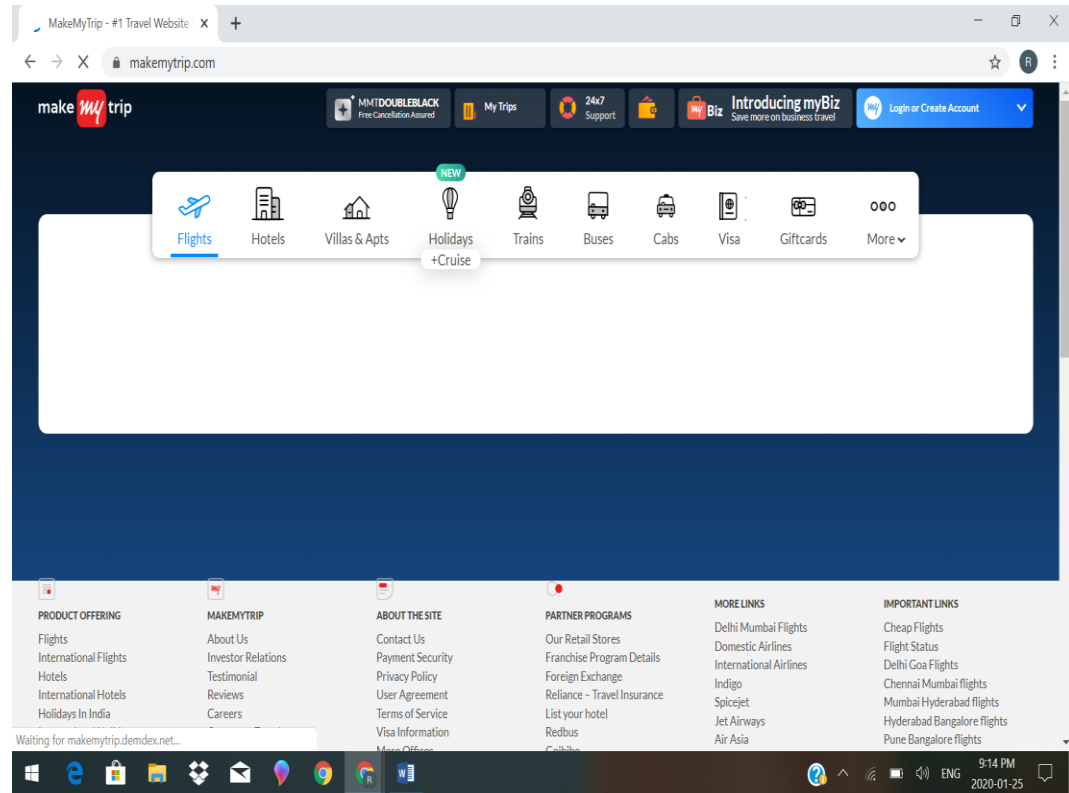


Figure2.4

Make My Trip Limited is an online travel company from India that was founded in 2000. Including flight tickets, domestic and international holiday packages, hotel bookings, and rail and bus tickets, the company provides online travel services. Deep Kalra, an alumnus of IIM-Ahmedabad, founded Make My Trip. In the year 2000, it was launched in the US market to cater to the overseas Indian community for their travel needs from the US to India. In September 2005, Make My Trip began Indian operations, offering Indian travelers online flight tickets. The organization also started to concentrate on non-air businesses such as vacation packages and hotel bookings.

2.3.1 Objective of the study

The main objectives of study are as follows:

- To know about the problems on the existing e-ticketing systems in Nepal.
- To know about technology and features of existing systems.
- To compare the purposed system with the existing systems.
- To add uniqueness in the proposed system.
- To identify the issues and challenges in online reservation of bus tickets

2.3.2 Benefit of online ticket booking

You can do a lot of stuff online nowadays, including booking bus tickets. Using an online booking system has plenty of benefits. Here are some advantages of online bus ticket reservations.

- Online ticket booking - User can book online ticket and get their e-ticket or can be able to print.
- Ticket cancellation online - If users need to cancel their booked ticket by any means, users can cancel the ticket with a single click.
- Bus scheduling - Once the operator schedules the bus for different routes, the software automatically shows routes with details such as time, departure, arrival, travel time.
- Cancelled services list - However, if the bus operator cancels services on any route, it will be displayed automatically on the Cancelled Service page.
- Commission free booking – By reserving a ticket online rather than booking from an agency or travel agent, we get commission free booking.
- 24 hours booking – The system enables us to receive bookings from anywhere at any time, 24 hours a day.
- Save money – While booking tickets online, we can get plenty of discount and coupon code that helps to save money.
- Save time – With just a click, it is easier to book tickets online than to go to reservation centers.

2.3.3 Challenges of online ticket booking

- Lack of internet connectivity.
- Personal information is not safe.
- There is risk in monetary transactions.
- There is risk of hackers.
- Sometimes money is deducted without the booking.
- There are some extra website charges.
- Time consuming.
- Difficult to cancel the tickets.
- Difficult to get the refund

2.4 Common Features of Similar System

- Register: - User need to register when using this system.
- Login: - User need to verify username and password.
- Search: - User can search particular data from the customer details.
- Logout: - User can Logout from this system.

2.5 Comparison table

Feature	Proposed System	Bus sewa	Make my trip	Red bus
Login System	Yes	Yes	Yes	Yes
Reset Password	Yes	Yes	Yes	Yes
Seat availability	Yes	Yes	Yes	Yes
Buses routes	Yes	No	Yes	Yes
SMS	Yes	No	No	No
OTP	Yes	No	No	No
Search for buses	Yes	Yes	Yes	Yes
Online payment	Yes	Yes	Yes	Yes

2.6 Conclusion

In this chapter, we have research on the current system and compare our system with those systems and found that each system, including our system, has its own unique feature, not only do we also study the challenges and benefits of the online ticket booking system.

CHAPTER 3

Methodology

3.1 Introduction

This chapter will address the software development lifecycle (SDLC) agile methodology that will be used by the proposed system by researching the workflow methodology and its benefits. Other than that, the chapter will include the proposed system's three types of unified modeling language (UML) diagram designs.

A dynamic or behavior diagram in UML is a Use Case Diagram. Use case diagrams model a system's functionality using actors and use cases. A set of actions, services, and functions that the system needs to perform are use cases. The actors are individuals or entities within the system operating under defined roles.

Another important behavioral diagram in the UML diagram is an activity diagram to describe the system's dynamic aspects. In essence, the activity diagram is an advanced version of the flow chart that models the flow from one activity to another. It describes how activities are organized to provide a service that can be performed at various levels of abstraction. It is also appropriate to model how a set of use cases co-ordinate to represent business workflows.

The static view of an application is given by the Class Diagram. A class diagram describes the types of objects and the various types of relationships that exist between them in the system. In the modelling of object-oriented systems, class diagrams are widely used because they are the only UML diagrams that can be mapped directly to object-oriented languages. By showing classes, attributes, operations, and their relationships, the UML Class Diagram gives an overview of a software system. In

separate designated compartments, this diagram includes the name of the class, attributes, and operation.

3.2 Agile Model

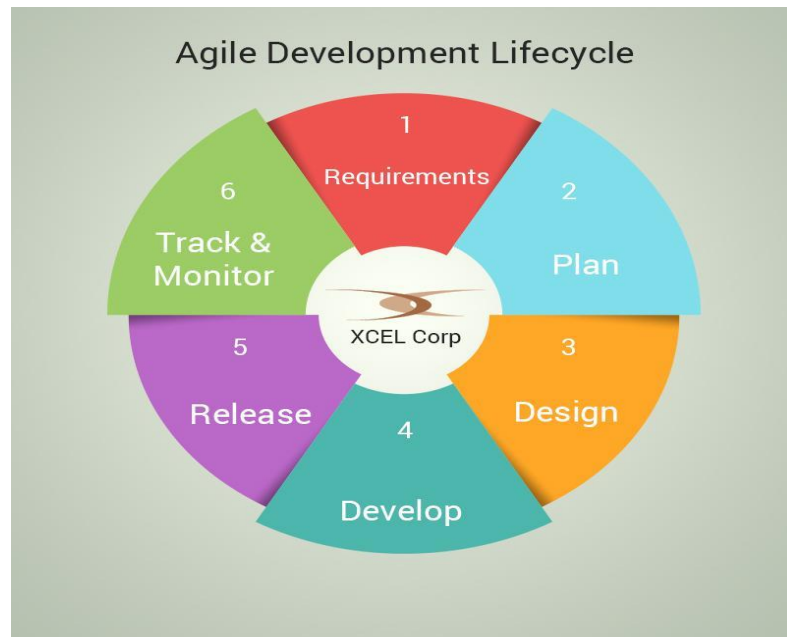


Figure 3.1

Agile is an iterative and incremental set of management practices. This helps teams in an evolving environment while retaining a focus on the rapid delivery of company value. All Agile project management methodologies (Scrum, XP and others) follow the Agile Manifesto, which is based on continuous improvement, flexibility, team productivity, and high quality product delivery.

Why using agile method?

The intended system will use agile methodology because the water fall model is very different from the agile method because it is not iterative, because Waterfall is more about a process in which the progress can be seen through the various stages. In reality, it is usually a sequential model that goes from analysis of requirements, design, implementation, testing and maintenance. Time and budget are variable and requirements are fixed according to the water fall method, because of which budget and timeline problems are often faced. Agile methodologies, on the other hand, address the needs of clients perfectly. The Agile approach is all about iterative planning, making it very simple to adapt when certain requirements change. User participation is encouraged throughout the entire cycle, providing visibility & transparency, showing the actual progress of projects.

The use of agile methodology on projects has different advantages. Some of them are as described below-:

- **Stakeholder Engagement**

Agile offers multiple stakeholder and team engagement opportunities before, during, and after each Sprint. There is a high degree of collaboration between the client and the project team by involving the client in each step of the project, providing the team with more opportunities to truly understand the vision of the client. Delivering working software early and often increases the confidence of stakeholders in the ability of the team to deliver high-quality working software and encourages them to be more deeply involved in the project.

- **Transparency**

An Agile approach provides customers with a unique opportunity to participate throughout the project, from prioritizing features to iteration

planning and review sessions to frequent new feature software builds. However, this also requires customers to understand that, in exchange for this added benefit of transparency, they are seeing a work in progress.

- **Early and Predictable Delivery**

New features are quickly and frequently delivered, with a high level of predictability, by using time-boxed, fixed schedule sprints of 1-4 weeks. This also provides the opportunity, if there is sufficient business value, to release or beta test the software earlier than scheduled.

- **Predictable Costs and Schedule**

As every Sprint is a fixed duration, the cost is predictable and limited to the amount of work that the team can perform in the fixed-schedule time box. Combined with the estimates provided to the customer prior to each Sprint, the customer can more easily understand the approximate cost of each feature, which improves decision-making about the priority of features and the need for additional iterations.

- **Allow For Changes**

While the team needs to stay focused during each iteration on delivering an agreed-to subset of the features of the product, there is an opportunity to constantly refine and reprioritize the overall product backlog. For the next iteration, new or changed backlog items can be planned, providing the opportunity within a few weeks to introduce changes.

- **Focuses on Business value**

The team understands what is most important to the business of the client by allowing the client to determine the priority of features, and can deliver the features that provide the most business value.

- **Improves Quality**

By breaking down the project into manageable units, the project team can concentrate on high-quality development, testing, and collaboration. Furthermore, performance is enhanced by quickly finding and fixing defects and early recognition of expectation mismatches by producing frequent builds and performing tests and reviews during each iteration.

3.3 Use case Diagram

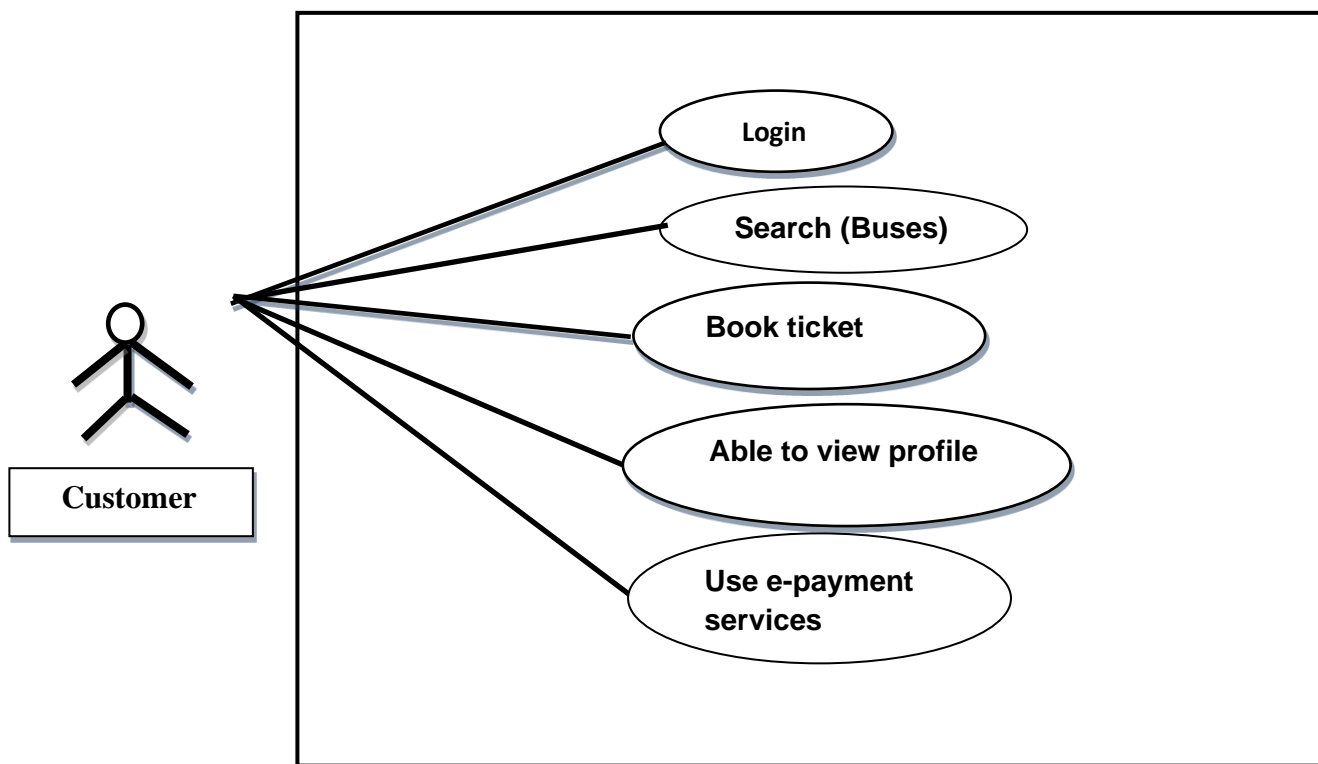


Figure 3.2 Use Case Diagram for Customer

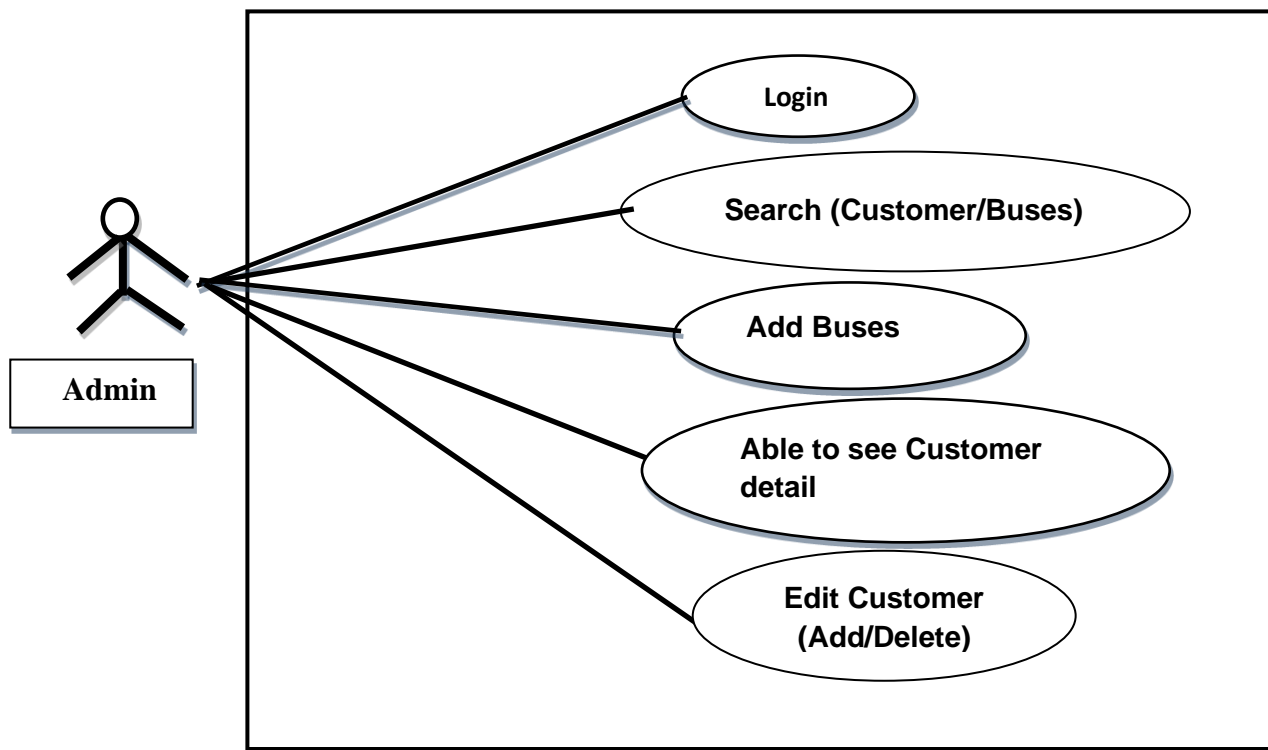


Figure 3.3 Use Case Diagram for Admin

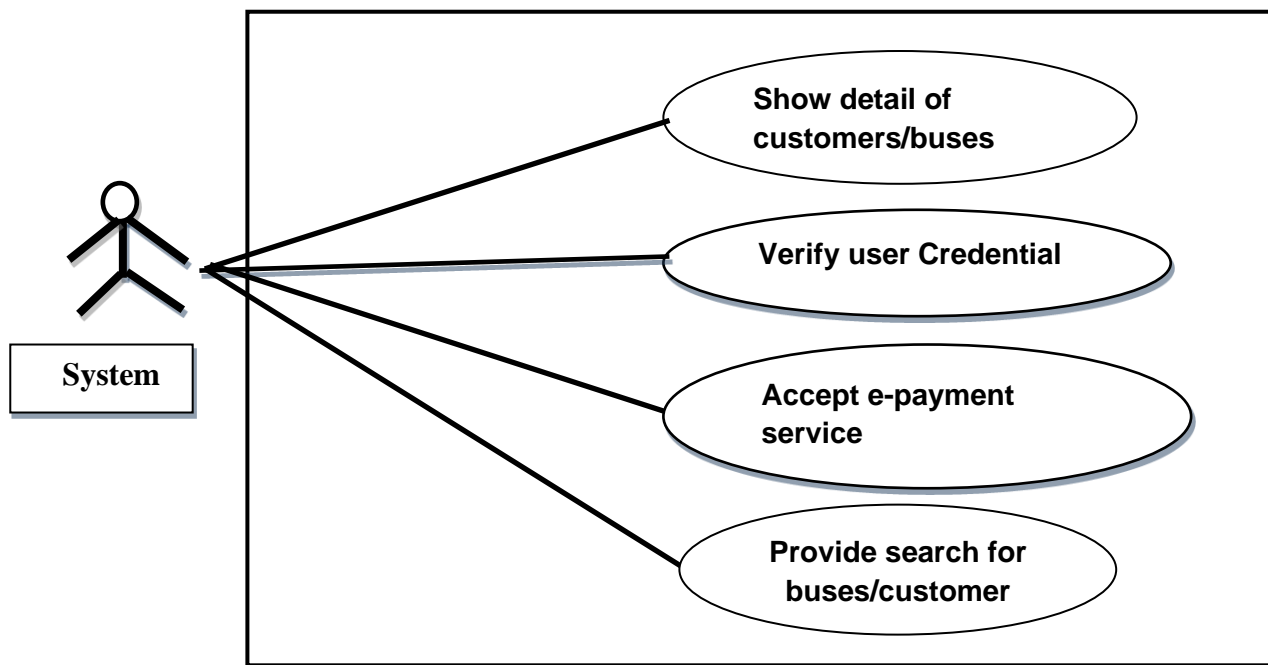


Figure 3.4 Use Case Diagram for System

3.3.1 Functional Design- USE CASE DESCRIPTION

DESCRIPTION	USE CASE
To register using username, email , address, and contact-no	Registration
To let customer use the system and have access to their own account.	Login
To search buses to book.	Search

Table 3.1 Customer Description for use case diagram

DESCRIPTION	USE CASE
To let admin to use the system and have access to view every users account.	Login
To view data of all the users.	View Users Data
To add and remove buses/customer.	Add & Remove buses/customer
To search customer/buses.	Search

Table 3.2 Admin Description for use case diagram

ACTORS	DESCRIPTION
User (Customer)	They can set up username and contact-no of user in the system and can book the ticket.
User (Admin)	Admin can view data of every user and also add or remove buses/customers.

Table 3.3 Actors description for Use Case Diagram

3.4 Activity Diagram

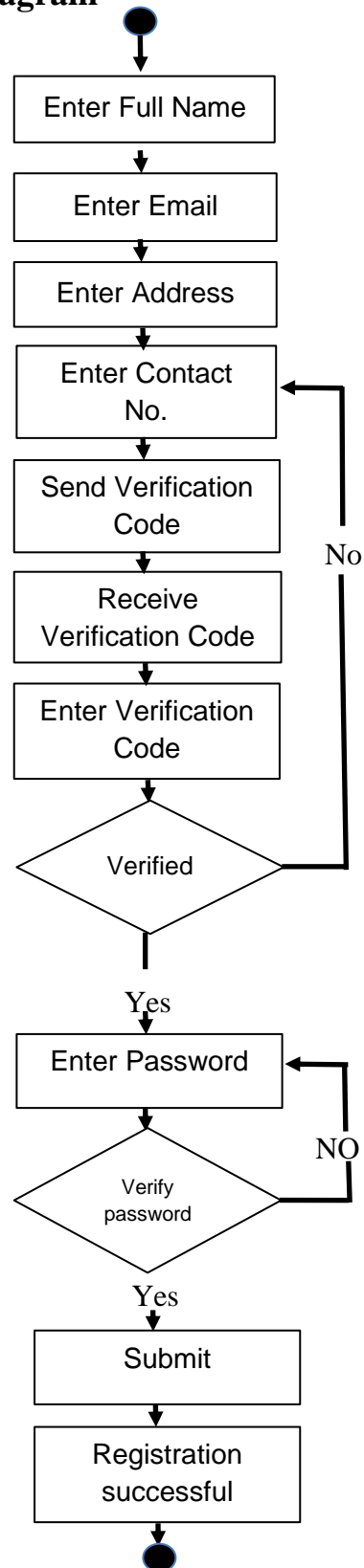


Figure 3.5 Activity Diagram of Customer Registration

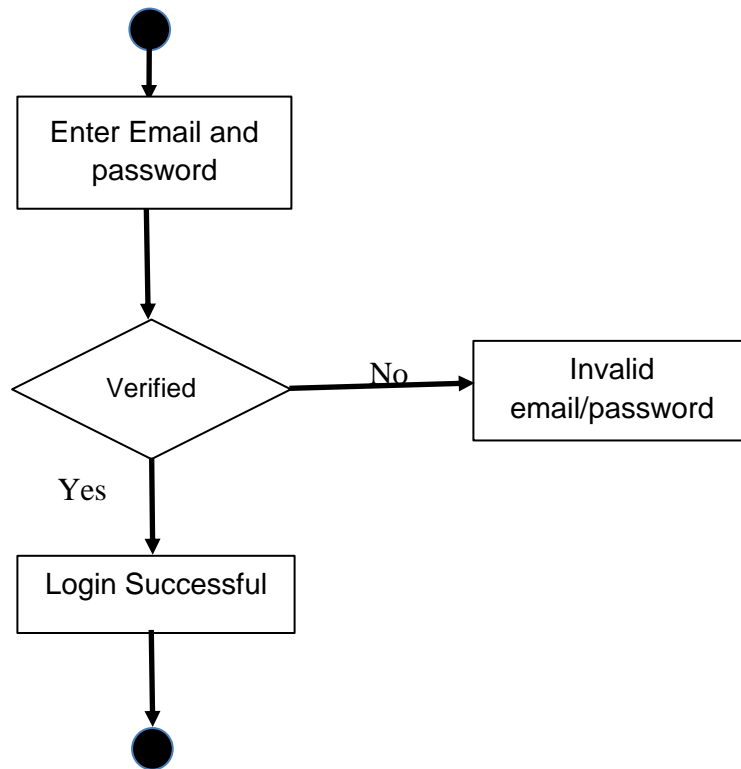


Figure 3.6 Activity Diagram of Admin Login

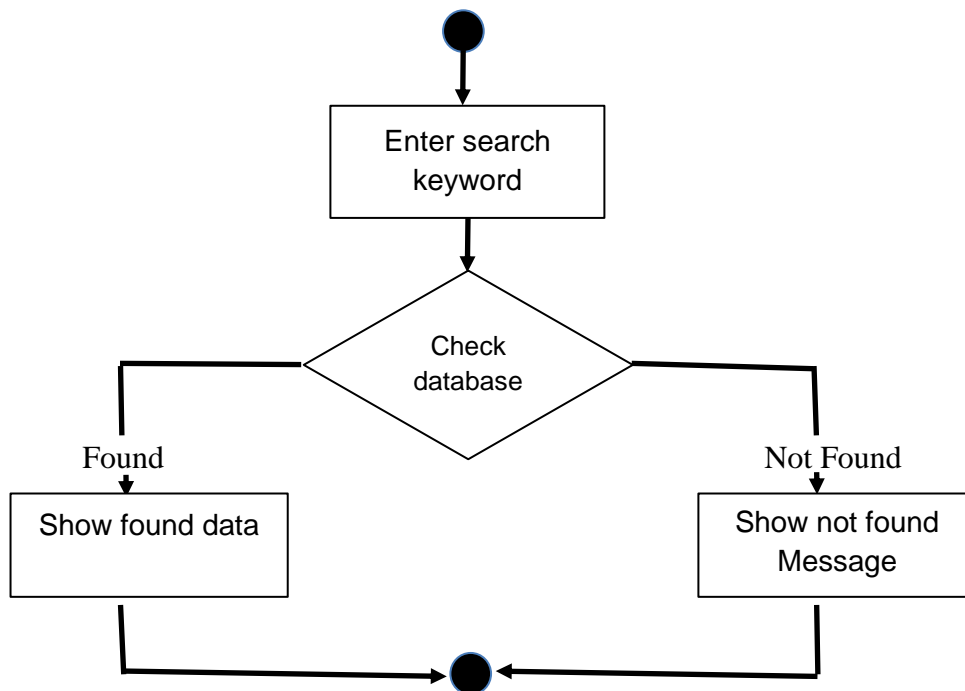


Figure 3.7 Activity Diagram of Search Property

3.5 Sequence Diagram

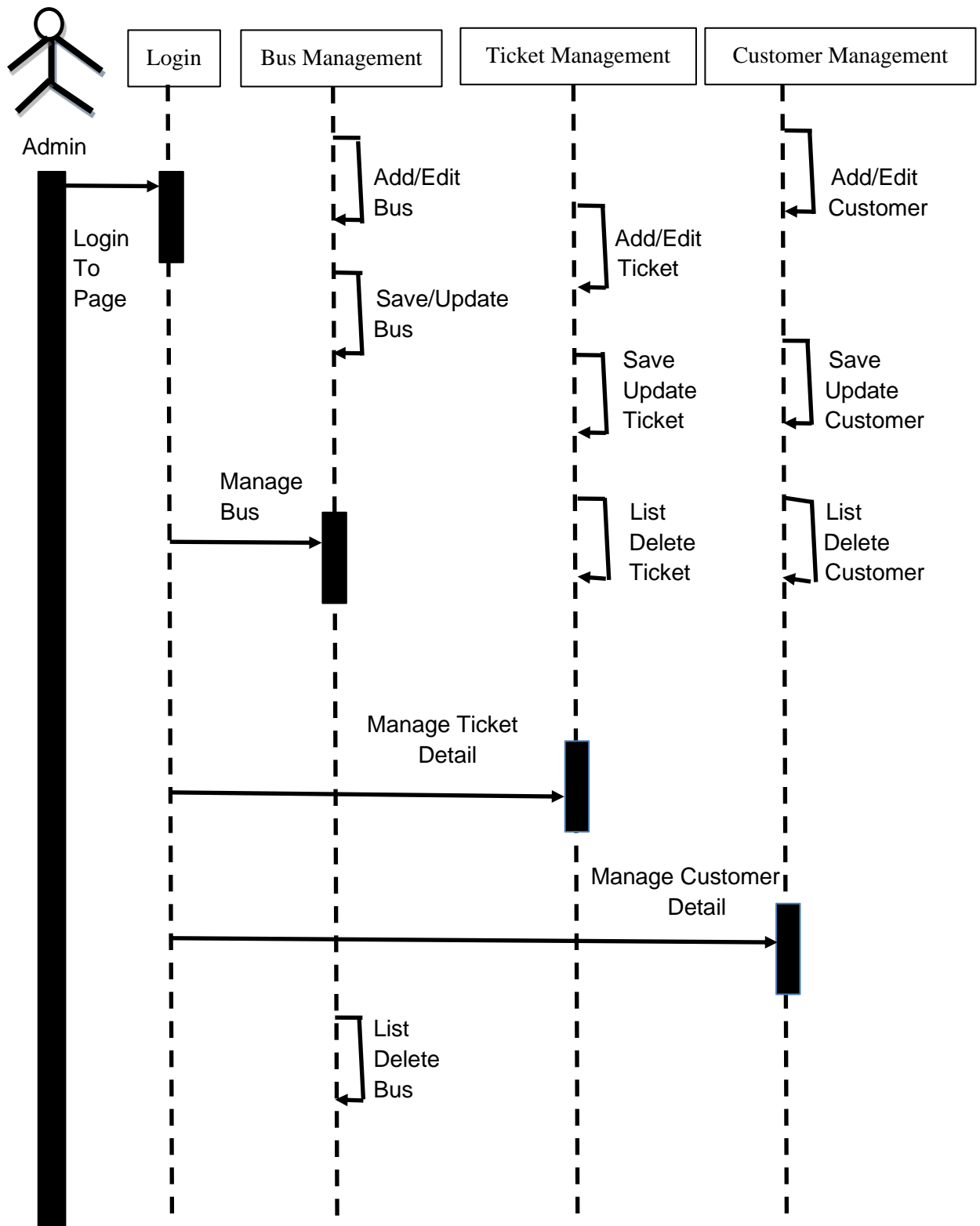


Figure 3.8 Sequence Diagram of Admin

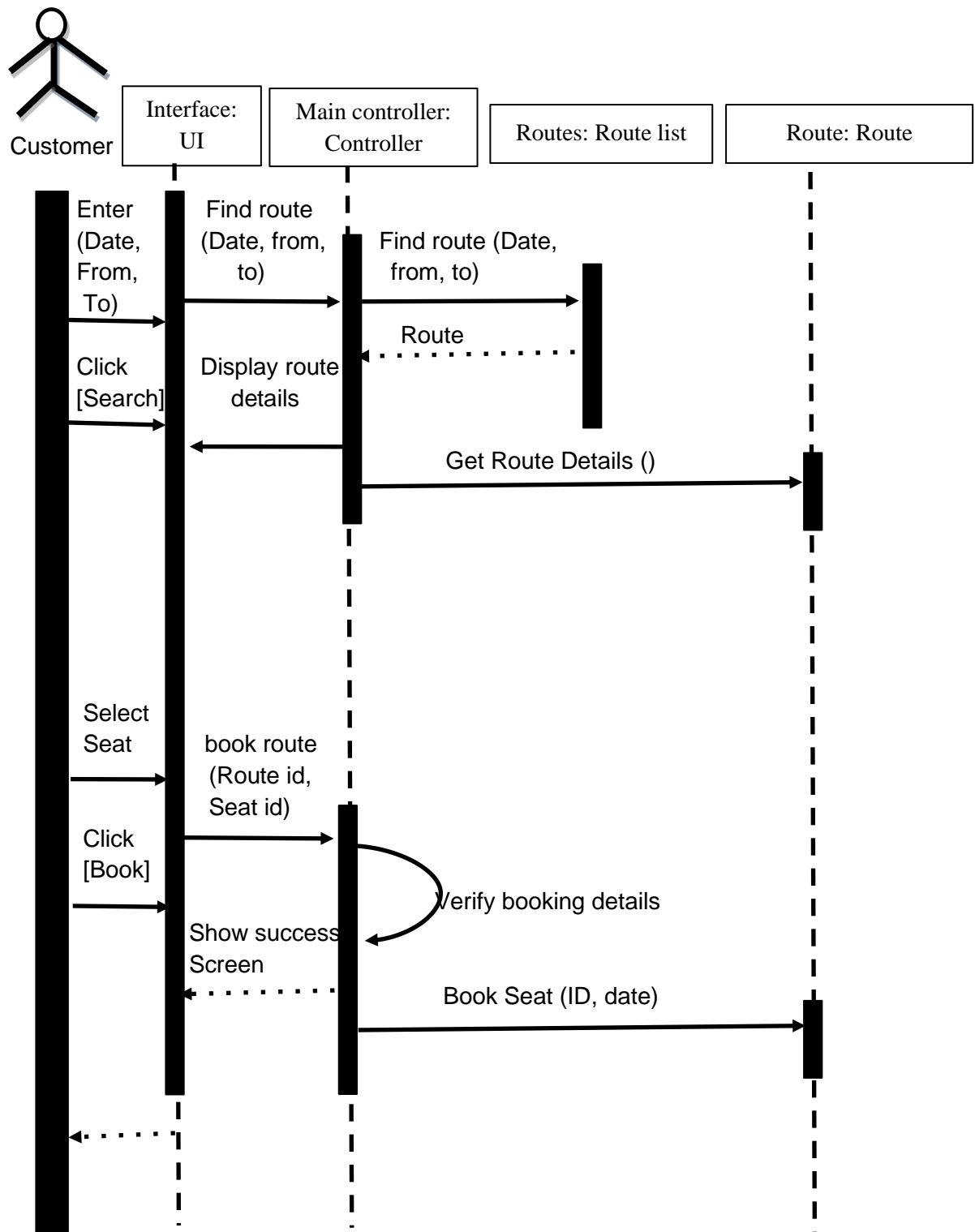


Figure 3.9 Sequence Diagram of Customer

3.6 Class Diagram

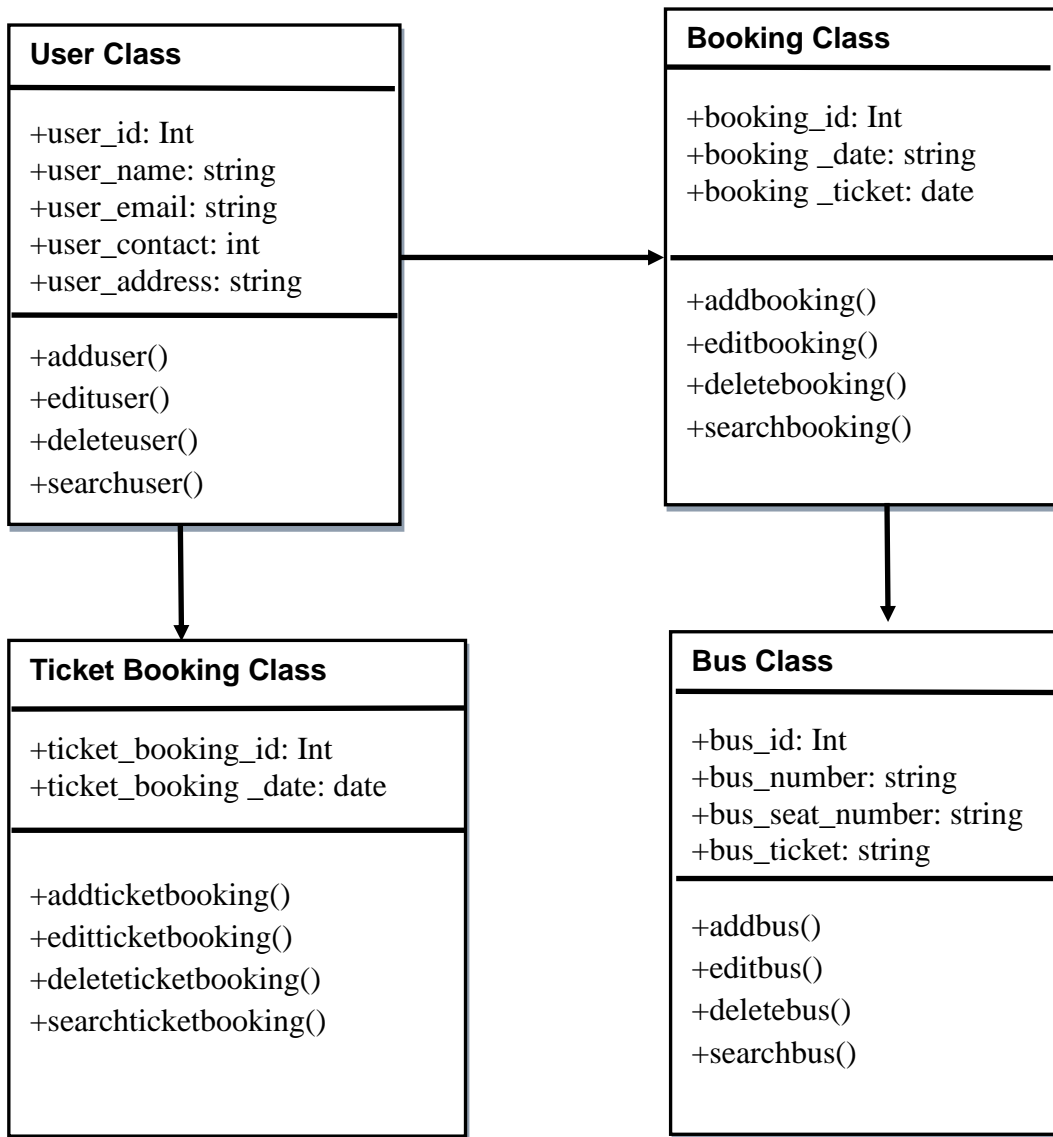


Figure 3.10 Class Diagram of Bus Ticket Booking System

3.7 Conclusion

In this chapter, we are researching the agile model, its benefits, and finding it more useful for the intended system than the water fall model. Not only this, we also have research for our project on the UML diagram. We have produced the intended system's Use Case Diagram, Activity Diagram, and Class Diagram, each of which has its own significance.

CHAPTER 4

INTERFACE

4.1 Introduction

This chapter explains all the applications activity page for users who are interested in studying the website. Following the Scrum Process, the Bus Ticket Booking Web page was developed. The Scrum Process is an advanced form of Agile Methodology for Development. The main focus of the Scrum Process is the series of sprint cycles, where each cycle builds up an increase in the framework. The system will explain, page by page, how the user can use each function on each page.

4.2 Interface explain

Bus Ticket Booking web page has several screens each carefully customized for the ease of the user. There are mainly two types of users: Customer and Admin.

4.2.1 Home screen

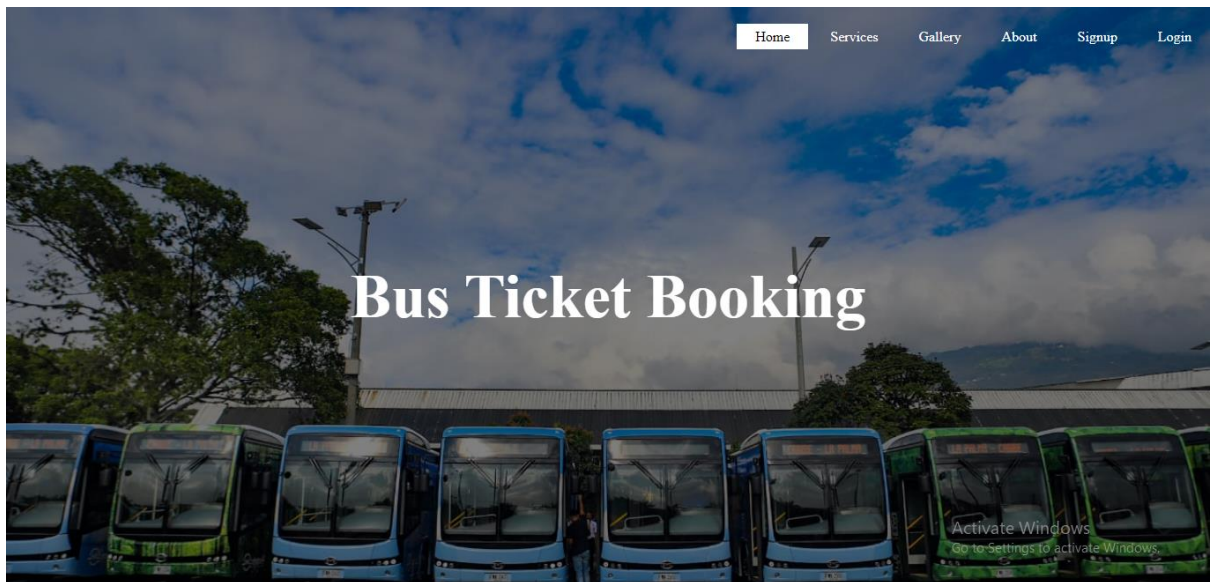


Figure 4.1

When user start the webpage it will display the home screen where the user can see the background image of the buses. At the top right side of the page there is the navigation bar of services, gallery, about, signup, and login where user can easily switch to anyone of these navigation bar easily.


4.2.2 Services

[Home](#) [Services](#) [Gallery](#) [About](#) [Signup](#) [Login](#)

BUSES AVAILABLE

Price list

Dhangadhi



Destination	Price/Person
Kathmandu to Dhangadhi	1800

Activate Windows
Go to Settings to activate Windows.

Figure 4.2

This is the service page in which the user can see the list of buses along with the routes detail. There is also the price mentioned in the table so that the user got the information about the price of the bus routes.

4.2.3 Gallery

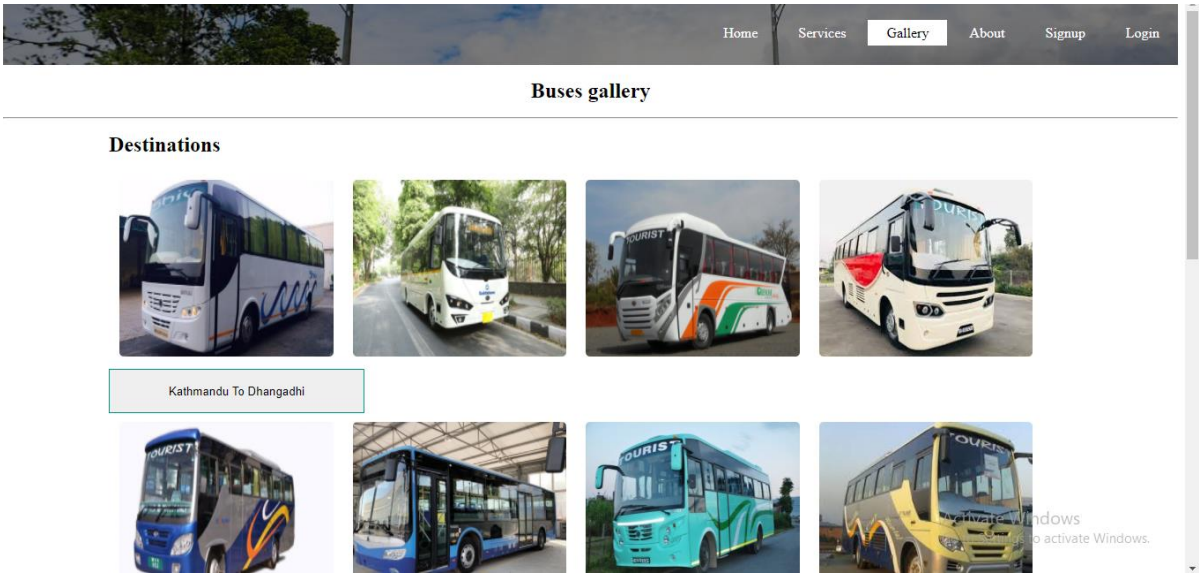


Figure 4.3

This is the gallery in which the user can find the buses available for the particular routes.

4.2.4 About us

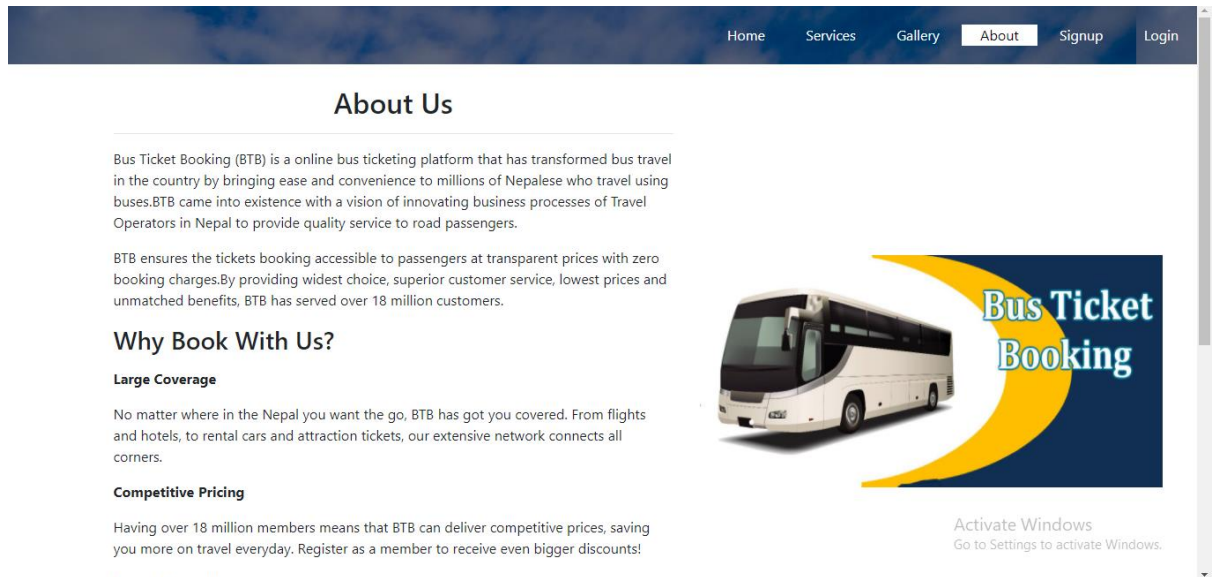


Figure 4.4

This is the about us page of the Bus ticket booking system which explain about the network and policies of the bus ticket booking system for the user to know better about the BTB.

4.2.5 Signup

NEW USER FORM

Full Name

Your Email

Your Address

Contact Num

Select Destination

No Of Person

dd/mm/yyyy

SUBMIT **OLD USER**

Activate Windows
Go to Settings to activate Windows.

Figure 4.5

This is the signup form of the new user in which the user need to enter the full name, email, address, contact num, destination, no of person and date for the booking.

4.2.6 Signup notification

Your Destination
Pokhara

Reserve Date
2020-10-03

No of Person
5

Total Ticket Price
7500

Ok

Cancel

Note:
!! Press ok inorder to confirm your booking !!

Activate Windows
Go to Settings to activate Windows.

Figure 4.6

This is the notification of the booking detail of the new customer which appear just after the customer fill up the signup form, with the detail of the customer along with the price.

4.2.7 Signup upload

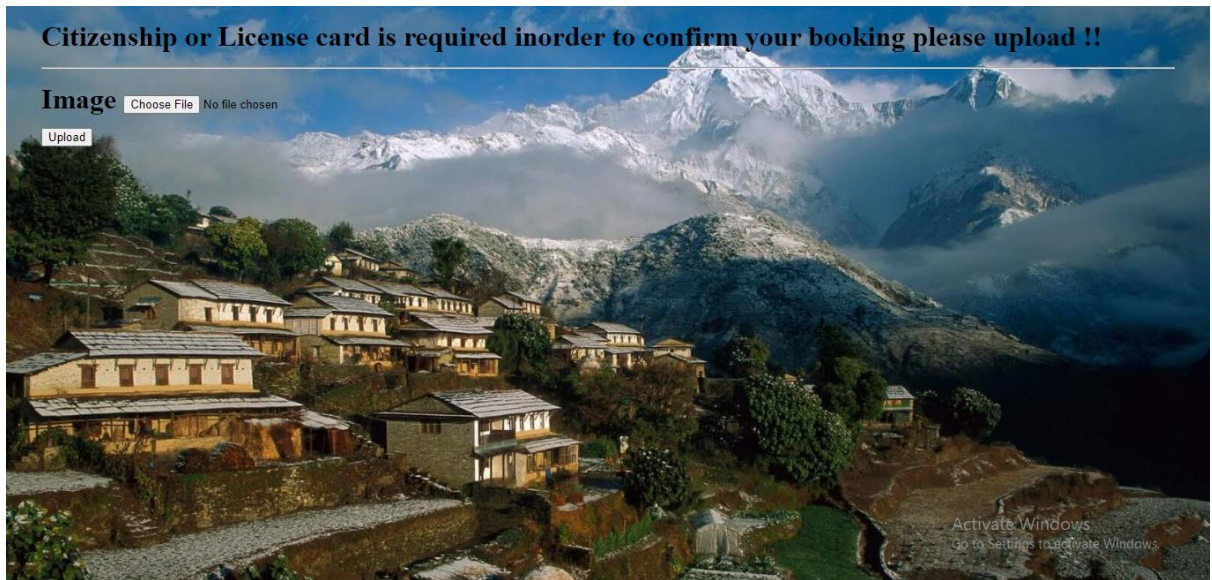


Figure 4.7

This is the page which appear just after the user click on the ok button of the signup notification page in which user need to upload the citizenship card photo for the booking in order to reduce the fraud and other similar activities.

4.2.8 Login

Home Services Gallery About Signup Login

OLD USER FORM

Full Name

Contact Num

Select Destination

No Of Person

dd/mm/yyyy

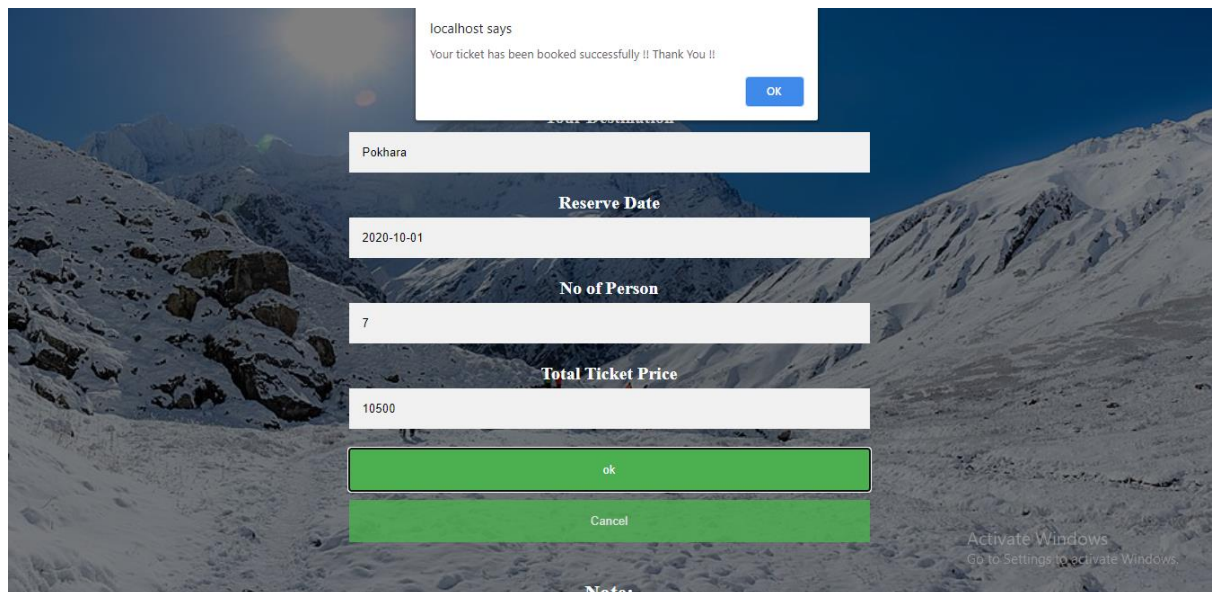
SUBMIT NEW USER

Activate Windows
Go to Settings to activate Windows.

Figure 4.8

This is the login page of the user where old user need to login by entering the name, contact num, destination, no of person, and date for the booking.

4.2.9 Login notification



The image shows a web application interface for booking tickets. At the top, a white notification box with a blue border displays the message: "localhost says Your ticket has been booked successfully !! Thank You !!". Below this, the booking form is visible with the following fields and values: "Your Destination" (Pokhara), "Reserve Date" (2020-10-01), "No of Person" (7), and "Total Ticket Price" (10500). At the bottom of the form are two green buttons labeled "ok" and "Cancel". The background of the page is a scenic image of a snowy mountain range. In the bottom right corner, there is a watermark that says "Activate Windows. Go to Settings to activate Windows."

Field	Value
Your Destination	Pokhara
Reserve Date	2020-10-01
No of Person	7
Total Ticket Price	10500

Figure 4.9

This is the notification of the booking detail of the old customer which appear just after the customer fill up the login form, with the detail of the customer along with the price. After the customer enter the ok button the notification “your ticket has been booked successfully” is pop out as shown in the picture above.

4.2.10 Admin login

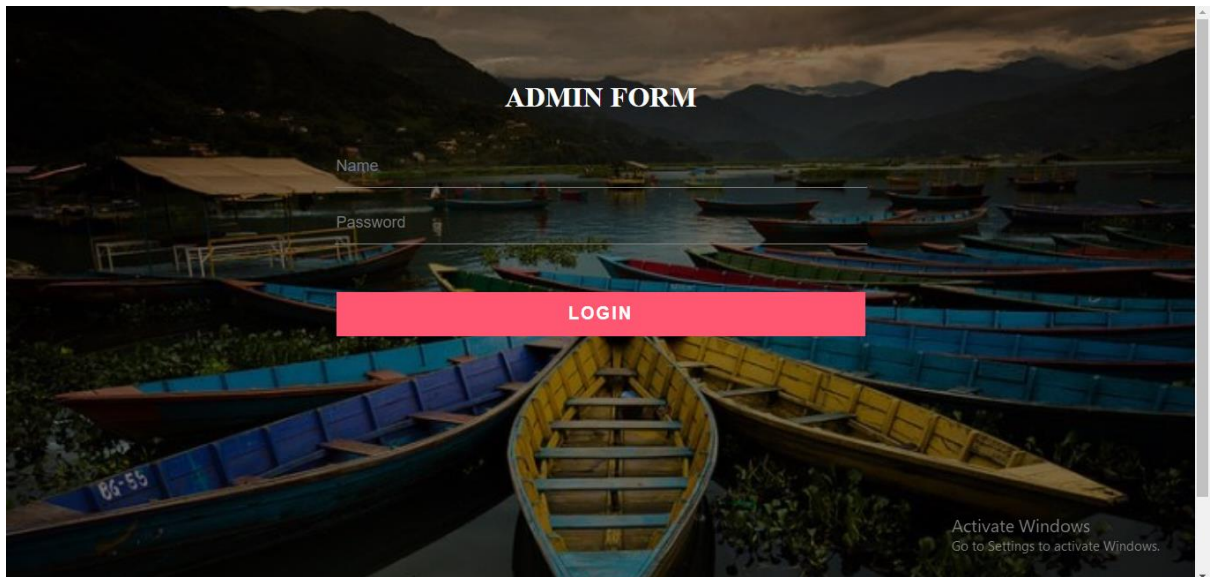


Figure 4.10

This is the admin form where admin need to enter the password and username in order to login. There is the separate page of the admin login in order to save the data from hackers and unauthorized users.

4.2.11 Customer detail

SearchLogout

CUSTOMERS DETAIL

ID	Name	Email	Address	Contact	Destination	Person	Price	Reserved	date	Action	s
39	yuwak	olduser	olduser	982121242102	Butwal	2	2400	2020-10-10			
40	yuwak	bistyuwak@gmail.com	dhangadhi	9800640628	Dhangadhi	2	3600	2020-10-03			
41	yuwak	olduser	olduser	9800640628	Butwal	4	4800	2020-10-02			
42	yuwak	olduser	olduser	9800640628	Pokhara	7	10500	2020-09-18			
43	yuwak	bistyuwak46@gmail.com	ktm	789456	Pokhara	5	7500	2020-10-01			
44	yuwak	bistyuwak46@gmail.com	ktm	9800640628	Butwal	2	2400	2020-09-25			
45	yuwak	bistyuwak46@gmail.com	ktm	789456	Pokhara	5	7500	2020-10-03			
46	yuwak	olduser	olduser	9800640628	Pokhara	7	10500	2020-10-01			
47	yuwak	olduser	olduser	9800640628	Dhangadhi	7	12600	2020-10-02			
48	yuwak	olduser	olduser	9800640628	Dhangadhi	7	12600	2020-10-02			
49	hgvfvv	bistyuwak46@gmail.com	.lkikikl	98006406289	Dhangadhi	5	9000	2020-10-03			
50	yuwak	olduser	olduser	9800640628	Butwal	2	2400	2020-10-09			

Activate Windows

Go to Settings to activate Windows.

Figure 4.11

This is the page which opens after the admin login success, where admin can add, edit, delete the user details as per the need.

4.2.12 Search

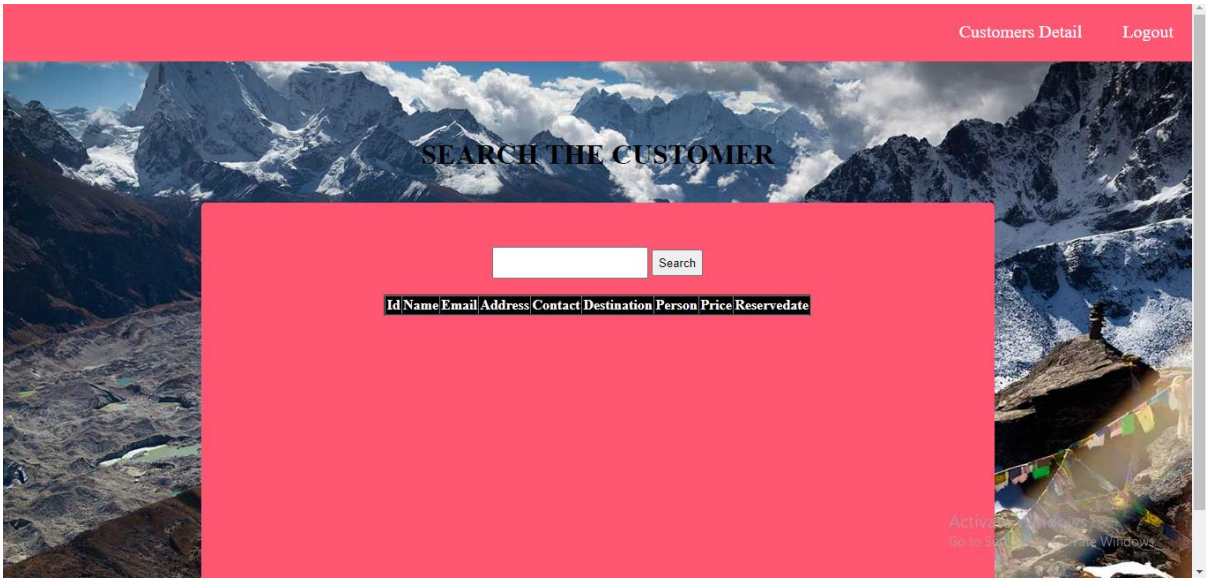


Figure 4.12

This is the search page which appear as the admin click on the search button just after the login. Admin can search the user with the name, address, email, contact, price, person and also by the reserve date.

4.3 Conclusion

The overall interface has fulfilled the requirements and goals set out in Chapter 1. Each interface is developed on the basis of the common color consistency design concept, title tab design, validation testing, feedback, as well as promoting the reduction of short-term memory load by tab icon navigation.

CHAPTER 5

TESTING AND RESULTS

5.1 Introduction

Software testing is a key component of quality assurance of software and is the ultimate review of specification, design, coding. The aim of product testing is to verify and validate the various working products, i.e. to ensure they meet their requirements, units, integrated unit, and final product.

5.2 Unit testing

Unit testing is to test software in terms of a unit, a module, a function, a specific section of code. This testing occurs while the software is being developed and before completion. For Unit Testing, test cases are designed to verify that an individual unit implements all design decisions made in the unit's design specification. A thorough unit test specification should include positive testing where the unit does what it is supposed to do, and also negative testing where the unit does not do anything that it is not supposed to do. Table below shows the Unit Testing for the Administrator login module.

5.2.1 Unit testing for Administrator login module

Test procedure	Output/Error	Analysis of Test Result
Login with valid login ID and password as admin.	The admin is redirected to the admin home.	Successfully redirected to the admin home after the validity of the login ID and password is checked by the system.
Invalid company's login ID, password or bus.	The error message is shown.	The login is denied and an incorrect login ID, password or bus company error message is displayed.
Nothing	A message will be displayed asking the administrator to insert the required fields.	Login denied and a message prompted to insert the required fields is displayed.

Table 5.1 Unit Testing for Administrator login module.

5.2.2 Integrated testing for the Customer Booking Ticket module

Test Procedure	Output/Error	Analysis of Test Result
By inserting origin and destination, search the seat availability	The customer is redirected to the Bus Schedule page containing the information for the search.	The client was successfully redirected to the Bus Schedule page containing the search information. Then the customer picks the bus and clicks the Submit button.
After clicking the submit button, you make a reservation and enter the number of adults or children, select the desired seat, and then click the Buy Now button.	The registered member is redirected to the Confirmation of Booking page. It will ask a non-member to register.	A registered member was successfully redirected to the Booking Confirmation page. Then the member clicks the button for payment.
Make an e-sewa payment.	The registered member will be redirected to the page on Online Banking.	The member was successfully redirected to the page for Online Banking. Then the member inserts their specifics.
Following a successful payment, the system gives a confirmation message and allows users to print the ticket.	A confirmation message is displayed to a member and an option is given to print the ticket.	A confirmation message successfully appears and a member can print his ticket.

Table 5.2 Integrated testing for the Customer Booking Ticket module

5.3 Field testing

Field testing tests the conditions for applications based on the actual operation of the application. Before offering it to clients, Field Testing means creating, using and iterating your offering. In the Iteration Cycle, Field Testing is a critical step, helping you find flaws in your offer. The purpose of Field Testing is to minimize risk by ensuring that before attempting to sell it, the offering works.

5.4 User acceptance Testing

Acceptance testing is a type of system-based black-box testing. The BTB system has been fully tested in the real environment using actual data. Acceptance testing will give the opportunity for both clients and administrators to verify the functionality and usability of the system prior to system deployment. Users will use network communications to test system interaction with the database, or interact with other hardware or other applications. Instead of simulated test data, the system is tested with data provided by the end users. Acceptance testing reveals errors and omissions in the definition of system requirements because the system exercises actual data in different ways from the test data.

5.4.1 Registration verification

objective	Test on Registration using username, password
Test description	To check whether the user can perform registration
Test Procedures	1. Enter Username 2. Enter address 3. Enter contact no. 4. Enter no. of person 5. Enter destination 6. Enter date 7. Enter e-mail 8. Select the button 'submit' in order to register the user.
Final results	pass
Remarks	

Table 5.3 Registration verification

5.4.2 Login verification

Objective	Test on Login using username and password
Test Description	To check whether the user can login to the webpages.
Test Procedures	<ol style="list-style-type: none">1. Enter Username2. Enter password3. Select the button "Login"4. Wait for the landing page to appear if the login is successful
Final Result	pass
Remarks	

Table 5.4 Login verification

5.5 Conclusion

To give a quality output, testing is necessary. The main test methods carried out in the evaluation process of the BTB system are described in this chapter. The final chapter of this thesis is the next chapter and will describe the overall accomplishments and further work of the BTB system.

CHAPTER 6

CONCLUSION AND SUGGESTIONS

6.1 Introduction

This chapter addresses the results of this entire study, the limitations of the research and, last but not least, the future results of this study. Finally, the various problems highlighted in the earlier chapters are concluded in this chapter. Knowledge of the web portal of the Online Bus Ticketing System was acquired in terms of concept, theory, technical and practical aspects.

6.2 challenges

During the development phase, few challenges are raised:

- Documentation method: lack of English ability to write a free grammar error document, using the spelling and grammar checker to check the documentation is the solution.
- Testing process: The application interface should be able to fit on all physical devices due to the varying size of mobile screen density. The solution therefore uses the Firebase Test Lab, which can automatically test the apps on every virtual device that emulates the device spec and can also check the web pages' resource compatibility.
- Process of implementation: absence of knowledge in the development of websites. Lack of expertise in developing mobile applications. Manage to identify internship websites and gain valuable insight from the company that is responsible for developing a mobile program plus self-learning.

6.3 Advantages

- i. Time-saves.
- ii. It's easy to reserve tickets online.
- iii. Paper saves.
- iv. Simple cancellation.
- V. Capable of booking tickets with just a few clicks.
- vi. The next steps are supported by the user interface.
- vii. It is trustworthy and dependable.
- viii. As promised, service is delivered.
- ix. I should book bus tickets via the Internet for people who are my influencers.

6.4 Disadvantages

- i. Inadequate internet connectivity.
- ii. Personal details are not safe.
- iii. In monetary transactions, there is risk.
- iv. The risk of hackers is present.
- V. Sometimes, without the booking, money is deducted.
- vi. There are some extra fees for websites.
- vii. It's hard to get a refund.

6.5 Future Development

Some of the future research work for this web portal for online bus ticketing that can be taken into consideration are—

- (a) Language Support:-The web portal of the Online Bus Ticketing System could be improved to provide further language support. As a result, this will expand the system's use and interact with more customers.
- (B) Enhanced User Interface:-When this web portal is converted to a real time system the system's user interface can be enhanced to be more attractive, impressive and interactive.
- (C) Increase Task for Administrators:-The task of the administrator can be further improved to include more features to facilitate the maintenance process. For example, to provide a more analytical function for the company, analytical tools, data mining,

other relevant reports and database backup are recommended to be included in this Online Bus Ticketing web portal.

6.6 Conclusion

Currently, bus agencies play a significant role in transport, and they need a strong system to make reservations easier, faster and safer to make reservations reliable. This project was designed to fulfill the requirements of a bus booking system. It was developed in XHTML, PHP, CSS, JAVASCRIPT and in MySQL the database was built. The company can provide its customers with reservation services and information by using this application without limiting office hours or manpower. Not only does it allow customers to book trips from any place with an internet connection around the clock, but it is also intended for the company's use to manage their business processes internally; minimizing human errors and overcoming the problems and problems that arose in the previous system.

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India's No #1 Bus Ticket Booking Company, Volvo, AC and RTC Buses - redBus.in. (2020). Retrieved 12 February 2020, from <https://www.redbus.in/info/aboutus>

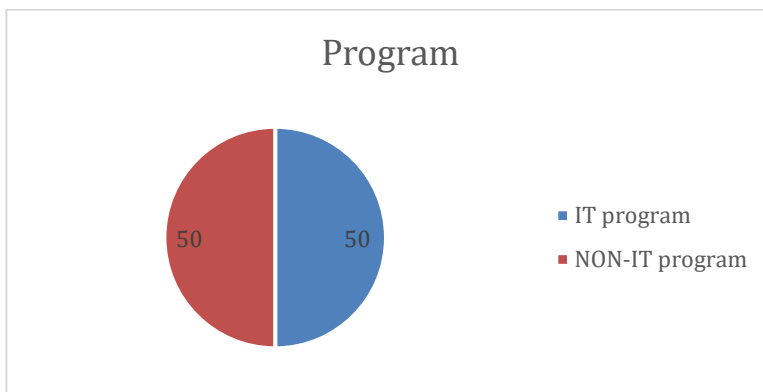
<https://www.iosrjournals.org/iosr-jbm/papers/Vol18-issue6/Version-4/F1806043238.pdf>

APPENDICES A: PROBLEM DISCOVER RESPONSE DATA AND ANALYSIS

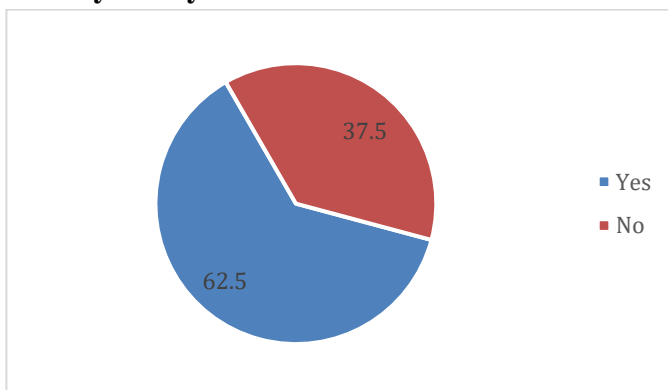
Programme	Did you buy ticket online	Did you prefer online payment for the booking
IT	Yes	Yes
NON-IT	No	Yes
IT	Yes	No
NON-IT	No	No
IT	Yes	No
NON-IT	No	No
IT	Yes	Yes
NON-IT	Yes	No

50 Responses

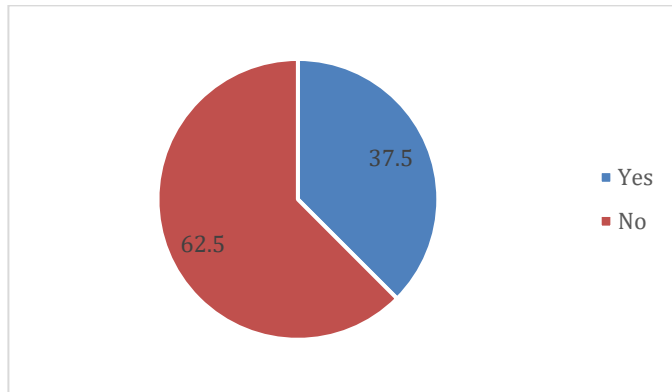
Summary



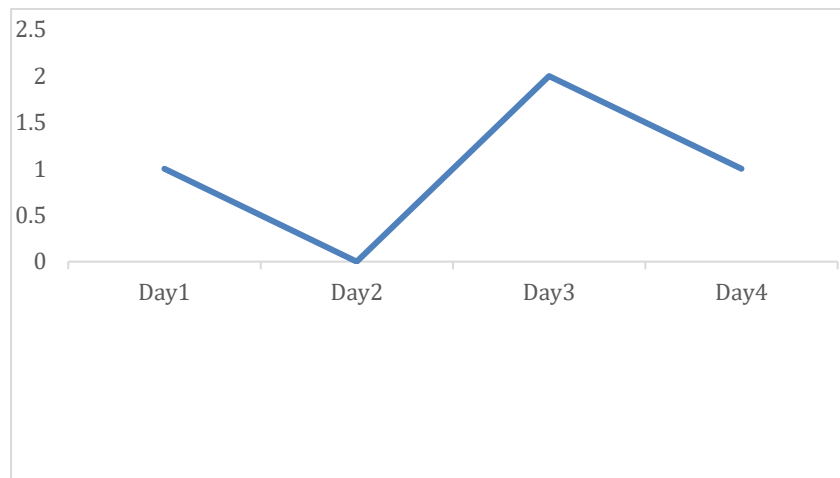
Did you buy ticket online?



Did you prefer online payment for the booking?



Number of daily responses



APPENDICES B: RESPONSE INTERVIEW DATA EXTRACTION

Interview Question		
Why you buy ticket online?	Respond A	It saves time and money.
	Respond B	Risk of identity theft and scam.
Why you prefer online payment for the booking?	Respond A	It saves time.
	Respond B	Risk of card data security .

***All the interview is conduct through social media message and voice call**

APPENDICES C: ACCEPTANCE TESTING RESPONSE DATA ANALYSIS

Education Background	How do you rate the functionality of the system in terms of performance?	How do you rate the graphical user interface design of this system?	How do you rate the system in terms of user-friendliness?
Bachelor IT	Excellent	Good	Excellent
Bachelor Ecommerce	Good	Excellent	Good
Bachelor Multimedia	Excellent	Excellent	Good
Lecture	Good	Excellent	Excellent
Bachelor IT	Excellent	Good	Good

Education Background	How do you rate the operational performance of this system?	Did you encounter any difficulty while using the system	Kindly recommend any improvement(s) or comment for this system (if applicable)
Bachelor IT	Good	No	Good application for study, Great job brother
Bachelor Ecommerce	Good	No	aesthetic interface
Bachelor Multimedia	Good	No	The theme colour is attractive
Lecture	Good	No	high performance interface, no laggy and nice page transition
Bachelor IT	Excellent	No	have multimedia content is better