Travel Assistant

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Submitted to the Faculty of Computer Software Engineering

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(JULY), 2021

CERTIFICATE OF CORRECTIONS & APPROVAL

Certified that work contained in this thesis titled "**Travel Assistant",** carried out by **Nauman Qadeer Ashraf, Ashraf Hussain, Sohaib Ahmed** under the supervision of **Assistant Prof Mobeena Shehzad** for partial fulfillment of Degree of Bachelors of Software Engineering, in Military College of Signals, National University of Sciences and Technology, Islamabad during the academic year 2020-2021 is correct and approved. The material that has been used from other sources it has been properly acknowledged / referred.

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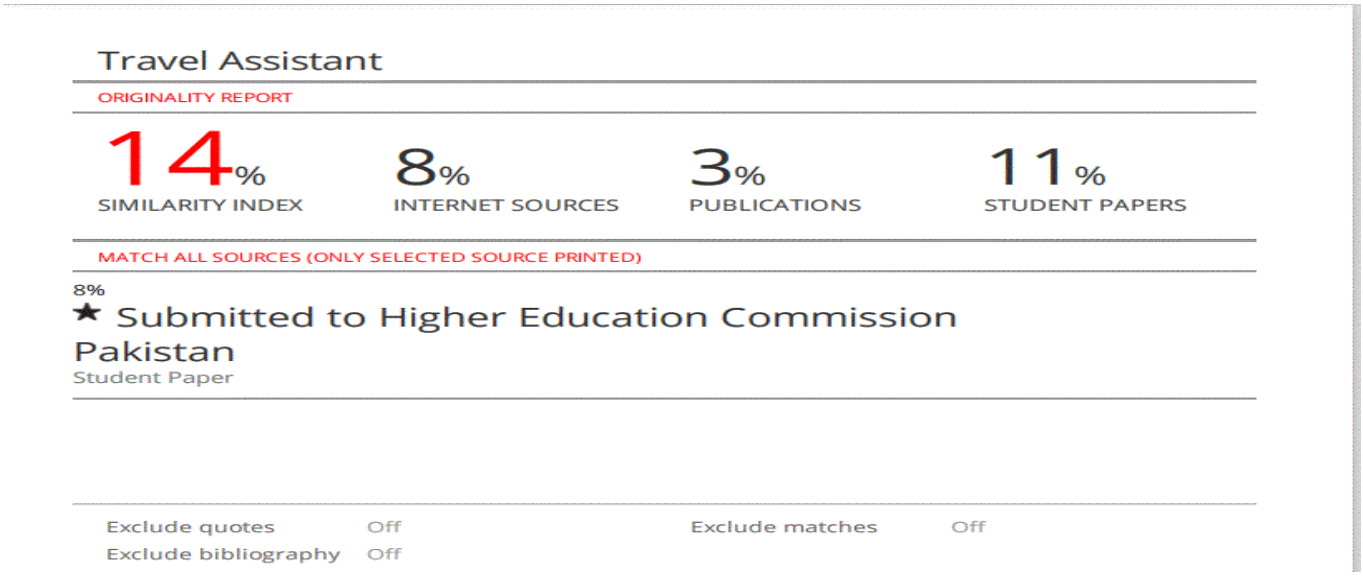

Travel Assistant

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.

Dedicated to my exceptional parents and adored siblings whose tremendous support and cooperation led me to this wonderful accomplishment

ABSTRACT

In this Thesis report, the Travel Assistant (TA) is one of the best on-line ticket for the delivery platforms are playing an important role in the transport industry of the Pakistan. The Travel Assistant takes care of train and bus line services. With the rapid economic development of Pakistan, as well as trains and buses, and passengers have been increasing year-on-year in the country. With such a large number of customers, the problem is with the purchase of the tickets and the tickets were very eye-catching. E-commerce business, it can solve the problem of the disposal of the train, and bus tickets. With the launch of a new online ticketing system (TA) is not only a technological innovation, but it will also help in the improvement of rail and public bus services are, to a certain extent to solve the complex issues raised by the sale of tickets for trains and buses. Booking tickets is no longer a difficult task to do, and you don't have to go to the ticket office to buy a ticket in advance and in the current COVID-19 situation, the Travel Assistant is the easy ticket booking. If you need to go to Karachi, Lahore, Peshawar, Islamabad, or, Multan and other cities in the Pakistan .A simple to make use of the Travel Assistant (TA) for the tickets to be sold in the very center of the city. It has an Android app available in the Play Store, called the Travel Assistant, Ticket service system.

Table of Contents

Chapter 1: Introduction

1.1 Overview

This document contains all information with regard to the development of the bachelor's thesis is the development of the software.

Travel Assistant (TA) is an Android and a web application that runs on a central location on your network. This is a list of the "ARRIVAL" - software that is used at the train station and bus stops of the public transport network, it is a tool that is required to make a reservation, cancel a reservation, and the different types of route requests, to ensure a quick booking. The Travel Assistant is designed to make the management of the informatizing traditional databases, ticketing, and travel. It stores all your data from the user, or the information about the trains, and buses; and for more information. Our customers sometimes have to line up in a queue in order to buy a bus ticket and the information of the request, and this causes a lot of discomfort.

However, IT can be easy for its customers for the purchase of a bus ticket, for a fee, and request information online.

1.2 Description of the Problem

In rail transport, or on the bus, and now a days it is possible to book a ticket, you need to get to the train station, or you can go to the Pakistan Railway pages in order to book a ticket, which is often not available to book, on a bus, you will need to deliver. We would like to launch an app that will help users to book tickets is online, via the app. They will be able to pay directly through the app, so you don't have to wait in long lines. Push to roma in the house, and then go to the train station, which is the liberation from the hustle and bustle and the hustle and bustle of the application process.

1.3 Purpose

The development of a system that can be used to provide the convenience for the users who want to travel by train or by bus. We want to be a service fee based on the row, or to the bus users. It will also help us in the development of an effective communication with the people.

1.4 Intended audience

The project could be proved helpful to anyone who wants to use railway or via Bus as their means of transportation.

1.4.1 Project Supervisor: It will help to supervise the project and guide the team in a better way.

1.4.2 Development Team: It will help the developer to develop the product and to trace back the functional requirements.

1.4.3 Testing Team: It will help the testers to understand the constraints.

1.4.5 Customers (Users): The potential stakeholders of the system, who are interested in booking or reserving using their Android Phone.

1.4.6 Evaluation Team: Evaluation team which will evaluate the progress of Project phases and activities.

1.5 Project scope

All of the manual work will have to be transferred to the computer, so that the workload of the employees will have to be reduced. The database will be stored in a computer system, rather than a bunch of registers, so that the access to the game, it will be easier and faster. In the Travel Assistant app is an easy-to-use, self-service app, which enables customers to purchase tickets online. This app is very useful for anyone who has ever wanted to be, this app can be use as a travel companion. Many of the bus transport network of organizations do not have online sales and the systems for their customers, this app will be very useful for the organizations

1.6 The Ultimate Goal

The development of a system that can be used to determine the number of people living in a certain place, with the use of images to use.

Table 1 - Deliverables

Sr.	Tasks	Deliverables
1	Literature Review	Literature Surveys
2	Requirements Gathering	SRS Document
3 4	Application Design	Design Document (SDS)
5	Implementation	Implementation on computer and drone with a live test to show the accuracy and ability and the project
6	Testing	Evaluation plan and test document
	Deployment	Complete project

1.7 Events

At the time of this writing, the document was not transferred to all of the requirements are to have the same priority.

This document is primarily concerned with the general requirements. This document complies with the requirements of the FYP, CSE Dept. GCS and NUST.

First, it shows the overall picture of the project, and then you have all of the features and parameters that will be analyzed in detail.

In this article, it is assumed that you will have to calculate the number of people living in a particular area, or a target (for example, with the management, safety, etc., etc. At the time of writing of this document, it is assumed that there is not a System / Subsystem Specification (SSS), documents or other written agreement is in place.

1.8 The reading of the Deals and the target audience

These are the requirements of the Project, the scope of the features, functions, and technologies. It describes in great detail all of the features that is intended for the design. Functional and non-

functional requirements have to be considered. The system functions will be discussed in detail, with examples of how to use it and its limitations. The System's interface, which is of the order of. This document is intended for:

1.8.1 Developers (team)

To make sure that the project has been created in accordance with the requirements set forth in this document.

1.8.2 Testing: project team Manager)

To ensure that all the interfaces, as shown in the document.

1.8.3 Users From: (Seller)

To capture all the information about the project, and the manner in which it has been designed for the use on / respond to incoming errors, and to make recommendations that are more relevant and functional**.**

1.8.4 The authors of documentation (project team)

To understand the controls and how they should disclose what skills were needed, how they will behave in response to some action by the user, as well as some of the possible faults in the system could occur, and what are the solutions to all of this is an accident, etc., etc.

1.8.5 The Project manager will: (Mobeena Shehzad)

This document will be used by the project manager for the audit of the management of the full and correct understanding and application of the requirements during the life cycle. Project Evaluators: (CSE Dept. MCS)

To know the span of the project and assess the project throughout the development.

Chapter 2: Software Requirements

2.1 Introduction

In the fast-moving world of technology everyone is running behind time. Thus, the main motivation of technology is to produce a time and cost-efficient product. In the railway and Bus station online ticket booking or e-ticketing can be introduced for facilitating the users to book ticket on internet via a website. The printout of the ticket may be used for validation. It necessitates the use of technology to minimize the effects of this current disparity by building an android–based application to enable the citizens to reserve tickets to the concerned destination efficiently.

2.2 Overall Description

Typically, four stages are involved in this App:

2.2.1 Register or Login,

2.2.2 E-Services

2.2.3 Manage reservation.

2.2.4 Destination location/ Distance traveled.

The explanation of the above steps is.

2.2.1 The user will open the application where he will be asked to login with his credentials. If he does not have any credentials than user will be required to register first and then login with his credentials. The users who are already registered can directly login to the application and start using it. To register a new account the user will have to provide his full name, Gmail, mobile number and password. The mobile number and password will be later used to login to his account.

2.2.2 After the user has successfully registered and login to the application, he will be able to access the application. Now in the application he will have a lot of E-Services. The E-

Services include Ticket Booking, Train and Bus Schedule, special discounts, previous bookings etc.

2.2.3 After you have booked a ticket, you can always login and see the status of your ticket where you will be given the booked/not booked status, data/time of train and bus arrival or if any kind of delay has occurred.

2.2.4 You can manage your train and bus reservation. You will be able to see information on your android phone screen.

2.3 Operating Environment

Users from the general public. Mobile phones can be used to book tickets online, and at home. The back-end database will be hosted in a SQLite database. Get the flutter SDK. An initial plan for the project is coded in the Dart for flutter using Android studio 4.0.

2.4 Characteristics of the System

This chapter describes the organization of the functional requirements for the project team members.

Count with the Travel Assistant, the system function is: -

2.5 Requirements

It is necessary to provide the highest quality equipment for the project, so the project in the estimated budget in the range of 1 to 1.5 lac).

2.6 Product Features

The numbering of the People, it is a much-studied and is commercially operated facility. This chapter describes the main technologies used for the project. The main features of TA are highlighted below:

2.6.1 Register

2.6.2 Login

2.6.3 Selecting service (bus/train)

2.6.4 Making Reservation

2.6.5 Insert payment information.

2.6.6 Previous Booking record

The detail of main features

2.6.1 Register

Every user will register with Travel Assistant (TA).

2.6.2 Login

User After successfully registered will be prompted to login to TA.

2.6.3 Selecting service (bus/train)

TA will allow users to reserve ticket by their location to desired destination.

2.6.4 Making Reservation

After booking, customer will be able to track status of reservation.

2.6.5 Insert payment information.

User can enter his/her payment requirements (Name, password etc.) then this application will give to user's different payment methods i.e., Jazz cash, Bank transfer etc.

2.6.6 Previous Booking record

Travel Assistant will keep the previous record of customers, and customers will also be able to see their previous reservations.

2.7 Sample data

User first need to install this application from Google Play Store. After install User need to sign up and then excess this application .Users need to following requirement to sign up (User Name, Password, Email-address, Contact Number etc.)

2.8 Assumptions

2.8.1 The most important factors in the development of a Travel Assistant, that is, the system should be available 24/7, as the clients of the application at any given time.

2.8.2 Officials were honest and to give you the best possible service.

2.8.3 People are getting ready for you to pick it up and buy the tickets with the help of the app you're in.

2.8.4 The server is able to provide a large amount of the reservation request, as there will be a lot of plus points for some special cases).

2.8.5 It is the Users of the Travel assistant app that is based on an Android phone with internet access.

2.9 Non-functional Requirements

The project will focus on non-functional requirements, and performance is very important. Some of the non-functional requirements, which are.

2.9.1 Performance specifications

• All information must be typed

• All information should be verified

• Access to the Internet to the user.

2.9.2 Security Requirements

It is fast and responsive. However, there may be situations where the system does not respond, such as with the application, the traffic increases significantly.

2.9.3 Security Requirements

Information and data is transmitted from the source to the destination, and every user account of the data must be secure. There are safety precautions to be taken in order to ensure that the information is safe and secure.

2.9.4 Software quality attributes

2.9.4.1 Reliability

The application must provide a reliable service for the user. The product is reliable, due to the fact that all functions are tested, accepted, and it works flawlessly. All of the fixtures and the tests need to be completed. All of the punishments to be administered.

2.9.4.2 User-friendliness and ease-of-use

The complete software has a better user interface with an interactive and attractive options/features, in a nutshell, the system needs to be friendly and helpful. Use Cases

2.10 Description

This section list use cases for Travel Assistant (TA). The various user classes identified the following use cases and primary actors for the TA:

2.10.0 for Actor

Actors	Use Cases
Administrator	1. Login 2. Edit/View Profile 3. Manage Users 4. Generate Report 5. Manage reservations
Manager	1. Registration 2. Login 3. View Profile 4. Check reservation Status

Customer	1. Register/Login 2. Book reservation 3. Search 4. Check Reservation Status 5. Notifications/Alert

2.10.1 Use Cases Description

2.10.1.1 Manage Users

Use Case ID:	PC12		
Use Case Name:	Manage Users		
Actors:	Administrator		
Created By:	Nauman Qadeer	Last Updated By:	Ashraf
Date Created:	05/12/2020	Date Last Updated:	06/12/2020
Description:	1. Admin has to login to the system to manage users i.e. create, read, update, and delete user profiles.		
Preconditions :	1. Admin has to login.		
Post conditions:	1. The System must record the change.		
Normal Flow (primary scenario):	1. The actor creates, reads, updates, and deletes the user details. 2. Click on create or read or update or delete button as required.		
Alternative Flows:	a. The actor will contact the system maintenance team to check if there is some error with database systems and has to resolve the error.		

2.10.1.2 Login

Use Case ID:	Pc22		
Use Case Name:	Login		
Actors:	Administrator, Managers, Users		
Created By:	Nauman	Last Updated By:	Nauman
Date Created:	05/12/2020	Date Last Updated:	06/12/2020
Description:	A user tries to login to the system.		
Preconditions :	1. User has to open the login page first.		
Post conditions:	1. If the use case was successful, the actor is now logged into the system. If not the system state remains unchanged.		
Normal Flow (primary scenario):	This use case starts when an actor wishes to log into the System. 1. The system requests that the actor enter his/her name and password. 2. The actor enters his/her name and password. 3. The system validates the entered name and password and logs the actor into the system.		
Alternative Flows:	1. **Invalid Name / Password** If in the *Basic Flow* the actor enters an invalid name and/or password, the system displays an error message. The actor can choose to either return to the beginning of the *Basic Flow* or cancel the login, at which point the use case ends.		

2.10.1.3 Registration

Use Case ID:	Pc33
Use Case Name:	Registration

Actors:	Managing Staff, Users		
Created By:	Nauman	Last Updated By:	Ashraf
Date Created:	06/12/2020	Date Last Updated:	06/12/2020
Description:	A user tries to sign up in to the system.		
Preconditions :	1. User has to open the sign up page first.		
Post conditions:	1. The System must record the membership information of the new member.		
Normal Flow (primary scenario):	1. The member enters the membership details on the screen and clicks the sign up button. 2. The system checks for the availability of the username. 3. The system generates the membership ID. 4. The system records the membership information of the new member, in the database.		
Alternative Flows:	1. The member enters the membership details on the screen and clicks the sign up button. 2. The system checks for the availability of the username. 3. The system displays an error report if the username is not available.		
Non-functional Requirements	The system must perform an encoding technique such as hashing to save all passwords securely.		

2.10.1.4 Reservations

Use Case ID:	Pc44
Use Case Name:	Reservation
Actors:	Customer

Created By:	Nauman	Last Updated By:	Ashraf
Date Created:	06/12/2020	Date Last Updated:	06/12/2020
Description:	User intends to book a train ticket		
Preconditions :	1. User accesses the reservation form.		
Post conditions:	1. The system registers the customer.		
Normal Flow (primary scenario):	1. The user fills in his credentials including name, phone number in the specified fields. 2. The user types in the complaint-description field, all the details about his complain in 500 characters.		

2.10.1.5 Check Reservation Status

Use Case ID:	Pc50		
Use Case Name:	Check Reservation Status		
Actors:	Administrator, Manager, User		
Created By:	Nauman	Last Updated By:	Ashraf
Date Created:	06/12/2020	Date Last Updated:	06/12/2020
Description:	A user has to login to the system to check the status of the reservation.		
Preconditions :	1. User has to open Check Status page first. 2. User has to know the Date / ID of the booking to check the status.		
Post conditions:	1. The System shows the status of Bookings.		

Normal Flow (primary scenario):	1. User enters Date / ID of the Bookings. 2. System shows the status of the Reservation.

2.10.1.6 Update Reservation Status

Use Case ID:	Pc44		
Use Case Name:	Update Reservation Status		
Actors:	Concerned Manager		
Created By:	Nauman	Last Updated By:	Sohaib
Date Created:	06/12/2020	Date Last Updated:	06/12/2020
Description:	The system will enable the concerned supervisor to update the status of the reservation after having seat is booked.		
Preconditions :	1. User has to login to the system. 2. User has to open the complaint status form of the concerned reservation.		
Post conditions:	1. The system will update the status of the reservation.		
Normal Flow (primary scenario):	1. The user selects the booking and updates its status. 2. The system records the changes.		

Chapter 3: Design and Development

3.1 Introduction

It's an overview of the entire SDD with Purpose, Scope, System Architecture, Data Design, Component Design, Human Interface Design, Requirements Matrix, Acronyms, Abbreviations, References, Unified Modeling Languages (UML) Diagrams and Overview of the project. The aim of this document is to present a detailed account of the project Ticket Reservation System.

3.2 Purpose

This document will define the design of our "Travel Assistant" project. It includes specific information regarding expected input, output, classes, and functions. The connections among the classes to convene the desired requirements are given in the detailed figures in the register.

3.3 System Overview

3.3.1 Product perspective

The web app will be designed to help a person who want Travel passengers can book the tickets online directly from their smart phones or through website and a received message to their own phones is enough for travelling a desired distance.

3.3.2 Product Functions

The main features of Travel Assistant (TA) are highlighted below:

3.3.2.1 Register

3.3.2.2 Login

3.3.2.3 Selecting service (bus/train)

3.3.2.4 Choose condition type (ac/non ac)

3.3.2.5 Making Reservation

3.3.2.6 Insert payment information

3.3.2.7 Cancel reservation

3.3.2.8 Faster Database access

3.3.3 The Android/web Application will work as following:

3.3.3.1 First you must download the TA Mobile application and then create your account.

3.3.3.2 To create your account in application you have to enter your mobile number, enter your name, email and password of your choice. After creating your account, select travelling from and travelling to with the date of departure.

3.3.3.3 Then Click the option “Search”.

3.3.3.4 Times listing will appear upon pressing “Search”, Select departure time in which you want to travel.

3.3.3.5 Select your seat numbers and proceed.

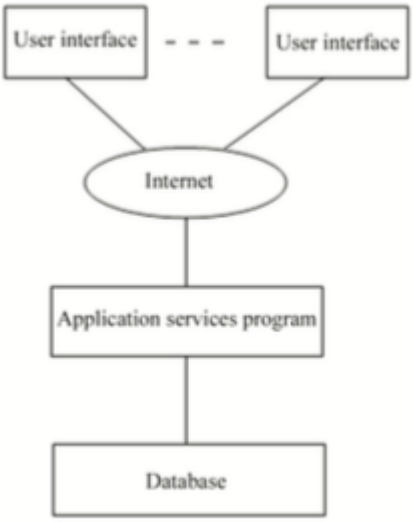
3.3.3.6 Then click to proceed your payment, select payment method and press Pay, Complete the payment procedure.

3.3.3.7 Upon successful booking you will receive confirmation to your mobile screen.

3.3.4 System Architecture

The system architecture of the system, and a typical three-layered structure: the database layer; the application layer and user interface layer. The database is used to store information including identification information, ticket information, about the time of ordering, ticket information, and any other relevant information. In the application layer, application service layer is the main body of the three-layer structure, and the functions of the system, and the business logic can be handled at this level. At this level, the system's business logic is to be closed, and the application service interfaces are available for the user interface layer, and a system of modules between the function calls. Level of Service-The application works with the data stored in the database in accordance with the task that has been assigned the highest level of customer service. - User friendly interface-level. The user interface layer is a software program that is running on a remote computer. It gives to the services provided by the server to the user. When the user selects a service, the application

will send a request to the server. If the server does not return the results, which show it to the user



3.3.5 Decomposition Description

Now we will discuss the description of the decompositions of the system using different UML diagrams.

3.3.6 Use Cases

3.3.6.1 Login

Use case	Log in
Pre-condition	The User has to access the application and open the login section and User is previously added in the system.
Post-condition	The user is successfully logged into the system.
Basic Path	1. User must enter username and password. 2. The username and password given by the user are matched from the entries in the database. 3. If match found, user will see dashboard of application.
Alternative path	-
Exceptional path	User is not registered with the system or User entered wrong username or password.

Table 1-1 Use Case 1

3.3.6.2 Login Error

Use case	**Login Error**
Pre-condition	1. User is not Registered 2. User Entered wrong username or password.
Post-condition	User cannot access the dashboard of Android/web Application.
Basic Path	1. User access login form and entered his data.
Alternative path	-
Exceptional path	User is nor connected to internet.

Table 1-2 Use Case 2

3.3.6.3 Registration/ Signup

Use case	Registration
Precondition	1. User is not Registered
Postcondition	User data is added to the system and now user can access the dashboard of Android/web Application.
Basic Path	1. User access Sign up form and entered his data.
Alternative path	-
Exceptional path	User entered something invalid.

Table 1-3 Use Case 3

3.3.6.4 Upload info

Use case	Upload information
Precondition	1. User is registered. 2. User has booking
Postcondition	booking info s successively uploaded
Basic Path	1. User login and after that he/she uploaded info about booking which system.
Alternative path	-
Exceptional path	Uploaded wrong information.

Table 1-4 Use Case 4

3.3.6.5 Check system

Use case	Model
Precondition	User check time, fare and date. .
Postcondition	User check which system is best for travel
Basic Path	1. User login. 2. User check which system is best for travel 3. User check time, fare and date. .
Alternative path	-

Exceptional path	During booking ticket some error coming from server or user side.

Table 1-5 Use Case 5

3.3.6.6 Display Results

Use case	**Displays result**
Precondition	1. User is registered. 2. User check which system is best for travel
Postcondition	Result is displayed on screen.
Basic Path	
Alternative path	-

Exceptional path	Server down or User lost internet connection.

Table 1-6 Use Case 6

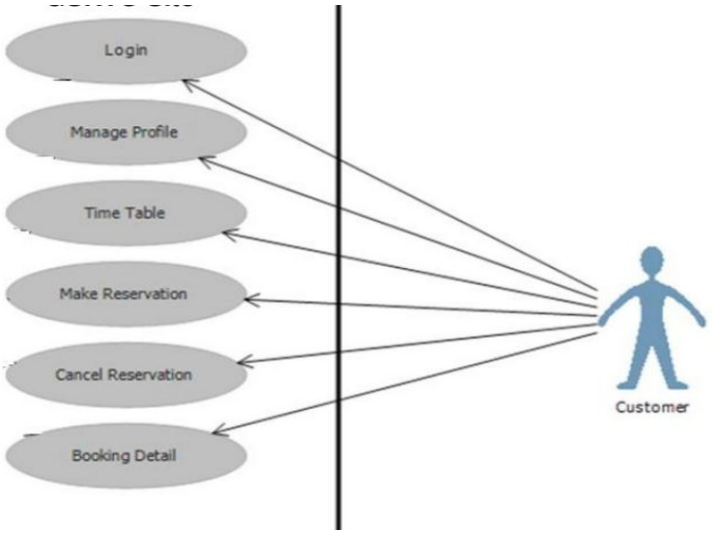
3.3.7 Use-Case (Diagrams & Narratives)

We use a use case to explain a set of predefined actions that can be started by an actor that can be performed by a system and can affect in output to a particular actor. This diagram bases its importance in providing a description of the behavior structure of the system.

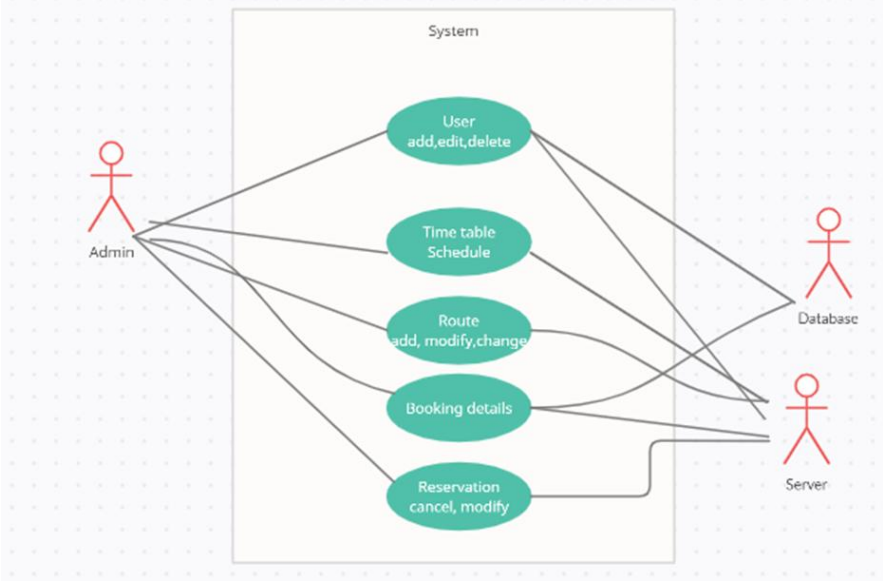
In the description we find the following information:

Use case diagram for Bus & train

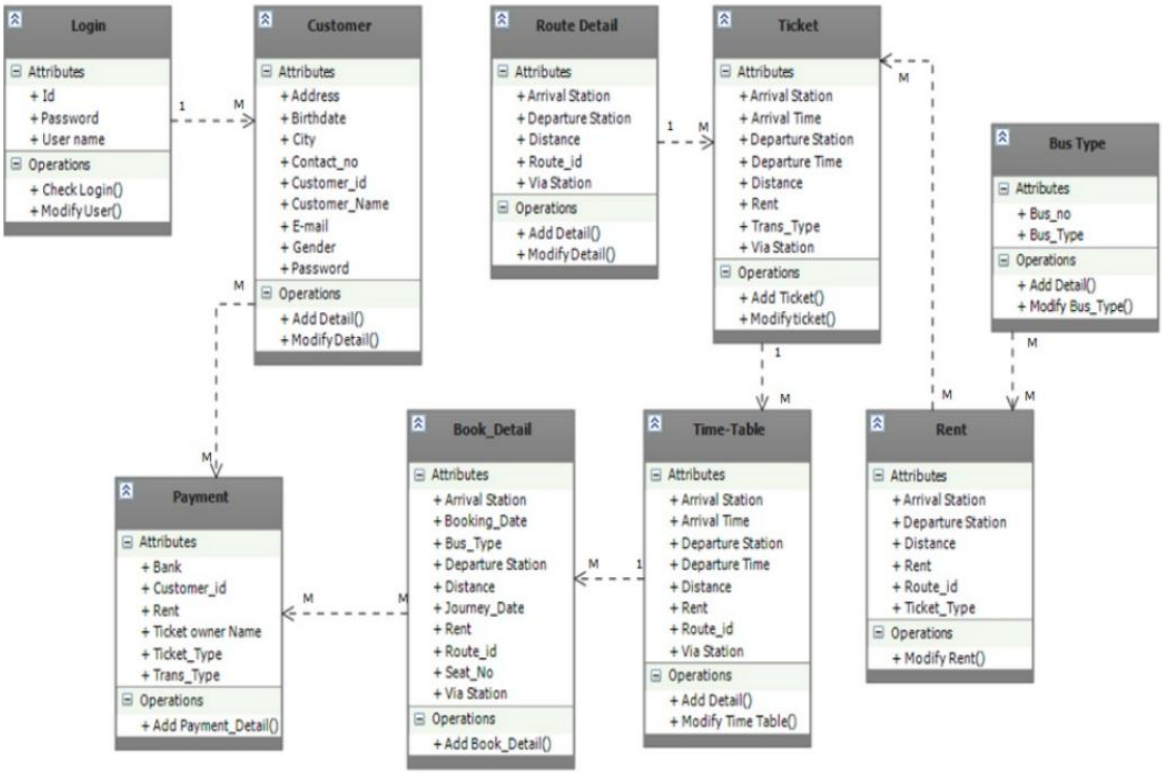
3.3.7.1 For Customer



3.3.7.2 For Admin

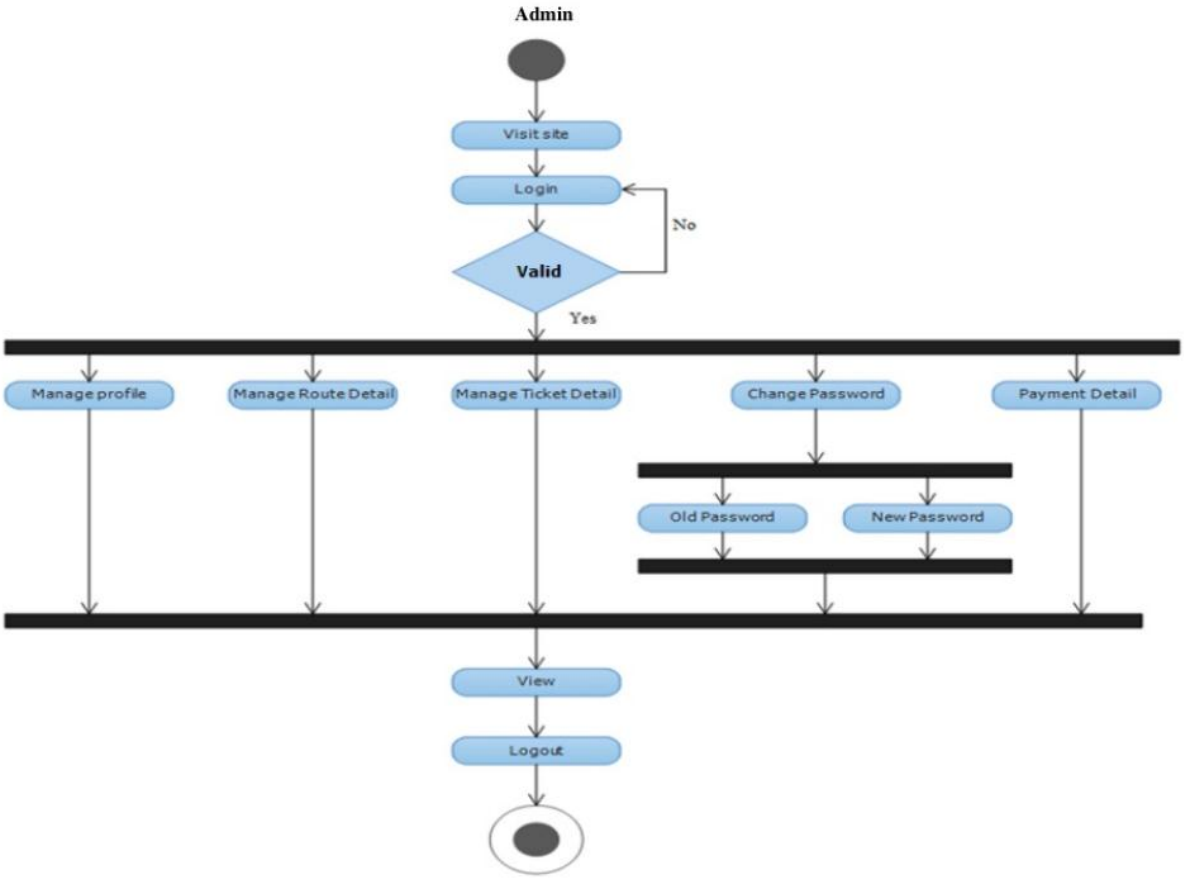


3.3.7.3 Class diagram

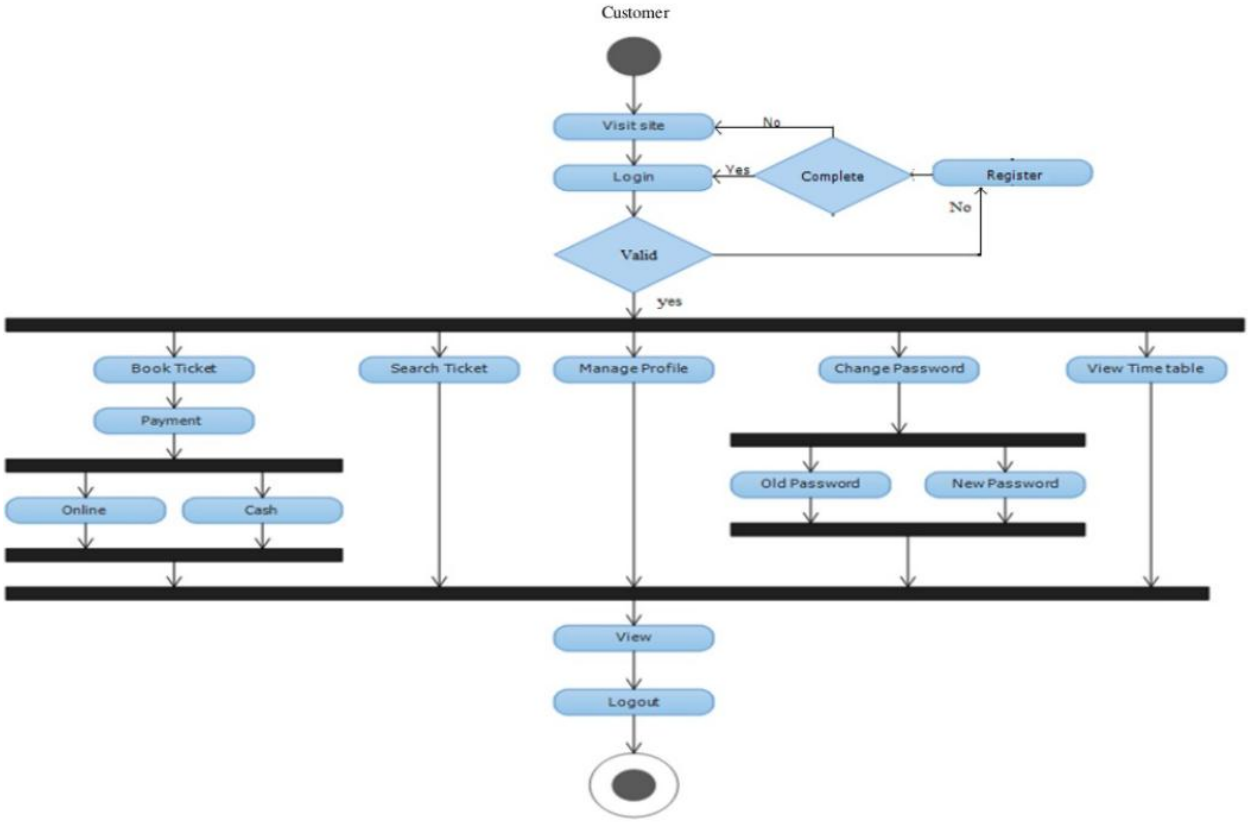


3.3.7.4 Activity Diagram

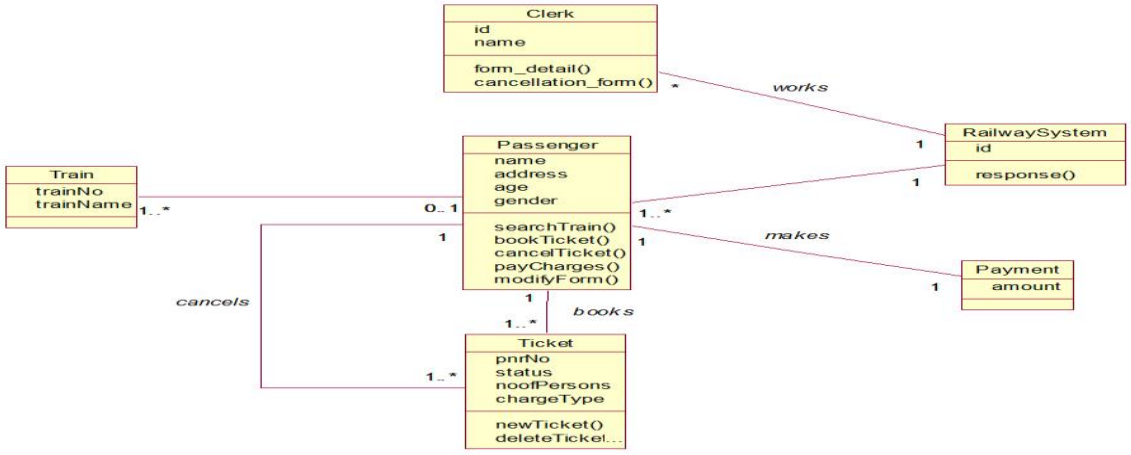
3.3.7.4.1 for ADMIN



3.3.7.4.2 for CUSTOMER



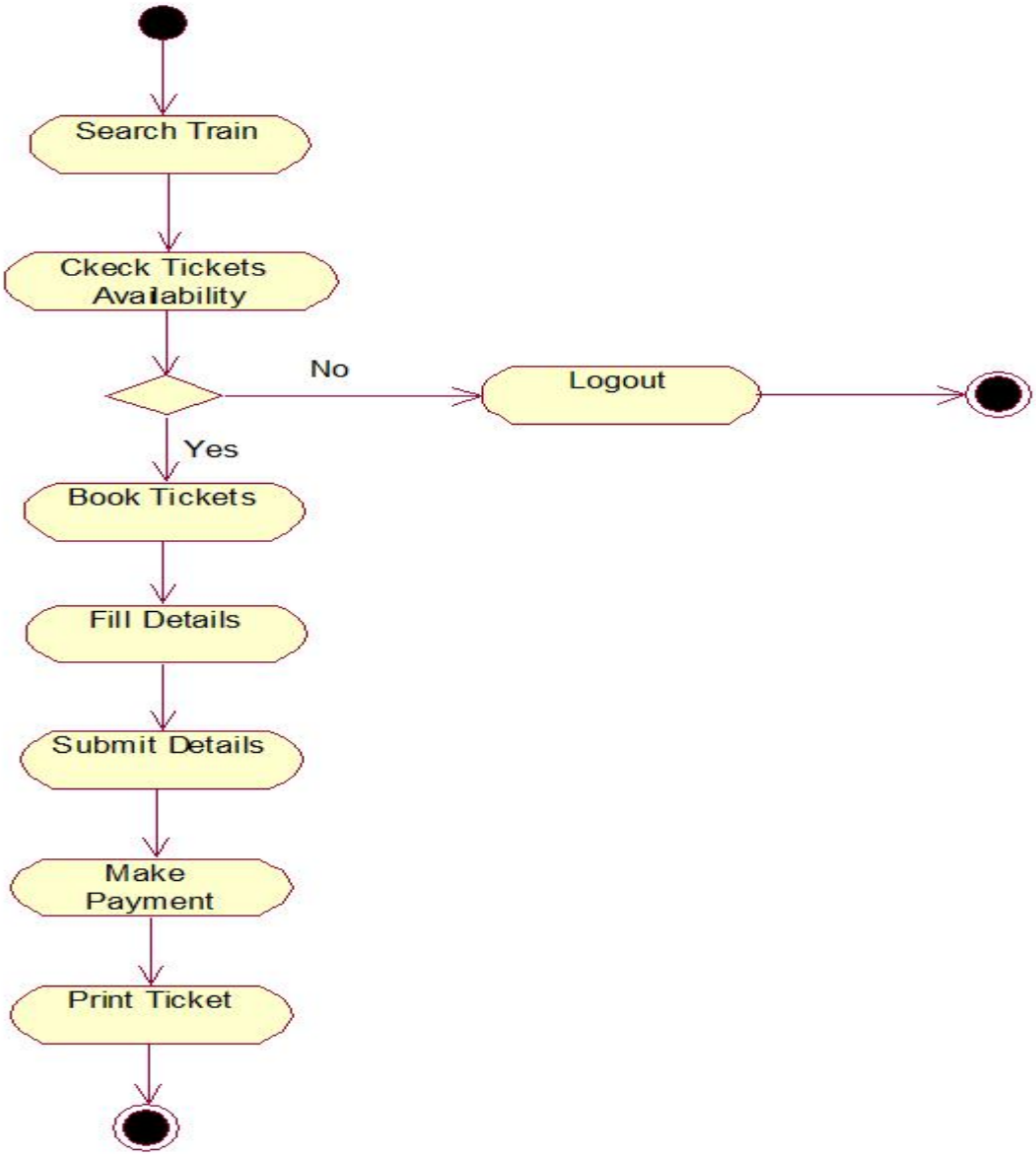
3.3.7.5 Class Diagram for Train



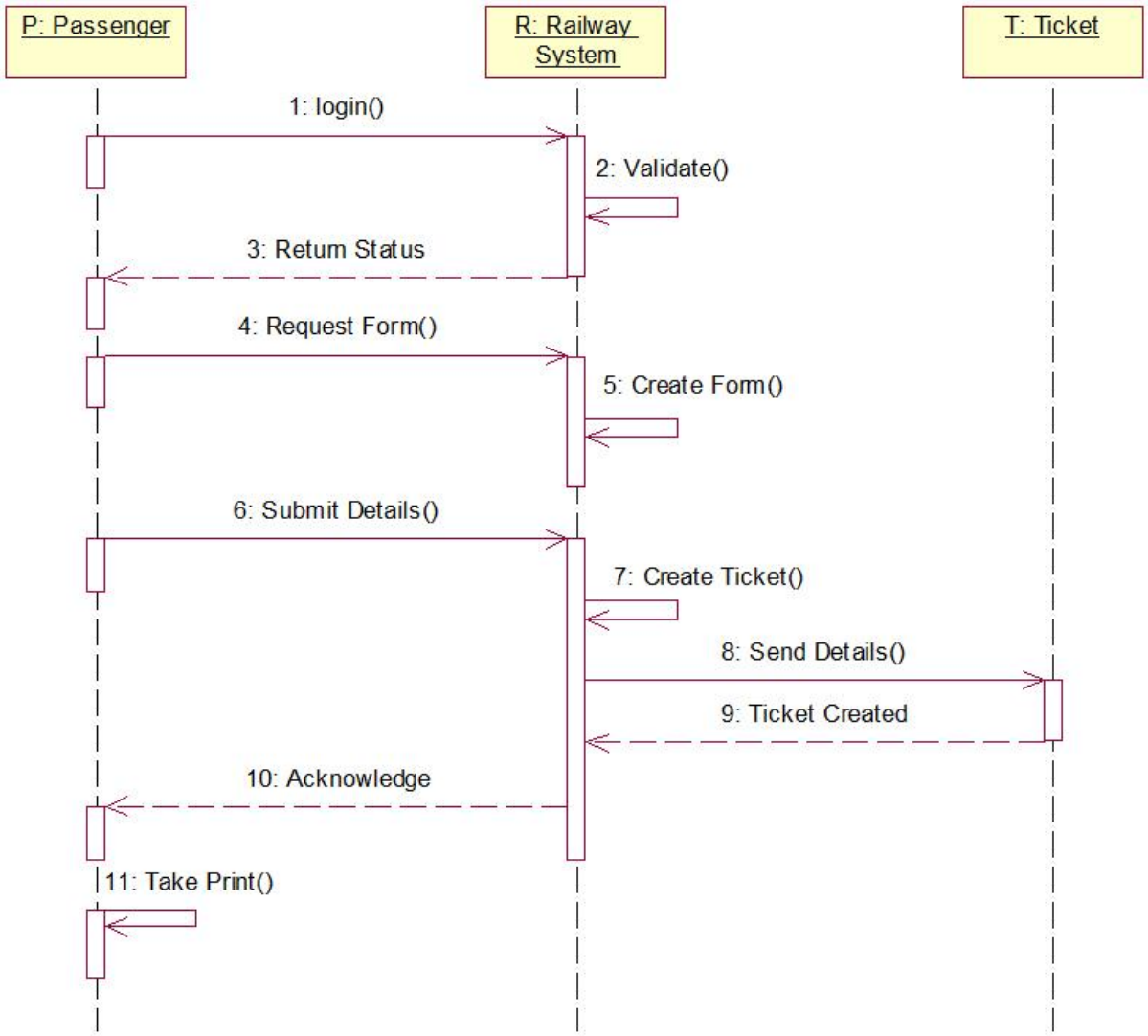
The class diagrams shown have three sub systems to we generate classes to divide and simplify the execution.

- Login: Verify and grant access to registered user
- Signup: Register new User by entering data.
- Buying the Ticket: Customer must buy a ticket before you board, or risk getting a penalty
- Searching for ticketing systems (Railway or Bus)
- Validation for Pin Code
- Notifications: Customers will be get notified by latest train schedules and other events.

3.3.7.6 Activity Diagram:



3.3.7.7 Sequence Diagram:



3.4 Design Rationale

Systems engineering comprises the development of the business processes and the design of the database. Business processes design and implement a variety of functions as well as the relationships between the different functions. The design of the Database is to mainly implement the tables and the relationships between the tables.

3.5 The design of business processes

The following process will take place after an in-depth analysis of the business functions of a Travel Assistant and the online booking system.

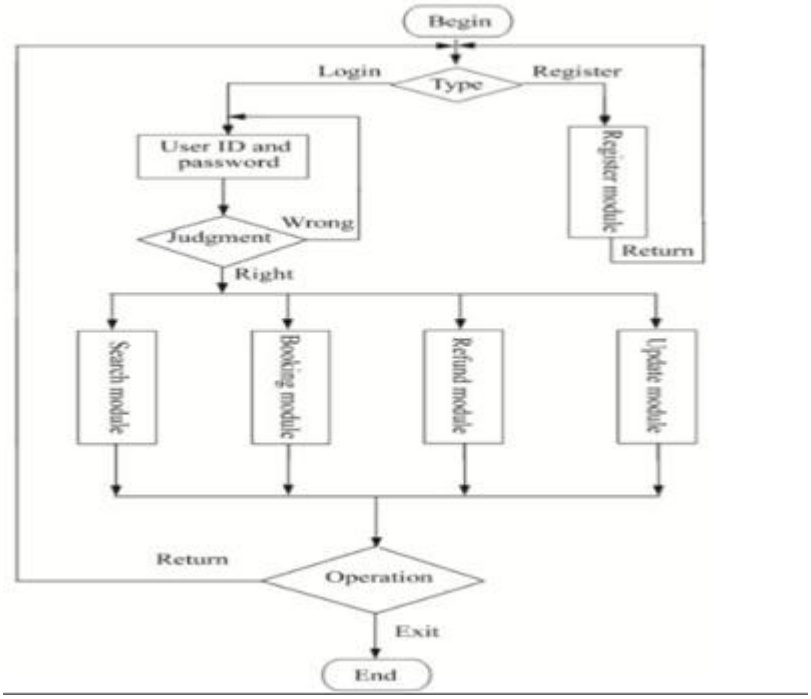
3.5.1 Customers to record personal information, so that they will be able to book tickets in the system.

3.5.2 Your customers are looking for in the train, through the system, the information is provided and see if they are the right ones.

3.5.3 Customers book tickets via the user-friendly interface.

3.5.4 The system displays information about the result of the ordering of the services.

3.5.5 Customers can choose to cancel the operation, for whatever reason, so the data is removed from the system.



System Business Process

3.6 Data Description

The mechanism/things, the storage of the data and information it is very simple, it has its own Android app that available on the Play Store, called the Travel Assistant (TA), Ticket bookings in the App.

With the launch of a new online ticketing system (AS) is not only a technological innovation, but it will also help in the improvement of rail and public bus services are, to a certain extent to solve the complex issues raised by the sale of tickets for trains and buses. To book tickets, it is currently not a very hard task to do, and you don't have to go to the ticket office to buy your advance tickets to the current COVID-19 situation and with the easy booking of tickets through THEM. You want to travel to a foreign city, in Pakistan (Karachi, Lahore, Peshawar, Islamabad, whether in Multan, etc.) with the help of this app. A simple to make use of the Travel Assistant (TA) for the tickets to be sold in the very center of the city.

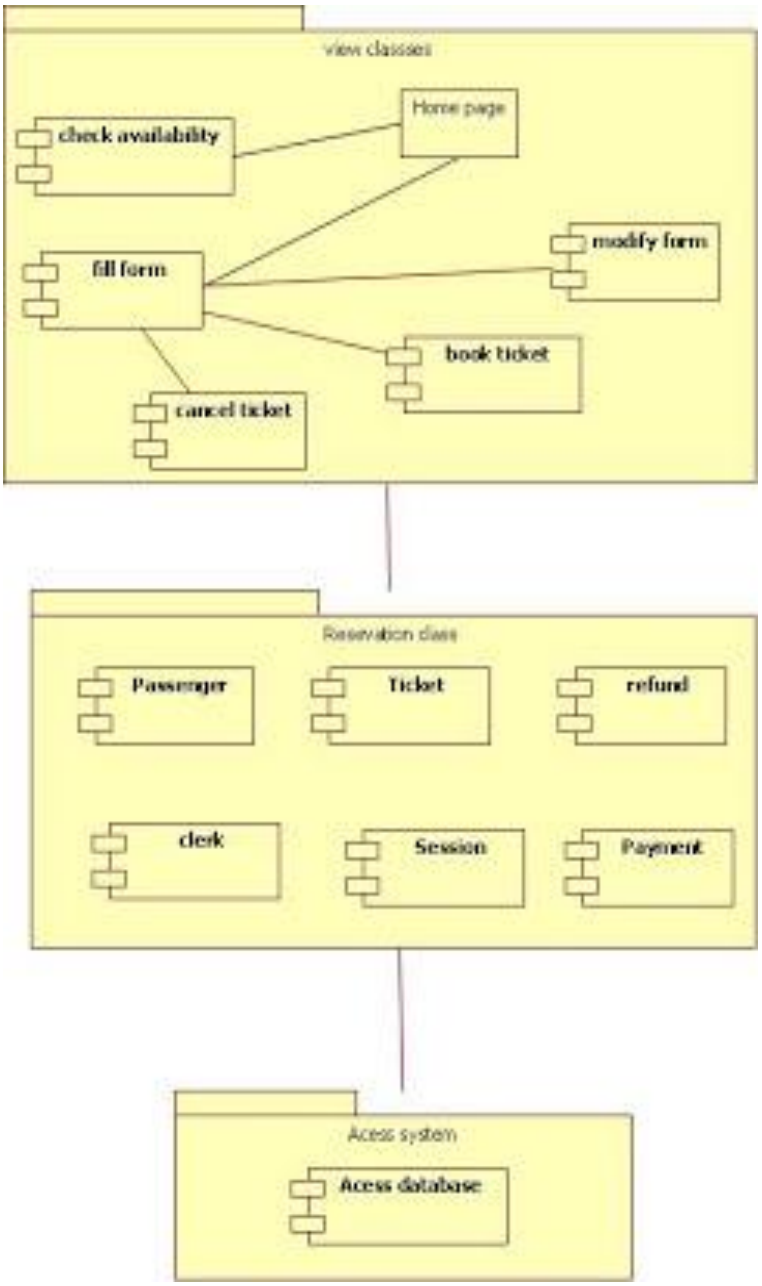
The Travel Assistant is an Android and a web application that runs on a central location on your network. This is a list of the "Travel Assistant" software, to be used at the train station and bus stops of the public transport network, it is a tool that is required to make a reservation,

cancel a reservation, and the different types of route requests, to ensure a quick booking. The Travel Assistant is designed to make the management of the informatizing traditional databases, ticketing, and travel. It stores all of the information about the clients, as well as trains and buses, and the details of the reservation. Our customers sometimes have to line up in a queue in order to buy a bus ticket and the information of the request, and this causes a lot of discomfort.

However, the Travel Assistant, the customer can easily buy a bus ticket, for a fee, and request information online.

3.7 Component Design

This section describes all the modules of processing. These modules have been assigned responsibilities. Modules are further sub classified into components.


view classes
Home page
check availability
modify form
fill form
book ticket
cancel ticket
Reservation class
Passenger
Ticket
refund
clerk
Session
Payment
Acess system
Acess database

3.8 Ticket booking Application

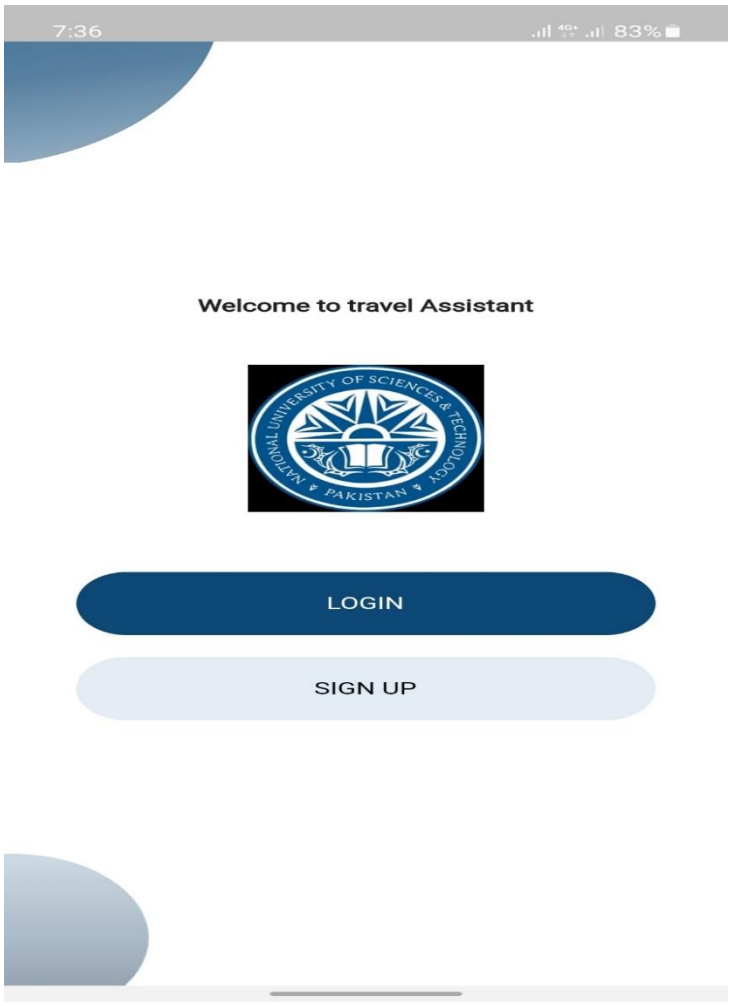
Ticket booking is a widely studied and commercially exploited subject. This section briefly reviews the typical technologies used for our project.

3.9 Mobile Application

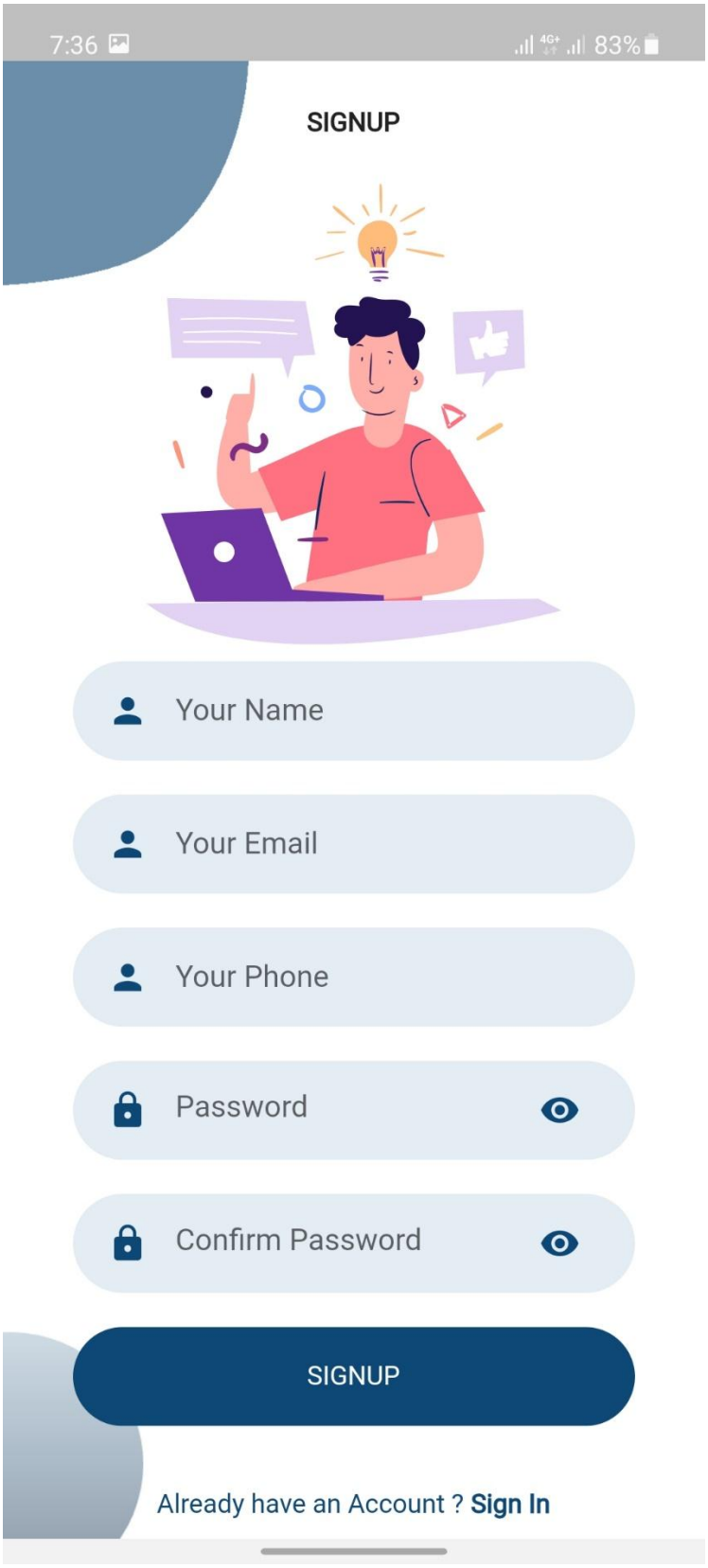
The user must have a mobile phone with internet access and users can install this application from play store. After installing user can sign up and login process then user can excess this application.

3.10 Interface Diagrams

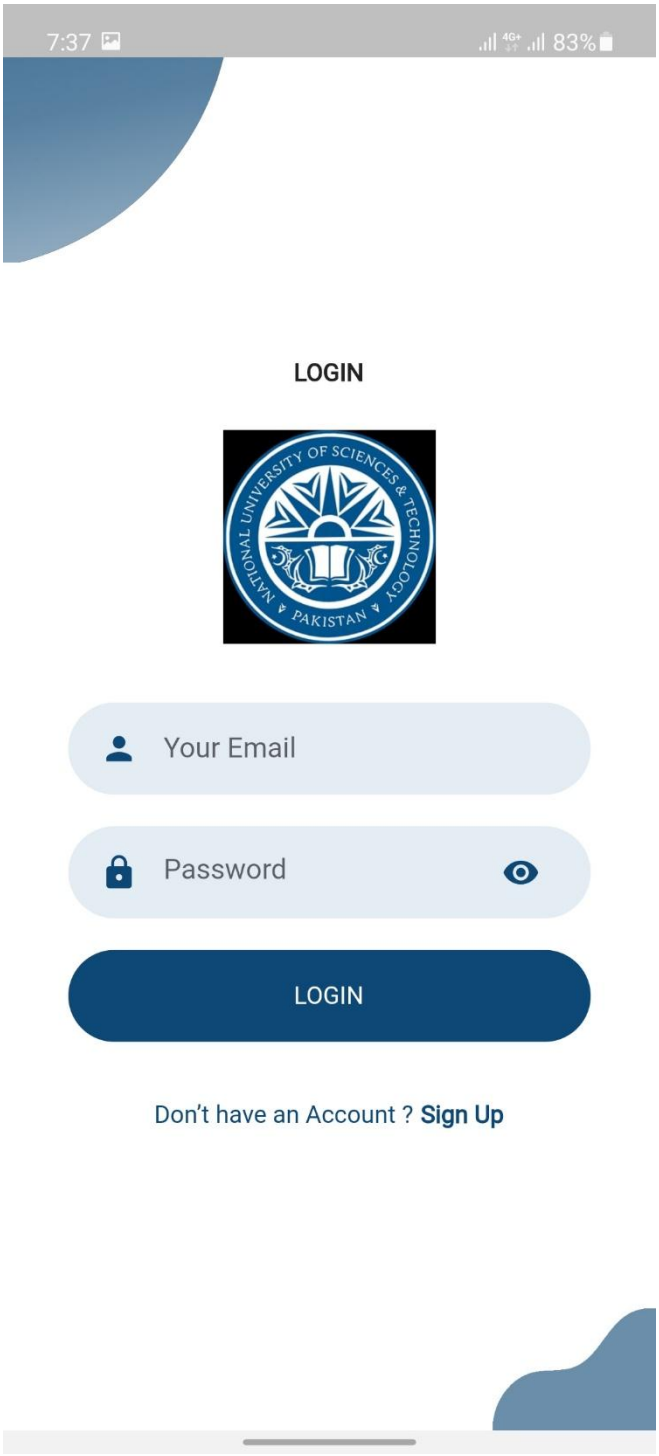
3.10.1 Welcome Screen



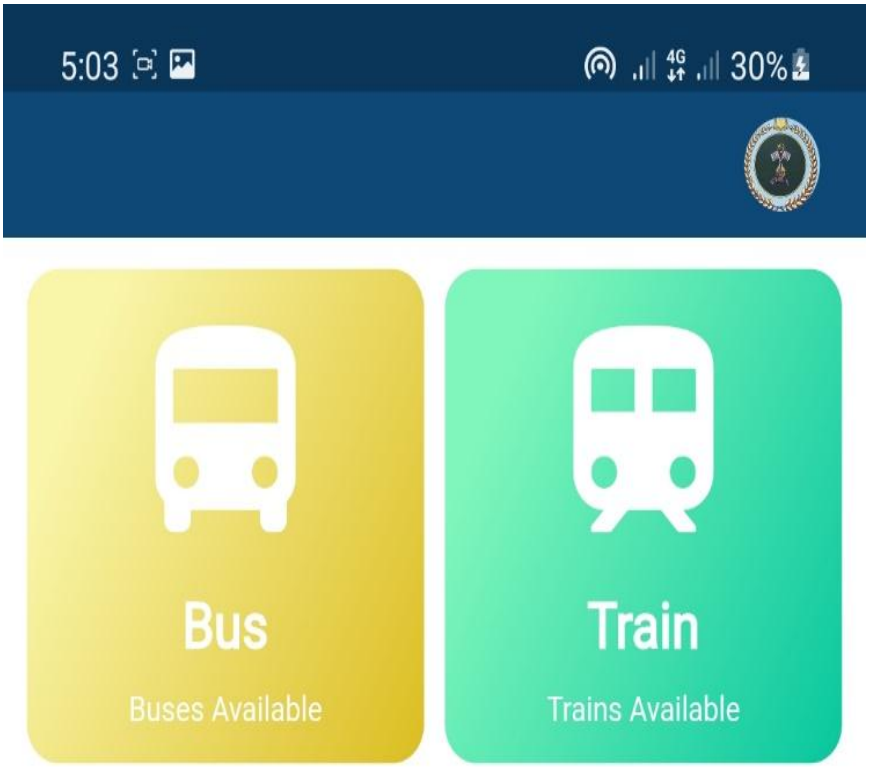
3.10.2 Signup screen



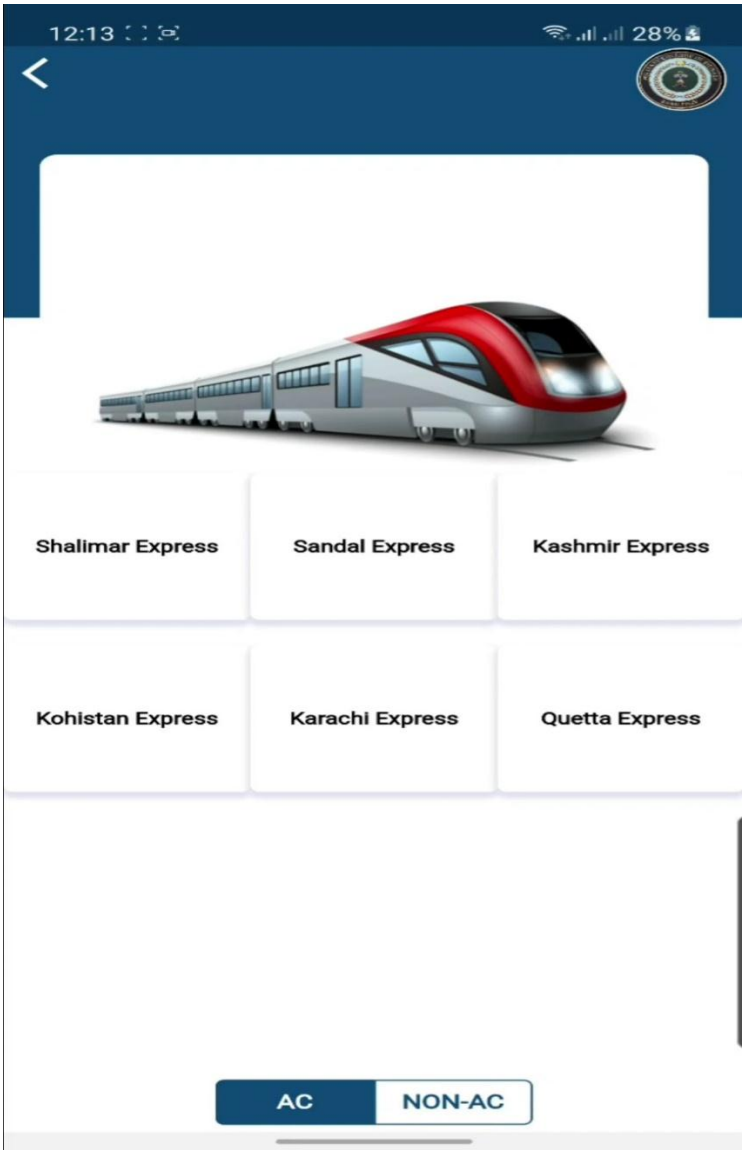
3.10.3 Login Screen



3.10.4 Selecting service type: (bus or train)

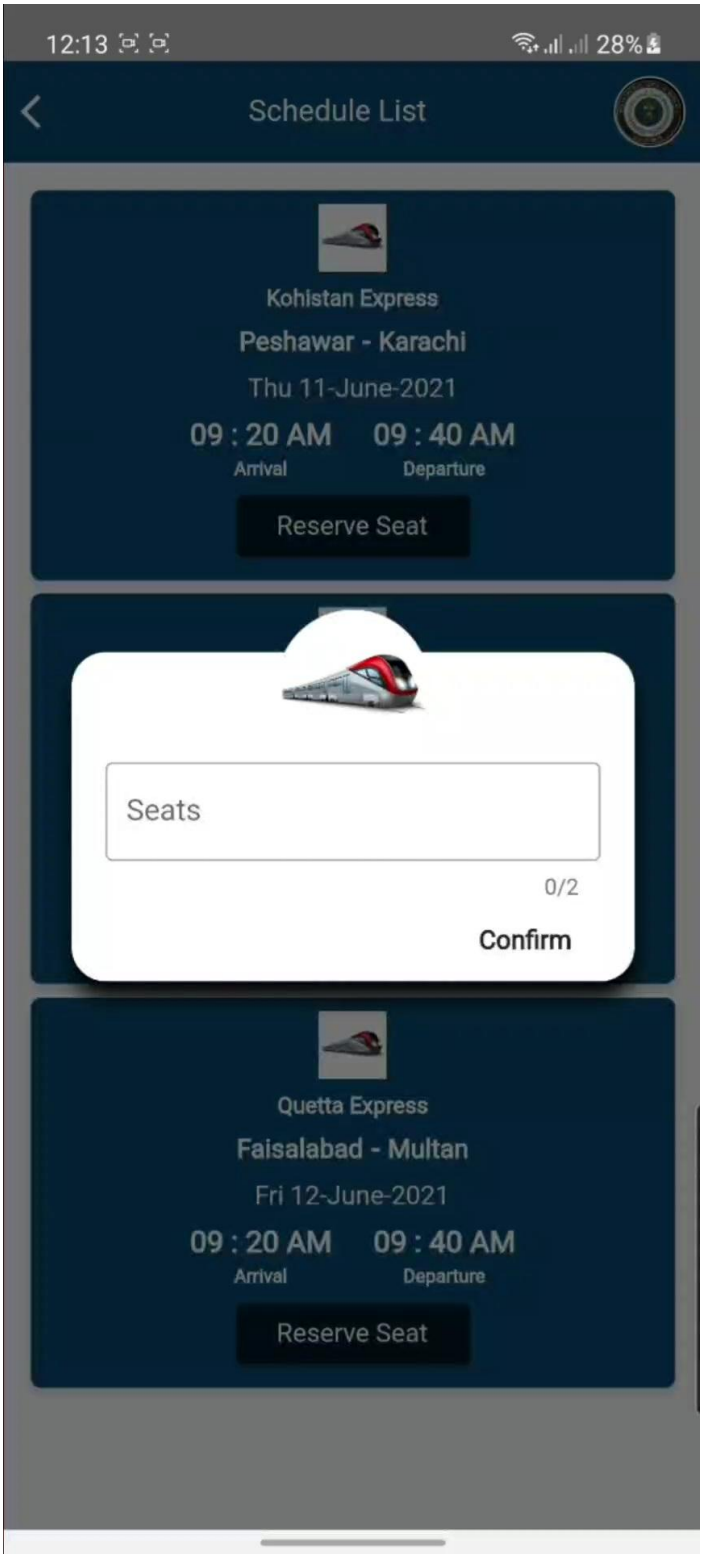


3.10.5 Selecting train service

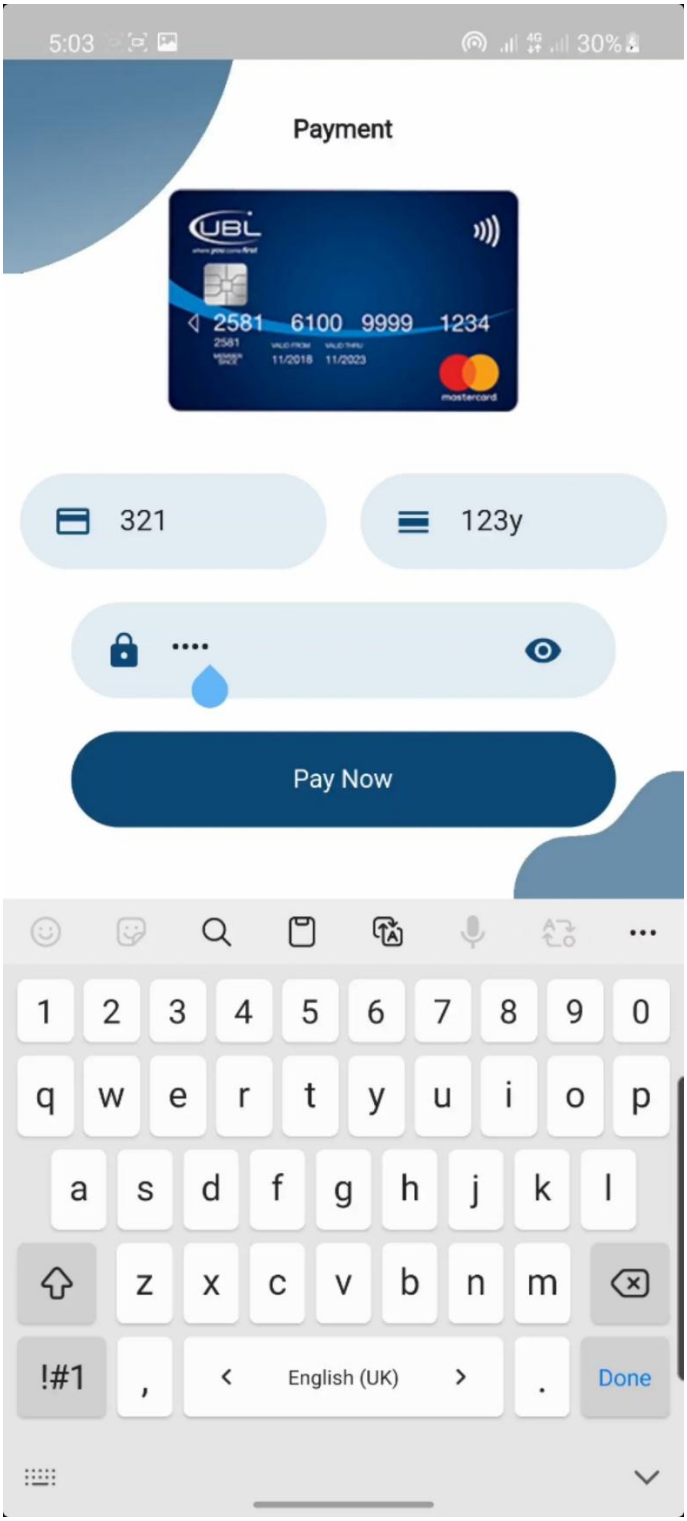


3.10.6 Selecting Bus service

3.10.7 Selecting Service, destination & Seats:

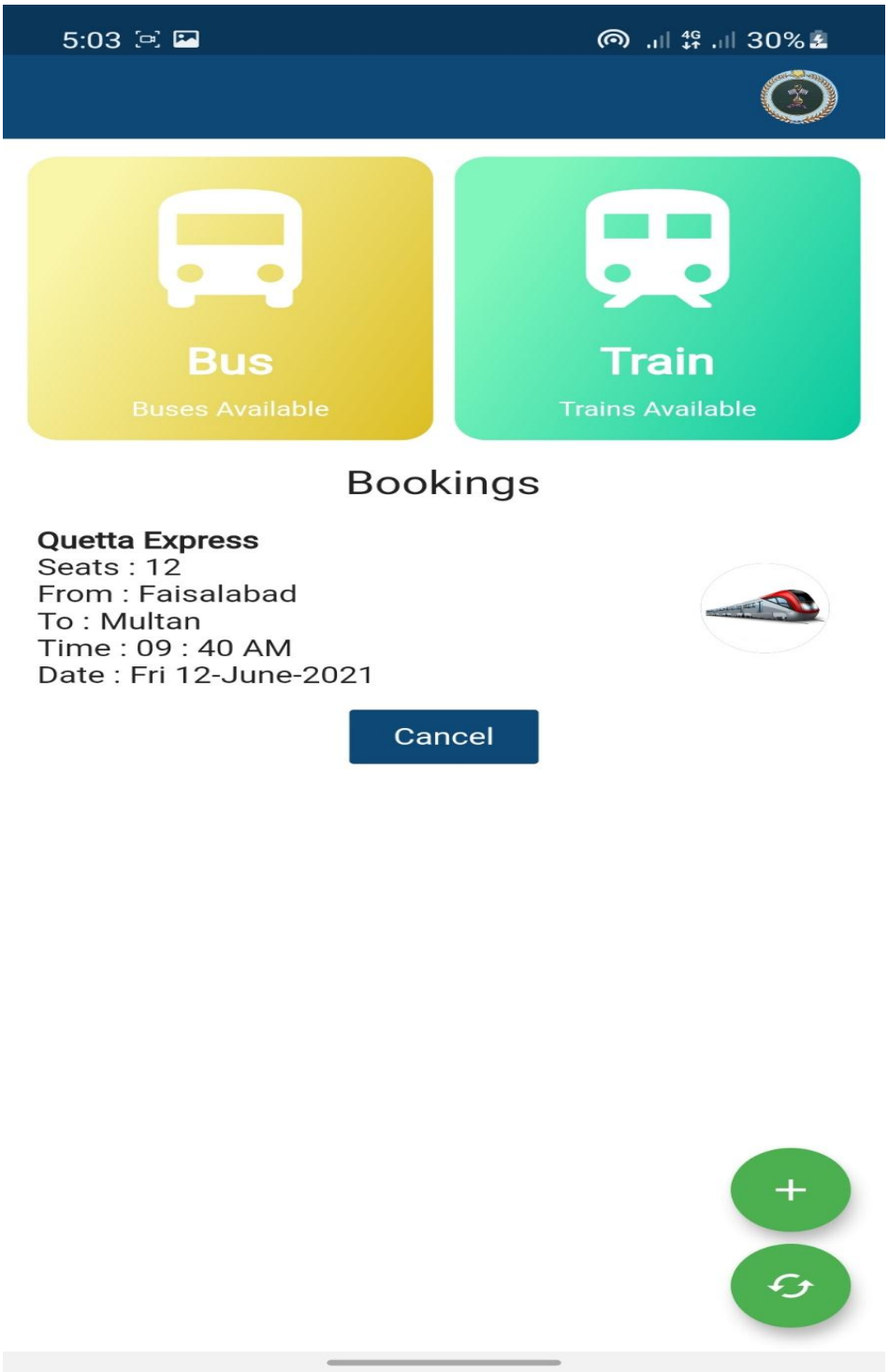


3.10.8 Confirmation of payment: by putting credit card data in fields.



3.10.9 Reservation is confirmed by data base.

Customer can cancel or can make many reservations as per his choice.



Chapter 4: PROJECT TEST AND EVALUATION

4.1 Introduction

The purpose of the document from the test is that the processing is necessary for the successful implementation of the project is to test the process. The test plan describes the strategies, processes, and methodologies that will be used for the planning and execution of the AP tests. By providing access to information about the tests, we hope to reduce the chance of missing an item or to improve the test coverage. The Testers will be able to make the test case presented in this document is forward, and then start the test.

Manual testing will be carried out by a tester who has taken on the role of an end user, for the purposes of testing the system, and to identify any unexpected behavior.

The test is a document that contains all the plans, approaches, and methods for the testing of the Ticket System. It is of passing/failing in each part of the test.

4.2 The Test of the elements

On the basis of the requirements of the project, the following are the main modules and the functionality that should be taken into account in the testing process: - - - -

As a rule, this is the project consists of four phases:

4.2.1 Register or Login

4.2.2 To e-services

4.2.3 Confirmation/Cancellation of the reserved seats.

4.2.4 Ship to/ from a distance.

4.3 Features to be tested

Listed below are the tested features:

4.3.1 Login tests

4.3.2 To select the service (bus / train).

4.3.3 Selecting a condition Type (ac/non-ac).

4.3.4 To make a reservation.

4.3.5 To insert the payment details.

4.3.6 Cancelled Reservation.

4.3.7 Quick access to databases.

4.4 The Android application,

Which works as follows:

4.4.1 First, you will need to download the mobile app and create your account.

4.4.2 Create an account on the app, then enter your phone number please enter your first and last name, email address, and a password of your choice. After you create your account, then select the "travel" and "travel" with the date of departure.

4.4.3 Please click on the "Search" button.

A list of frequently, will appear on the page when you click on the Find button and select the departure time that you decide to go.

4.4.4 Use to select the phone numbers from the sites over time.

4.4.5 Click “proceed to payment, select the payment method you prefer and click to pay, after completion of the payment process.

After a successful registration, you get your reservation details on your mobile screen.

4.5 Detailed Test Strategy

The testing strategy comprises of unit testing using white-box testing and black-box testing. Integration testing is done in order to check the successful integration of the modules of the system.

4.6 Unit Testing

During the testing of the units, as individual blocks or components of a software are tested. The goal is to make sure that every piece of software that works the way it should be. This can be done at the code level for a particular programming errors, and we have unit tests for each module/part of the project.

4.7 Integration testing

We test all of the above modules and their integration. This is done in order to ensure that the functional modules are usually placed together. After the unit test, we carried out the integration tests in order to improve the overall performance.

4.8 Checking for extension

There are four main modules, which need to be integrated. Due to the integration of the modules to create a complete application. A step-by-step, tests are to be carried out in order to integrate. Integration testing is done by developers. The module, which will be described below, as well as the steps to be taken in order to achieve integration. We have carried out performance tests on the additional information.

4.8.1 Log in

This module will ask the user to enter the user's name and the password for the login to the system. If he captures the relevant data, he will have access to, or else you will not be able to log in.

4.8.2 Manage ticket

When you log in, the user will need to find the train journey, one that will be provided are in the right place column, and they will not be allowed to post to a particular train, the ticket is for a specific period of time.

4.8.3 Ticket sales

After checking out and selecting a time, you'll be able to book your ticket online. To book a room in both business class and economy class. They will need to fill out all the required items in order to book a ticket.

4.8.4 Payment

After confirming the details of the user he will be asked to make an online payment for the ticket he has just booked.

4.8.5 Ticket Printing

After successful payment of the ticket the user will be allowed to print his ticket which will be provided to him.

4.8.6 Performance Testing

This test evaluates the fulfillment of a system with specified performance requirements. It is done using black-box testing. It will be performed by

4.8.6.1 Checking the response time of the system
4.8.6.2 Check database read/write time

4.9 Item Pass/Fail Criteria

Test case details are specified in section Test Deliverables. Following are the item Pass/fail criteria:

4.9.1 Preconditions are met
4.9.2 Inputs are carried out as specified
4.9.3 The results are as specified in output => Pass
4.9.4 The results are not as specified in output => Fail
4.9.5 The system does not work => Fail

4.10 Suspension Criteria and Resumption Requirements

Whenever a defect is found/introduced, testing will be suspended. Testing will be resumed after the removal of defects.

Chapter 5: CONCLUSION

5.1 Overview

In this thesis article, we will have the design and development of an online sales register in the system with the name of the Travel Assistant. The system is built on top of the data access layer, business logic layer, and third layer. We carry out the customer's subscription, the cancellation of the order, ticket, ask questions, and online booking, online ticket refund in the system. Business process design is the design of the database is at the center of this system, and that is to be clearly and effectively in real-time the ticket, the messages will be sent to customers as an on-the-go Assistant. It increases with the booking, efficiency, and reduce the manual booking of errors and makes it easier to control the trains, and bus transportation of passengers and the booking the client.

5.2 Objectives Achieved

5.2.1 Reduce manual surveillance personnel.

5.2.2 Easy and efficient monitoring.

5.2.3 Providing cost and time effective solution.

5.3 References

1) https://pakrail.gov.pk/index.aspx
2) https://ieeexplore.ieee.org/document/6868416
3) https://ieeexplore.ieee.org/document/8641625
4) https://daewoo.com.pk/
5) http://www.skywaysbus.com/