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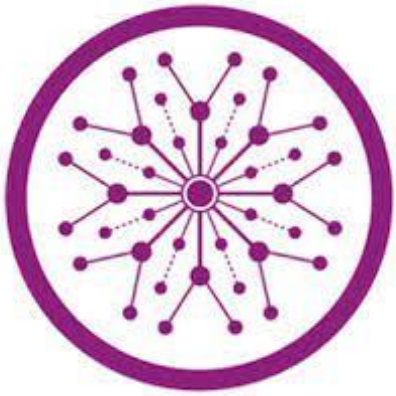

Faculty of Computer Science & IT

Final Year Project

Final Report

Android Tour & Travel Agency

Project ID: **FYP-MCSM-S21-008**

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Project Report

Android Tour & Travel Agency

Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
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APPROVAL

PROJECT SUPERVISOR

Comments: _____

_____

Name:_____

Date:_____ Signature:_____

PROJECT MANAGER

Comments: _____

_____

Date:_____ Signature:_____

HEAD OF THE DEPARTMENT

Comments: _____

_____

Date:_____ Signature:_____

Dedication

First of all, we dedicate our project to Allah Almighty
And to whom the world owes its existence
Muhammad (Peace Be upon Him)
This humble effort is dedicated to
Our beloved parents who brought us
To the level of excellence where we
Are studying today looking for most
Promising and gleaming future ahead
For which they scarified most of the
Time of their life
&
To our respected and genius teachers
Who guided us throughout academic career!
And all those people
Who have remembered us in their prayers!
A lot of thanks for all my teachers!

Acknowledgements

Above all, I owe much tribute to the Almighty God who gave us a life worth living and I thank him for giving us the strength to accomplish this project. The success and accomplishment of this project stems from efforts and dedication offered by many individuals whose support was either direct or indirect. I thank all of them for their devotion.

First and foremost, I thank my project advisor, **Sir Ifraseab Afzal** for his continuous support and dedication towards this project.

Second, I would like to thank the FYP manager (**Mr. Javaid Iqbal**), thank you all for the assistance and constructive discussions we had during the entire courses

Finally, I'd like to thank my family for their personal support throughout this project experience. In the last but not the least, special gratitude with the deepest sense of respects to our parents whose love and affections kept us steep fast and enabled us to attain targets and goals of academic life. The authors are extremely indebted to their brothers and sisters whose constant encouragement provides us with the impetus that was necessary for attaining academic initiatives.

Executive Summary

In Pakistan many people who like to plan for tours and the foreign tourist have to face many problems. The system is built to provide guidance for the users to plan and schedule for the tours. The user must have a user ID to login the system. New users can register to get a user ID.

The system contains various tours to select. After login user come on home page where different tour categories are available such as forest, beaches, monuments and religious. The user can one of the categories and there will be different tours of that category then he can select one of the tours then he can also add tours to favorite and also, he can choose package. There he will see many packages by bus or by train or by air. After selecting one of them he can select different facilities according to their budget. In end he can pay the payment of the tour by online bank transfer, jazz cash or PayPal.

The user can also add tour packages in to favorite. After adding in favorite the tour package will appear in favorite section from where he can also book their package from favorite.

One of the most important features of this application is its customization. The system is design in such a way that it automates the booking process of hotel rooms, tour packages, holiday packages and travelling vehicles also apart from this, it also automates the payment gateway system as well.

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Chapter 1

Introduction

Chapter 1: Introduction

The system is built to provide guidance for the users to plan and schedule for the tours. The user must have a user ID to login the system. New users can register to get a user ID. The system contains various tours to select. One of the most important features of this application is its customization.

The system is design in such a way that it automates the booking process of hotel rooms, tour packages and travelling vehicles and also apart from this, it also automates the payment gateway system as well.

1.1. Background

Many people in Pakistan enjoy capturing the visual, historical, and experiential contexts that landmarks offer as they travel. These individuals, however, use disjoint resources to plan trips, reducing the quality of the narrative experience they receive when visiting a place. To facilitate the narrativization of a place and create a shared experience of that place, I created an Android smartphone application, which allows users to explore basic facts, photographs, historical details, and travelers' experiences. I developed three image-processing algorithms to serve as photograph filters and conducted two surveys and five usability studies to inform my iterative, audience-involved application design.

1.2. Motivations and Challenges

Now a day people use more mobiles for internet for different purposes. It is very easy to use for everyone. It is app only for tour plan. A great new idea to help people through mobile app. The close gap between fortune and unfortunate people in the society.

1.3. Goals and Objectives

This android tour and travel application allows users to experience the narrative of different places of Pakistan and create shared experiences of that place through photographs, knowledge of the monuments' historical events, and visiting experiences. The application also offers advanced filtering options for photographs featuring these seaside landmarks in order to

simplify prospective visitors' planning processes for traveling to these places. The application also serves to raise awareness of the beauty and historical interest that Pakistan and other countries possess. In order to create as feature-rich and user-friendly of an application as possible, I created several high-level goals for this project:

- Explore ideas related to concrete places and abstract spaces to present appropriate contexts for Pakistan within my application
- Design the user interface using an iterative, audience-involved process to ensure optimal usability within the target audience
- Create efficient and easily extensible data structures within the application to allow for simple updates to the information it presents; and
- Develop a set of image-processing algorithms that can classify photographs of Pakistan and identify the presence of color- and shape-based features within these images.

By fulfilling these goals, I created an application that Pakistan's visitors express interest in downloading. To further simplify the scope of this project, I worked closely with a regional Pakistan's societies.

1.4. Literature Review/Existing Solutions

The system must require an internet connection for the search. It also requires large database. These are considered as the major drawbacks. Sometimes the booking are done via telephones which may lead to losing up of hotel rooms, tour packages and so on and finally lead the customers to face time wastage issues, money wastage issues and efforts wastage issues.

In existing system, paying the charges is the big issue. While finalizing the money, sometimes it does happen that we finalize a particular amount of money and in the end, we will end up paying more money at the desk of the hotel, rather than paying the same as finalize earlier.

1.5. Gap Analysis

There is no online mobile app before this create for tour management online. This app creates for tourist and different Foreigners who just come Pakistan to enjoy different places according to their demands.

1.6. Proposed Solution

The system gives solution to the user by suggesting different packages and provides option to personalize the tour. The proposed system is built with 3 categories of packages namely, economic, semi deluxe, and deluxe for the stay, food, and travel.

The system is convenient for the users to schedule the travel and book the tickets online rather than contacting the travel agency.

1.7. Project Plan

Android tour and travel is the travel agency which gives all the required facilities to their customers when they are ready to plan for any tour. By using this portal the user can book any travel packages, they can reserve their tickets for any travel, they can book hotels and also it provides help to the users.

The facilities provided by this portal are following

1. Holiday Packages.
2. Traveling.
    a. Flight Travel.
    b. Car Travel.
3. Currency converter.
4. Distance calculator.
5. Hotel Reservation.
6. List of hotels in Pakistan.

Holiday Packages:

Tour Management specializes in offbeat holidays for people from all walks of life and offers flawless customized itineraries to explore Pakistan and its neighboring country whilst pumping up your adrenalin. As tour operator tour Management is capable of providing you all the facilities at a low price. Here customer can mention their budget.

Traveling:

Tour Management provides reservation facility to their customer for all types of travels they provide by booking for car and flights. If customer wants to cancel their reservation they can

cancel it through cancellation from provide in this project. Not only reservation but status and timings are also provided here to the customers.

Hotels in Pakistan:

Tour Management gives the list of different hotels and guest houses in Pakistan. Customers can decide their hotels and guest houses according to their budget and places.

Hotel Reservation:

Customer can use hotel reservation facility provided by Hotel Management so that they can stay on their trip. If customer likes to cancel their reservation they can cancel it on their behalf. List of the hotels and guest houses are provided by the Tour Manager

This application consists following modules.

1. User Module
2. Reports Module
3. Distance Calculator
4. Currency Converter

1. User Module:

This module tells all about customers and their responsibilities while accessing Grand-tour portal. If any user wants to use the facilities which are provided in this portal he/she must be register in Tour Management portal by using username and password they can login and they can use all the facilities.

2. Reports Module:

By using this module administrator will get different types of reports regarding customers like Number of users of a portal, no of reservations done through this portal etc. And this module is controlled by administrator only.

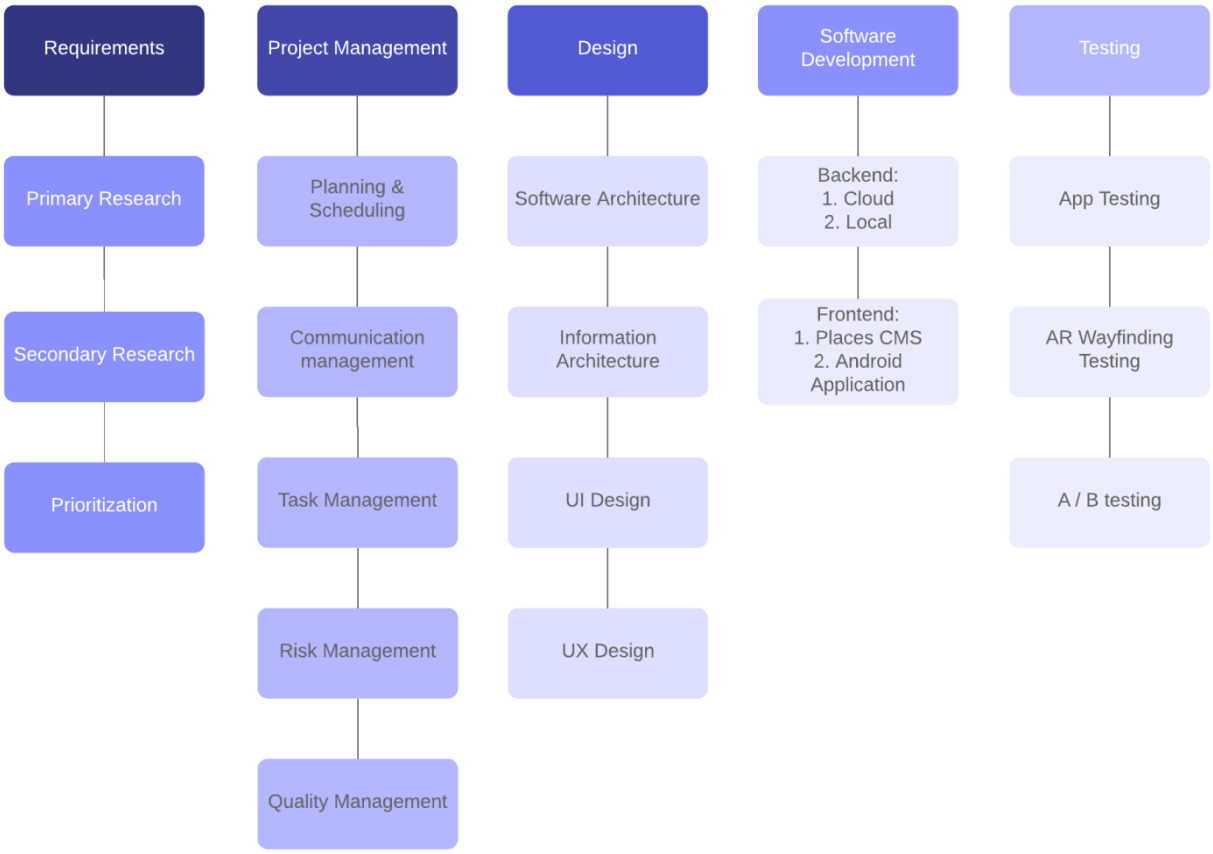
3. Distance calculator:

Distance calculator gives the distance value between source and destination cities which gives the idea to the customers that which facility they will use on the basis of distance because for short distance customer can use car booking facility of Tour Management or large distance they can use train, cruise or flight booking as per their budget.

4. Currency converter:

It helps very much to those visitors who are coming from foreign .If they have no idea about what is the value of their currency in Pakistani rupees then currency converter provides them this facility so that they can't be cheated by anyone.

1.7.1. Work Breakdown Structure



1.7.2. Roles & Responsibility Matrix

WBS #	WBS Deliverable	Activity #	Activity to Complete the Deliverable	Duration (#ofDay)	Responsible Team Member(s) & Role(s)
1	Requirement gathering	1	Technical specification Restricted areas	10 Days	Rafay Asad Syed Komail Haider Deebaj Awon

			Available solutions.		
2	Analysis	2		10 Days	Rafay Asad Syed Komail Haider Deebaj Awon
3	Architecture	3		20 Days	Rafay Asad Syed Komail Haider Deebaj Awon
4	Designing	4		8 Days	Rafay Asad Syed Komail Haider Deebaj Awon
5	Implementation &development	5		10 Days	Rafay Asad Syed Komail Haider Deebaj Awon
6	Database Module	6		10 Days	Rafay Asad Syed Komail Haider Deebaj Awon
7	Final testing	7		4 Days	Rafay Asad Syed Komail Haider Deebaj Awon
8	Documentation	8		40 Days	Rafay Asad Syed Komail Haider Deebaj Awon

1.7.3. Gantt Chart

1.8. Report Outline

1. The Requirement was gathered in about 10 Days.

2. The Documentation was made in a month.

3. Validation and finalization in added golden days.

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2. Introduction

A software requirements specification (SRS document) describes how a software system should be developed. Simply put, an SRS provides everyone involved with a roadmap for that project.
It offers high-grade definitions for the functional and non-functional specifications of the software, and can also include use cases that illustrate how a user would interact with the system upon completion.

2.1. Purpose

Considering travelers requirements and popularity of android device and app, we have come up with the idea of making a mobile app for the foreigners and newcomers in one of the most attractive country Pakistan and our chosen mobile platform is Android which is open source, developed and distributed by Google.

2.2. Document Conventions

This record is. Its degree is to portray the necessities of the Advertisement Management System and its affiliations. This report has been composed after the AMS and considers that future changes to this program ought to be incorporated into this prerequisites determination record for keeping up its helpful part. To the extent the program usage is concerned while it's not been actualized, this record can be utilized as manual for improvement of framework. CSS, VCSS property, descriptor, and pseudo-class names are specify by single quotes. Values are specifying by single quotes. Document language element names are in upper case Letters. Document language attribute names are in lower case letters and specify by Double quotes.

2.3. Intended Audience and Reading Suggestions

People who travel a lot possess some distinct characteristics which happen to be displayed on social media. Sometimes you may be able to detect travel enthusiasts from their profile, but you can't rely on this info all the time. Hence, we depend on other unobvious factors. What are these factors?

Young people will be more autonomous in their travel needs

- Office workers
- People with a high degree of education
- Country & Cities
- Gender
- Age
- Interest
- Analyzing the Audiences of Your Competitors

2.4. Product Scope

As people travel, they visit landmarks and capture photographs to mark the key moments along their journeys. Recently, people have begun capturing these memories more frequently on their smartphones and digital cameras, which offer convenient methods for storing entire scenes but cannot easily analyze the details within these scenes. Furthermore, these individuals need to develop an impossibly complex mental model while investigating different aspects of a location they plan to visit, preventing them from forming effective traveling communities. The application that I developed for this project presents informational, visual, historical, and experiential contexts of Pakistan. It offers image-processing algorithms for detecting global classifications as well as local features within images, and it scaffolds the narrativization of place as a shared experience of place, allowing the application to facilitate the formation of travel- and preservation-conscious communities.

2.5. References

5. IEEE standard document for software requirement specification.

2.6. Overall Description

2.6.1. Product Perspective

Android tour and travel agency will provide a platform for people who want to visit different places and seekers after they successfully register into the system. If a user wishes to plan for a tour, he/she can send a request in application. The system gives solution to the user by suggesting different packages and provides option to personalize the tour. The system is convenient for the users to schedule the travel and book the tickets online rather than contacting the travel agency.

2.7. Product Functions

The system gives solution to the user by suggesting different packages and provides option to personalize the tour. The proposed system is built with 3 categories of packages namely, economic, semi deluxe, and deluxe for the stay, food, and travel. The system is convenient for

the users to schedule the travel and book the tickets online rather than contacting the travel agency.

2.8. User Classes and Characteristics

There is the following user of our system

Administrators:

- The administrators have complete control over all the activities that can be performed.
- They verify the user after he/she registers.
- They must provide rules for the Login.
- They must maintain the App and update the same making necessary changes at times.
- They must take care of the security issues involved in the login.
- They must inform the users about their login status and keep them updated about the progress through emails.

Users/Traveler:

- They are the registered members of the system. They can view all the features.
- User should be familiar with the terms like login, register etc.
- Two type of users are included travelers and tourist.
- General user have the access to view the specific features whereas, admin, tourist traveler and registered user can see the tours and packages.
- They are able to see the requirement or request from tourer.
- They are the registered members of the system. They can view all the features.
- User should be familiar with the terms like login, register etc.
- They can view all the features.
- User should be familiar with the terms like login, register etc.
- They can request for the betterment.

2.9. Operating Environment

This system will operate in browsers like Mozilla, Firefox, and Opera and for their different version also.

- It can be open on window, android and iPhone.
- The processor should be core 2 duo or above.
- The processor's speed should be 2.8 GHz or greater.
- Ram should be or greater than 512 MB.

2.10. Design and Implementation Constraints

There are the following design and implementation constraints that we should keep in our mind during developing of the application.

- This system is working for single server
- Limited to HTTP/HTTPS.
- Sketch or proto.io for prototyping the system
- XAMPP server for the local host
- MYSQL used for manage the database specification
- Operating system required for this application is windows kit Kat 4.0 android or any other higher version

2.11. User Documentation

Latterly, the uses of mobile devices and wireless network applications became more and more widespread. Project has solved the issue that system is convenient for the users to schedule the travel and book the tickets online rather than contacting the travel agency.

2.12. Assumptions and Dependencies

There are assumptions and dependencies that should be fulfilled for use of this application:

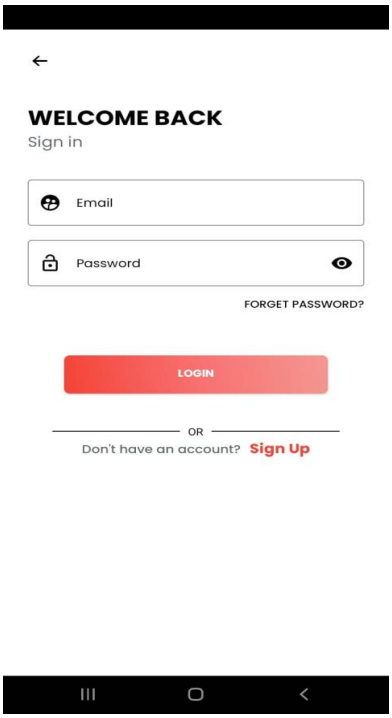
- User should have basic knowledge of English language and computer and smart phone usage.
- Admin monitoring the use of application.
- User has basic understanding on how to operate computer and computer software.

2.13. External Interface Requirements

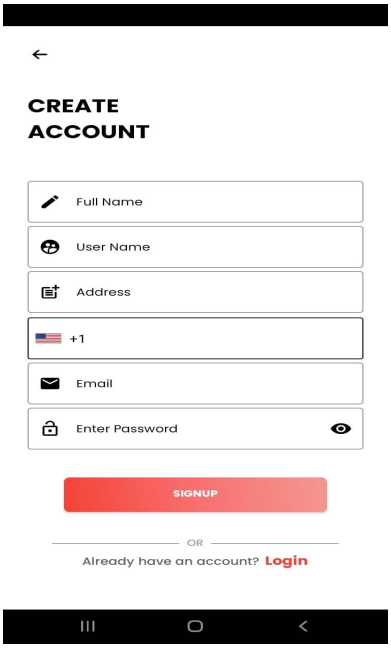
2.13.1. User Interfaces

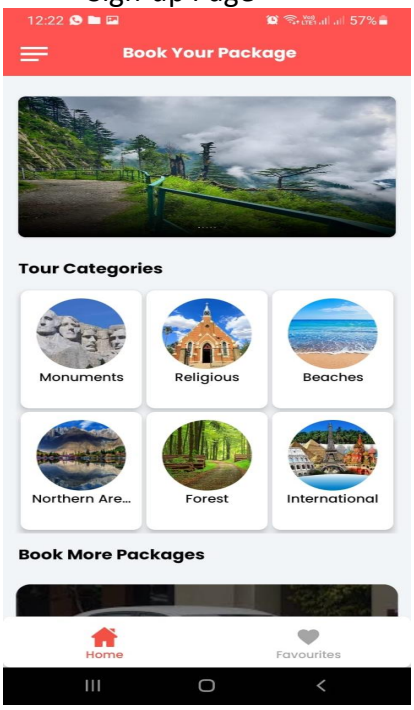
In this module, user can create their account and after login, they can access to all the features of this application. User module is the most active module of this application.

Opening Screen



Sign-up Page





Login Page Dashboard

2.13.2 Hardware Interfaces

This is an online system so the hardware interface that are going to be used are the hardware components that are required for the internet access. These have been mentioned in the following table.

WLAN	WAN	LAN	Ethernet cross-cable	Modem	Router

2.13.3 Software Interfaces

- **External machine interfaces**

External Machine interface is not required since computation will be done on Windows OS and Android OS.

- **External system interfaces**

This will only include the Firebase database for the products.

- **Human interface**

The software will use a Graphical User Interface coded in XML.

2.13.4 Communications Interfaces

The Android tour and travel system shall use the HTTP protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite.

2.14 System Features

The system is going to consist of multiple modules, each separately developed with their own features.

2.14.1 Register Account

Description and Priority

If customer/user wants to plan for tour then he/she must be registered, unregistered user can't able to use our auto generate LMS. For this purpose, user/customer will register to the system.

Stimulus/Response Sequences

- User first clicks on the button or link to initiate registration process.
- System prompts the user to fill out his/her first name, last name, address, email address, and their password.

- User enters fields.
- System validates the user's information.
- System creates a new account for the user.

Functional Requirements

REQ-SF1-1: System must be able to verify and validate information.

REQ-SF1-2: The system must encrypt the password of the user to provide security.

2.14.2 Login/ Logout

Description and Priority

This feature used by the user to login into system. A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed entering the system.

Stimulus/Response Sequences

- User clicks on the button or link to initiate the login process.
- System prompts the user for his/her email and password.
- System verifies the information.
- System displays account home page to the user.
- User clicks the button or link in order to initiate logout process.

Functional Requirements

REQ-SF2-1: Username and password will be provided after user registration is confirmed.

REQ-SF2-2: Password should be hidden from others while typing it in the field.

2.14.3 Booking

Description and Priority

This feature used by the user for the booking of tours. A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed entering the system.

Stimulus/Response Sequences

- After successfully login user Click on the packages.
- System prompts the user all the packages user select the package and the tour.
- System verifies the information.
- System displays account home page to the user.
- User clicks the button or link in order to initiate booking process.

Functional Requirements

REQ-SF2-1: After selecting the packages he will be assigned tickets.

REQ-SF2-2: For tickets he will must pay advance payments.

2.15 Other Nonfunctional Requirements

Response time: The home page loaded in 3-5 seconds.

Availability: The site will available 99.99% of the time.

Throughput: Page hits per second or orders per hour.

Capacity: Maximum throughput that can be achieved with acceptable response time and availability.

2.15.1Safety Requirements

- Once admin delete record or user account the data of that user can't be retrieve. To handle this problem system gives warning before delete the record.
- Safety disclaimers will be given for both students and teachers.

If any user has some problem while using the site, so he can contact via mail to firebase maintainer.

2.15.1.1 Security Requirements

Security is one of the major concerns of these days. Our system is based on following security parameters which are given below:

- This software keeps the information of students and teachers safe.

- User will be registered after verification of user data.
- Secure login and logout. If renter forget his account credential than he has to get new credential through his sign-up e-mail.
- Admin area will be secured.

2.15.2 Software Quality Attributes

Usability: This Application should be easy to use and easy to learn how to operate.

Correctness: When user search something but spellings are not right the system search related to that spelling or give autocomplete search.

Portability: This product can be used on different devices like tablets, mobiles, laptops etc.

Robustness: This software can handle many problems itself like if user forgets his password so system gives it option to re-write name and user password.

Flexibility: The functionality of this software can be increased after development because documentation is available.

Performance: The loading speed of web pages onto a Clients web browser is quite good.

Reliability: This software is reliable.

Maintainability: Admin of the Application will maintain the working of this software.

Security: This software is secure enough to use. This software keeps the information of users safe.

2.15.3 Business Rules

- If user want to perform some crud operation than he/she has to first sign up.
- User has to follow terms and conditions of Application.

2.16 Other Requirements

Methodology Adopted

The Spiral Model:

The spiral model, originally proposed by Boehm, is evolutionary software process model that couples the iterative nature of prototyping with the controlled and systematic aspects of the linear sequential model. It provides the potential for rapid development of incremental versions of the software. Using the spiral model, software is developed in a series of incremental releases. During early iterations, the incremental release might be a paper model or prototype.

- **Customer communication**

Tasks required establishing effective communication between developer and customer.

- **Planning**

Tasks required defining resources, timelines, and other project related information**.**

- **Risk analysis**

Tasks required to assess both technical and management risks**.**

- **Engineering**

Tasks required to build one or more representations of the application.

- **Construction and release**

Tasks required constructing, testing, installing, and providing user support (e.g., documentation and training).

- **Customer evaluation**

Tasks required obtaining customer feedback based on evaluation of the software representations created during the engineering stage and implemented during the installation stage

Chapter 3

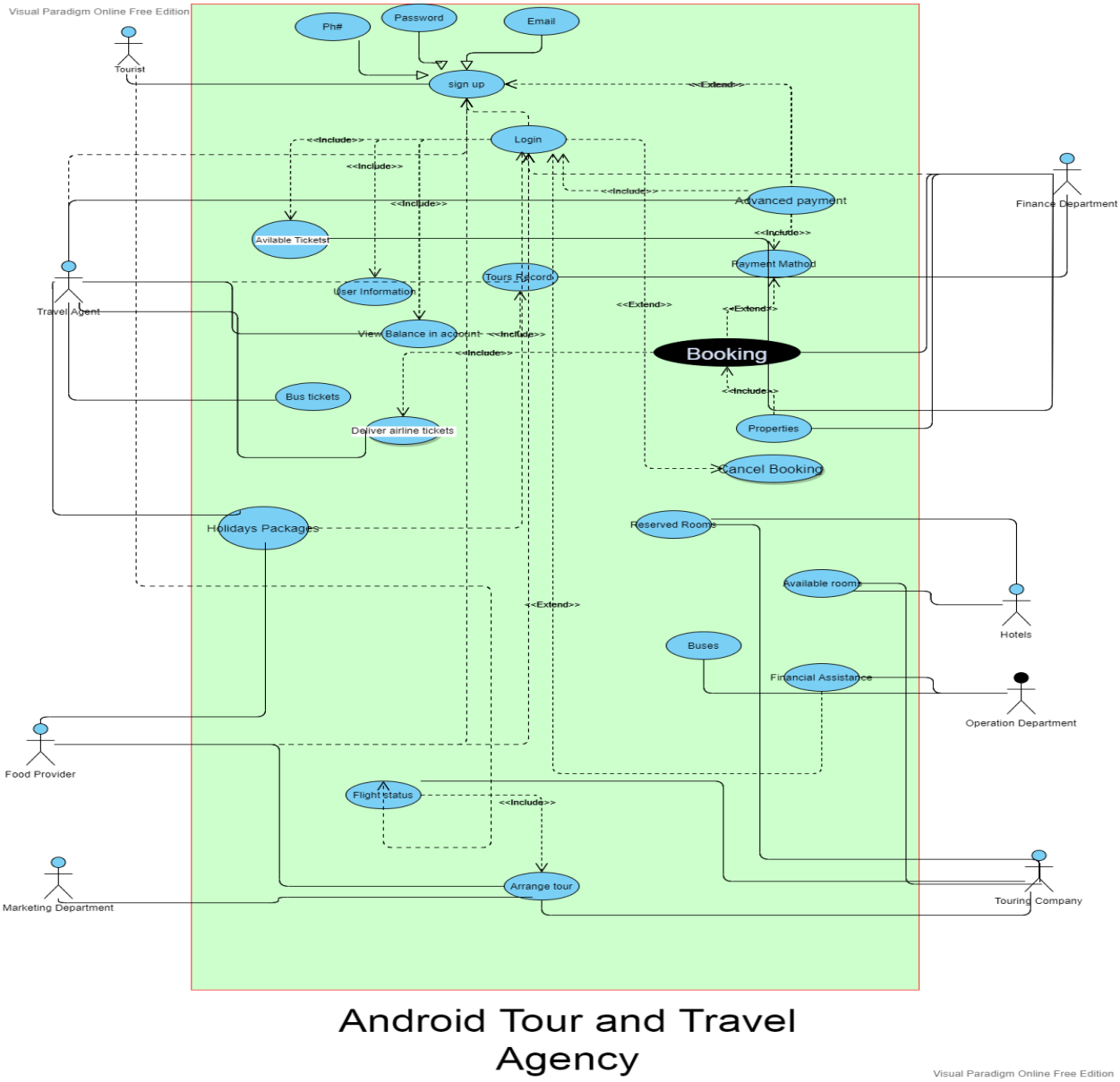
Use Case Analysis

Chapter 3: System Analysis

Systems analysis is "the process of studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way"

3.1. Use Case Model

A use case is a written description of how users will perform tasks on your Application.It outlines, from a user's point of view, a system's behavior as it responds to a request. Each use case is represented as a sequence of simple steps, beginning with a user's goal and ending when that goal is fulfilled.



3.2. Fully Dressed Use Cases

Name	Signup
Scope	New user on application must have to sign up because its mandatory is having a login to book their visit.
Primary actor	User
Actor's Goal	To create an account on application for service
Precondition	User have an internet connect
Post condition	Have an account on app

Success Scenario	• New user on application • Click on signup • Enter user name, Phone, password • Then click on signup • Account is created
Alternative Scenario	If the user has an account then he will login the account

Use case Name	Login
Scope	Customer login is very important part to the Application to reserve order because without login user cannot reserve order.
Primary actor	User
Actor's Goal	Login into application to select the packages
Precondition	User have an internet connect
Post condition	Must be payment pay according to packages
Success Scenario	• Visit the application • Select the login button • Enter a valid user name and password • Successfully login
Alternative Scenario	If the user has not entered the correct password or user name then he/she will still remain on login screen with error. He has to enter the user name and password again

Name	Payment Method
Scope	Customer have to select the payment method for paying the amount of package
Primary actor	Customer
Actor's Goal	To select the suitable payment method to pay bill
Precondition	• After selecting payment • Select payment method • Bank , cash by hand, Jazz cash or easy paisa
Post condition	Payment method selection and reserve confirm
Success Scenario	• After viewing the Bill select checkout • Select the payment method • Proceed the order

Name	Booking
Scope	When package is selected and proceeded from all step

	then the user will confirm package
Primary actor	User
Actor's Goal	To confirm the booking for user
Precondition	• After selection payment • Confirm Booking
Post condition	Order confirm for message
Success Scenario	• After view total and selecting payment method

Name	Holiday Packages
Scope	User can view packages to select the packages button to show all available services
Primary actor	User
Actor's Goal	View packages and make selection for booking
Precondition	• Visit the application • View packages
Post condition	View packages and select the required for package
Success Scenario	• Visit application • View all services and packages or select package

Name	Cancel Booking
Scope	When user can cancel the booking by click the cancel booking button and with terms and conditions
Primary actor	User
Actor's Goal	Selected package is cancel
Precondition	• Select packages • Confirm the cancel package
Post condition	With the terms and conditions the amount will be transferred in your account
Success Scenario	• Select package • Cancel the booking • Click to check out for payment return

Name	Available Tickets
Scope	User can view the available tickets for booking Date and time
Primary actor	User
Actor's Goal	To check the available seats for the tour
Precondition	• To check the tickets date and time • To check the available tickets

Post condition	Get all the list of available tickets
Success Scenario	• Check the date and time to available tickets • Click the tickets to be want to book

Name	Bus Tickets
Scope	User can view the available tickets for booking with the bus service Date and time Book the tickets with bus service tour
Primary actor	User
Actor's Goal	To check the available bus seats and reserve seats for the tour
Precondition	• To check the available bus tickets • To check the bus tickets date and time • Reserve the seats of bus for tour with package
Post condition	Get the bus tickets of reserved seats
Success Scenario	• Check the date and time to available bus tickets • Click the tickets to be want to book • Confirm tickets with the payment

Name	Airline Tickets
Scope	User can view the available tickets for booking with the airline service Date and time Book the tickets with airline tour package
Primary actor	User
Actor's Goal	To check the available airline seats and reserve seats for the tour
Precondition	• To check the available airline tickets • To check the airline tickets date and time • Reserve the seats of airline for tour with package
Post condition	Get the airline tickets of reserved seats
Success Scenario	• Check the date and time to available airline tickets • Click the tickets to be want to book • Confirm tickets with the payment

Name	Available Rooms
Scope	User can view the available rooms of hotel for booking Date

Primary actor	User
Actor's Goal	To check the available rooms for the rest
Precondition	• To check the available rooms • Check the date
Post condition	Get all the list of available rooms
Success Scenario	• Check the date to available room • Click the reserve room to be want to book room

Name	Reserve Rooms
Scope	User can view the available rooms of hotel for booking Date Reserve the room
Primary actor	User
Actor's Goal	To check the reserve rooms for the rest
Precondition	• To check the available rooms • Check the date • Reserve the room
Post condition	Get the confirmation of reserved rooms
Success Scenario	• Check the date to available room • Click the reserve room to be want to book room • Confirm the reserve room

Chapter 4

System Design

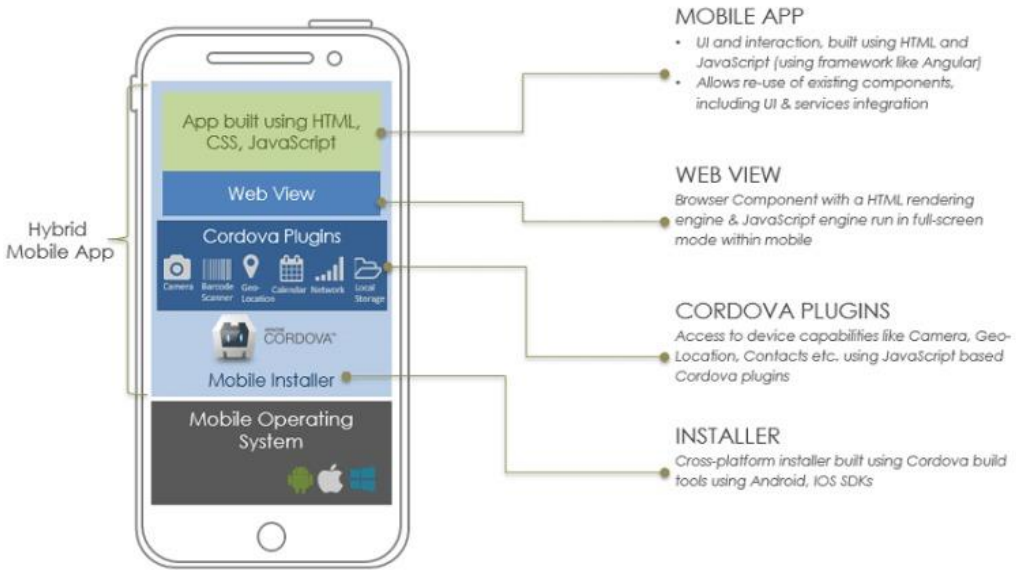
Chapter 4: System Design

Systems design is the process of defining elements of a system like modules, architecture, components and their interfaces and data for a system based on the specified requirements. It is the process of defining, developing and designing systems which satisfies the specific needs and requirements of a business or organization.

The Chapter is all about how the software is going to work and how the processes will be executed as we see we have several diagrams that shows how really is the system performing and what will be the requirements to perform the operations required tasks as well as the diagrams and data clearly describes the process and shows a great help in understanding.

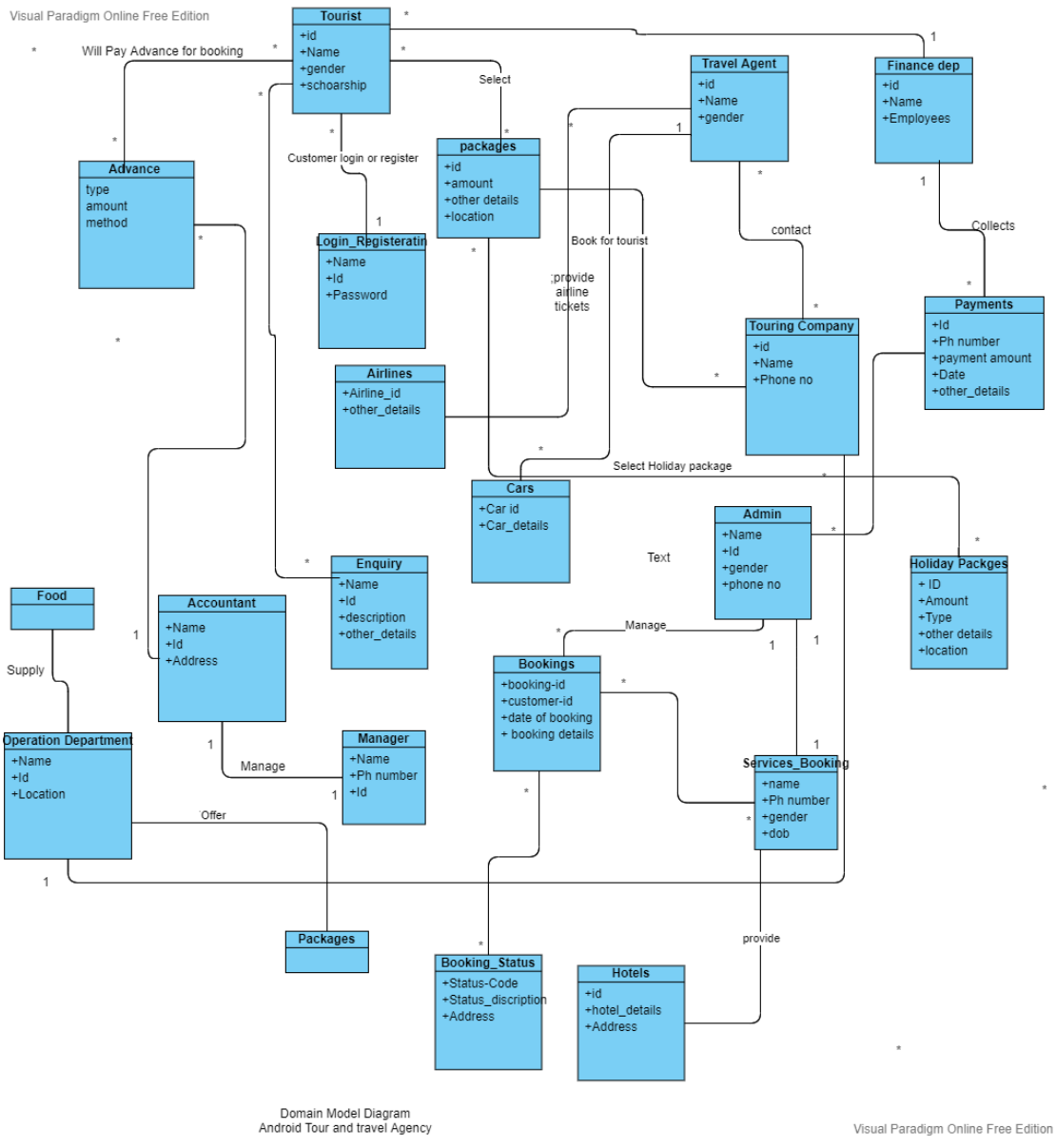
4.1. Architecture Diagram

An architectural diagram is a diagram of a system that is used to abstract the overall outline of the software system and the relationships, constraints, and boundaries between components. It is an important tool as it provides an overall view of the physical deployment of the software system and its evolution roadmap.



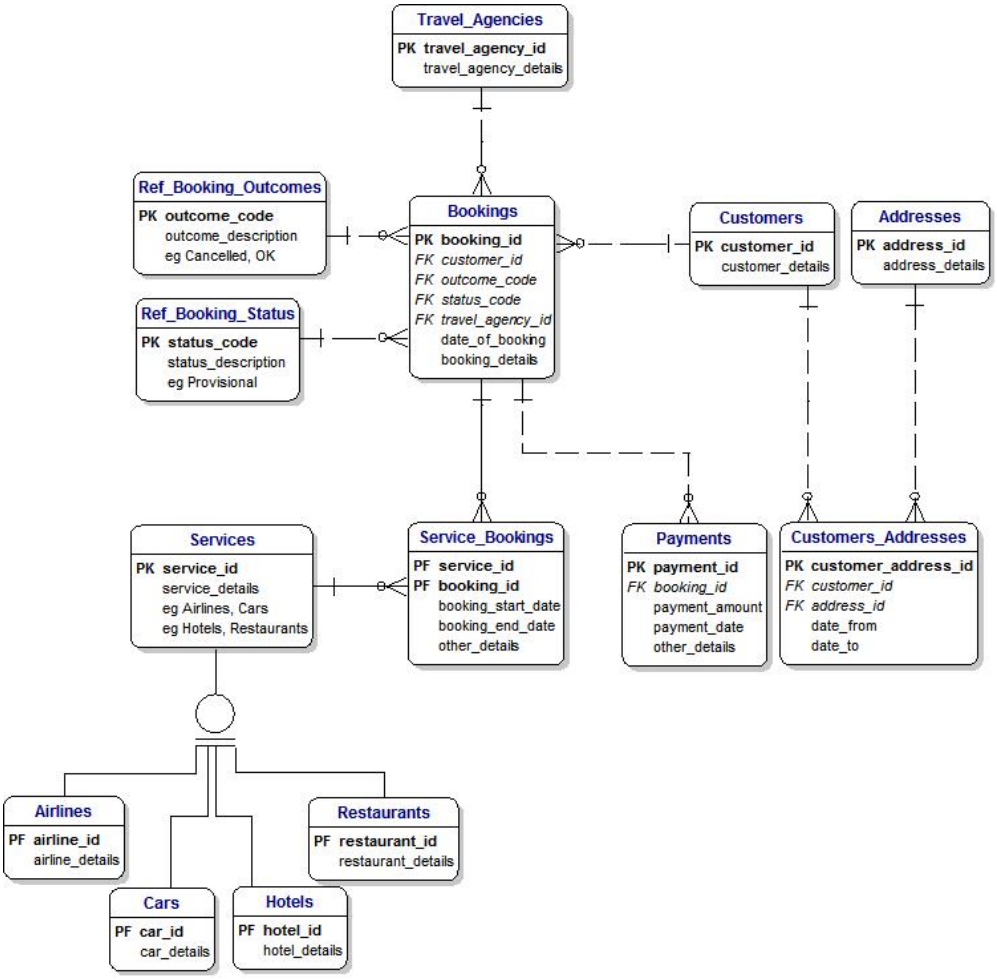
4.2. Domain Model

A domain model is a representation of real-world conceptual classes, not of software components. A domain model contains conceptual classes, associations between conceptual classes, and attributes of a conceptual class. "Informally, a conceptual class is an idea, thing, or object".



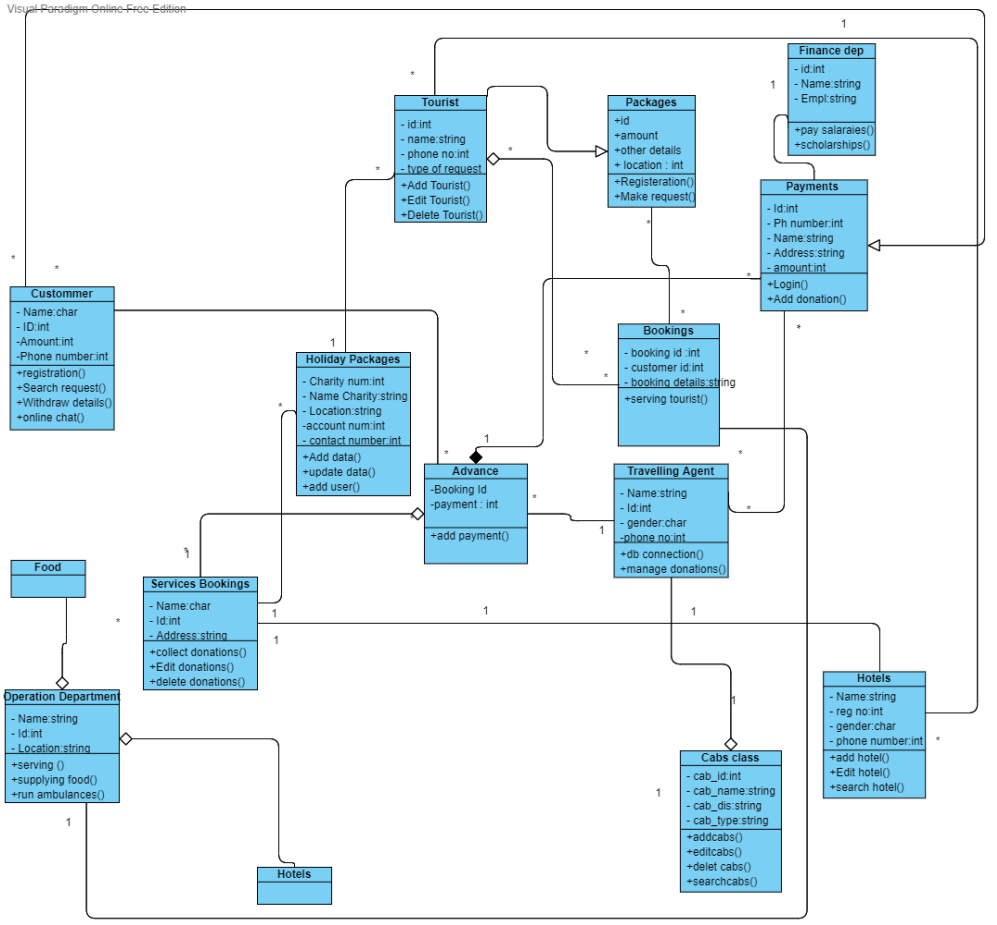
4.3. Entity Relationship Diagram with data dictionary

Entity Relationship Diagram (ERD) ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships



4.4. Class Diagram

The class diagram is the main building block of object-oriented modeling. It is used for general conceptual modeling of the structure of the application, and for detailed modeling translating the models into programming code. Class diagrams can also be used for data modeling**.**

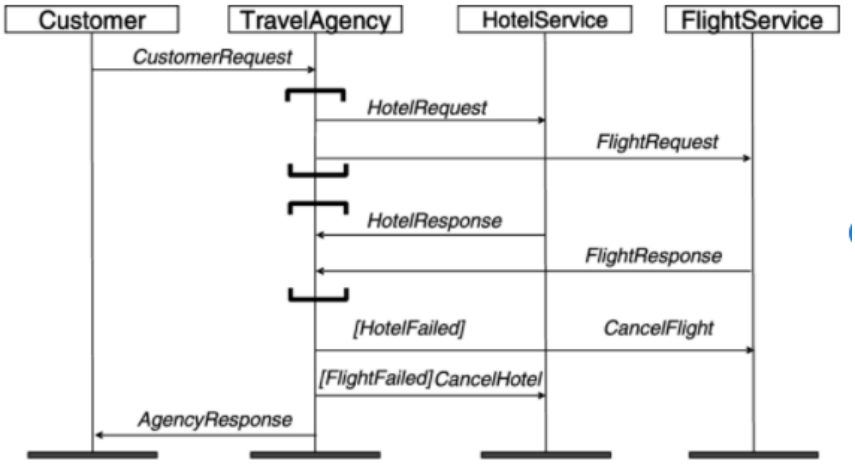


Class Diagram for Android tour and travel agency

Visual Paradigm Online Free Edition

4.5. Sequence / Collaboration Diagram

In software engineering, a system sequence diagram (SSD) is a sequence diagram that shows, for a particular scenario of a use case, the events that external actors generate, their order, and possible inter-system events.



4.6. Operation contracts

- **Operation:**

  Registration ()

- **Cross Reference:**

Use case: registration
Scenario: Process registration

- **Precondition:**

  login

- **Post Condition:**
  - A registration instance r was created(instance of registration)
  - registration was associated with the user name and address .
  - Attributes of r were initialized.

- **Operation:**

  Cancel Registration ()

- **Cross Reference:**

Use case: Cancel registration
Scenario: Process cancel registration

- **Precondition:**

  login

- **Post Condition:**
  - A cancel registration instance c was created(instance of cancel registration)
  - Cancel registration was associated with the user id and registration number .
  - Attributes of a were initialized.

- **Operation:**

  Make a payment ()

- **Cross Reference:**

Use case: payment
Scenario: process payment

- **Precondition:**

  Login

- **Post Condition:**
  - A payment instance p was created(instance of payment)
  - payment was associated with the tourist id.
  - Attributes of p were initialized.

- **Operation:**

Tourist Booking ()
Cross Reference:
Use case: Booking
Scenario: Process Booking

- **Precondition:**

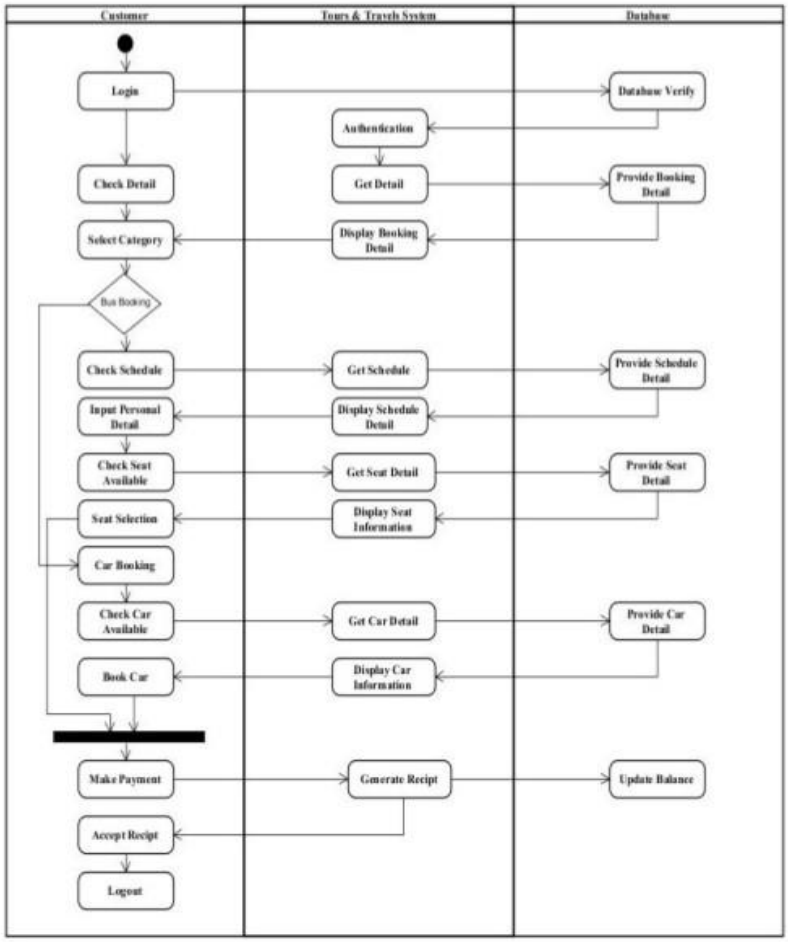
  Must be registerred.

- **Post Condition:**
  - A booking instance b was created(instance of booking)

- booking was associated with the packages .
- Attributes of b were initialized.

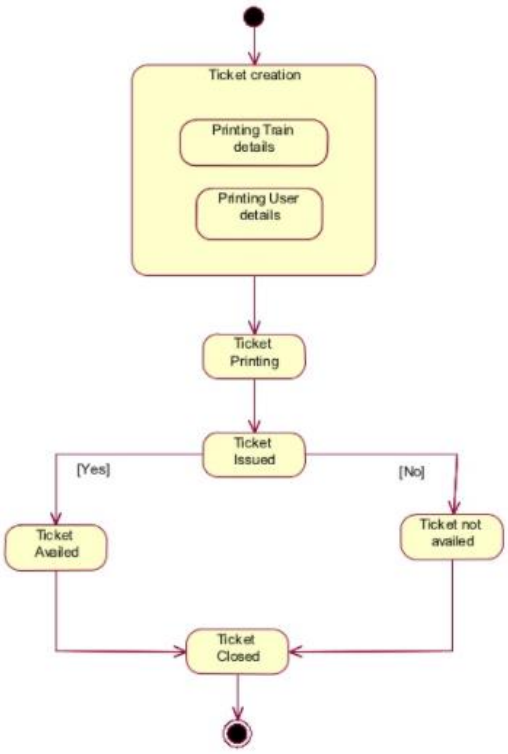
4.7. Activity Diagram

An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Activity diagrams are often used in business process modeling. They can also describe the steps in a use case diagram. Activities modeled can be sequential and concurrent.



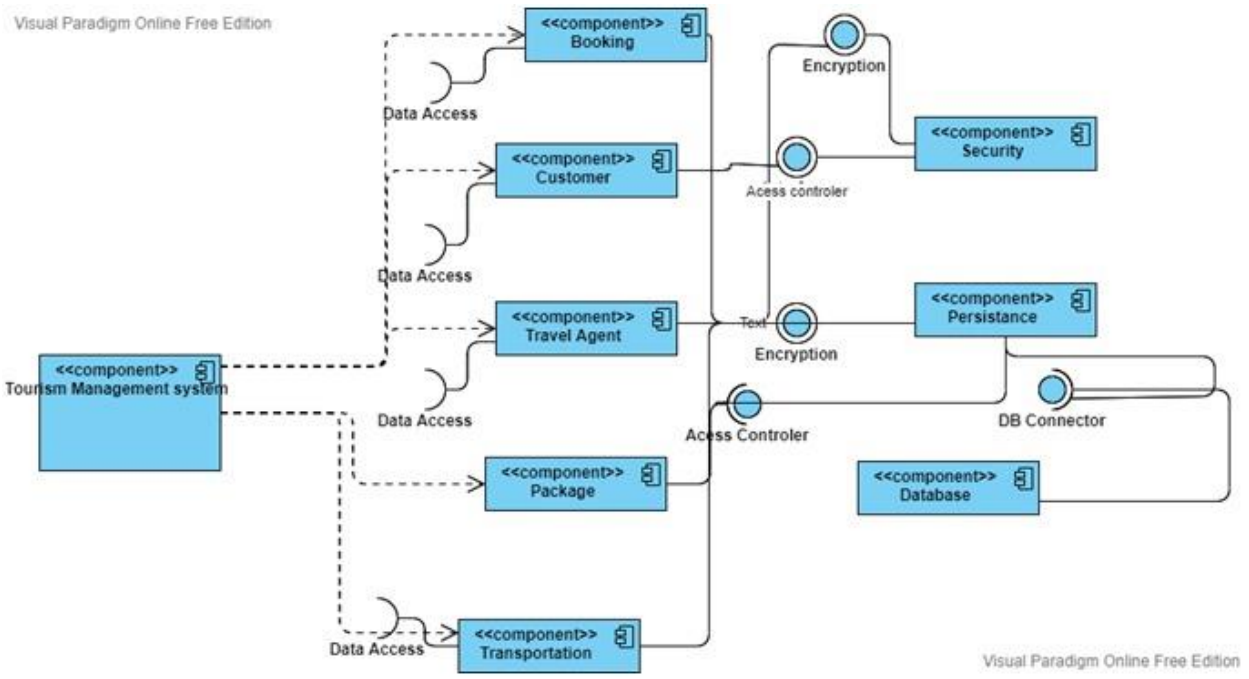
4.8. State Transition Diagram

State-transition diagrams describe all of the states that an object can have, the events under which an object changes state (transitions), the conditions that must be fulfilled before the transition will occur (guards), and the activities undertaken during the life of an object (actions).

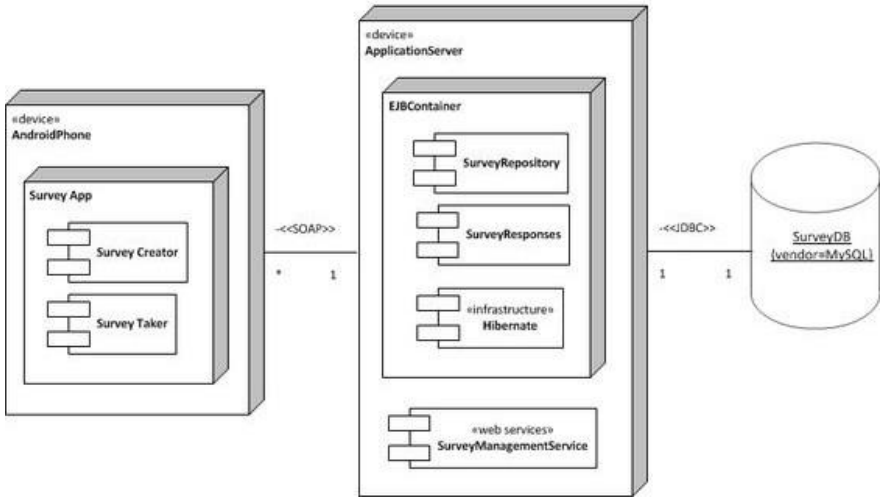


4.9. Component Diagram

A component diagram, also known as a UML component diagram, describes the organization and wiring of the physical components in a system. Component diagrams are often drawn to help model implementation details and double-check that every aspect of the system's required functions is covered by planned development.

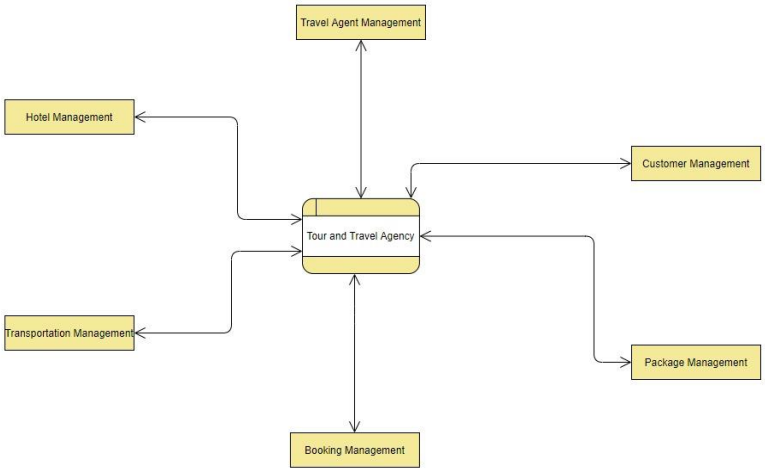


4.10. Deployment Diagram

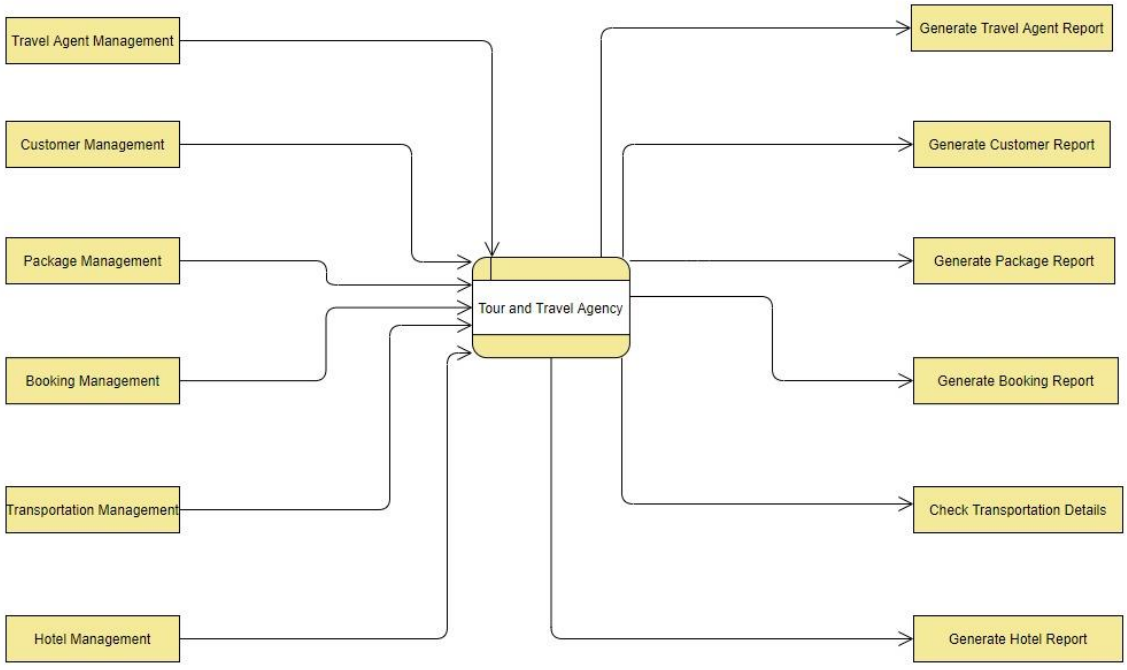


4.11. Data Flow diagram

Zero Level:



Level 1:



Chapter 5

Implementation

Chapter 5: Implementation

5.1. Important Flow Control/Pseudo codes

- Services that this application will provide are the following:
- There are two types of users
- Users who want to book tickets for tours.
- They will be able to create a profile with the necessary information (contact, Account no etc.) Add/check reviews.
- Users who want to register themselves.
- They will be able to access profiles based on the criteria they specify
- Add/check reviews.

5.2. Components, Libraries, Web Services and stubs

In Deployment environment we work on android studio for build our android based application

Components, Libraries, Web Services and stubs

- Gson is a Java library used for serializing and desterilizing Java objects from and into JSON.
- Retrofit. From their site: "Retrofit turns your REST API into a Java interface.” ...
- Event Bus. ...
- Active Android. ...
- Universal Image Loader

5.3. Deployment Environment

In Deployment environment we work on android studio for build our android based application

5.4. Tools and Techniques

Tool	Android Studio 4.1
Languages	JAVA, XML
Data base	Firebase

5.5. Best Practices / Coding Standards

- Testing on android studio
- Use java language
- Use xml language

5.6. Version Control

Now we just working on version 4 after the passage of time we changed the version. From the start of the project number of versions updated and finalized now version 4.1.

Chapter 6

Testing and Evaluation

Chapter 6: Testing and Evaluation

In this chapter, we will discuss the testing phase of developed system DTS in different manner to know that how much efficient and effective system.

6.1 Introduction

A process of performing as system or program with the intention of finding errors and whether the system is fulfilling user needs. It can also be defined as the ability of a program in meeting the required or desired results.

In many methodologies of software engineering, a separate phase is called phase of testing which is performed after the completion of the implementation. There is a benefit in using this approach that it is hard to see one's own mistakes, and a fresh eye can find observable errors much faster than the person who has read the material many times.

6.2 Deriving Test Case Specifications

The specifications for testing are derived from customer requirements, from the study of design code of software modules, and from screen or visual interfaces through which the user interacts with the system. Test-case specification in performed for system testing by keeping in mind several issues, which are discussed in the following subtopics.

6.3 State the Test Environment

The software is tested at UIT with the required hardware and software requirements. The system used for Sentiment Analysis on the bases of tweets. Each machine in based on android and 2GB RAM.

6.4 Test Identification

A specific test should be planned for every test level to test all system components. The test procedure should be detailed so that the system meets all user requirements.

The system can be divided into 3 Modules:

i. Member
ii. User
iii. Admin

The system in executed systematically, and its output is verified.

6.5 Test Procedure

A testing strategy is decided for testing the system so that all modules are tested to fulfill all user requirements. A test strategy is methodology that describes the various steps that need to be performed during testing and the time and effort required for performing them. The following strategies are used for testing Android tour and travel agency

6.6 Test Plan

A process of performing as system or program with the intention of finding errors and whether the system is fulfilling user needs.

6.7 Unit Testing

The software units in a system are modules and routines that are assembled and integrated to perform a specific function. Unit testing focuses first on modules, independently of one another, to locate errors. This enables, to detect errors in coding and logic that are contained within each module. The various controls are tested to ensure that each performs its action as required.

Commonly used method is White-Box Testing method. Every time a component of the program is changed, it can be run for testing that is the biggest and famous benefit of this testing phase. Issues that are arises during this phase, allowing to be resolved as quickly as possible. Unit testing is familiar by software developers. It allows them to test their system units before move them to testers for formal testing.

6.8 System Testing

System testing involves the set of tests that ensures that the entire system performs according to specifications. In which all the functions of system testing to check all the things are working well. The system is working well and the other process and flow of data is stored on exact place.

6.9 Integration Testing

Integration testing allows the software developers to integrate all of the components/ units of the system within a program and then test them in a group. Basically, this testing level is used

to catch the defects in the user interface between the functions/ modules. It is useful to determine how logically and efficiently all the units/ components are running together.

Here the streaming module and encoding module options are integrated and tested. This testing provides the assurance that the system is well integrated functional unit with smooth transition of data.

6.10 User Acceptance Testing

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for user acceptance by constantly keeping in touch with the system users at time of developing and making changes whenever required.

6.11 Test Plan

Test plan to make project perfect and check the possible error in it to have the following tests perform.

Objectives

System Overview: Android tour and travel agency

Document Overview: This document contains the plan and schedule for tests to be performed on the system and the mapping of tests to specified system requirements.

Referred Documents: The referred documents are SRS and test cases developed for the system.

6.12 Software Test Environment

Software test to check the functionalities have:

Software: Android Studio

Hardware: The minimum hardware requirements are a any android mobile with minimum of 2 Gb Ram.

Other Materials: Smart Phone using Apk file

Licensing Issues: Google holds development licenses for all the Apps being used.

- **User Panel**

Unit and integration testing

Input tests, output tests, verification, 00 and validation tests

Test will use real-time data from Google.

- **Admin Panel**

Unit and integration testing

Input tests, output tests, verification, 00 and validation tests

Test will use real-time data from Google(firebase).

Test Cases

Test cases that are testing to main objectives. In which include easily understand the system and log in and other features such as favorite and book now.

Test Case #: Test Case Name

Test Cases	Objectives
1	To make sure that user can easily understand and can use the App.
2	Make sure that user can easily login
3	Make sure that user can view/see/ book/pay for the tour.
4	Make sure queries Rating and dislike successfully
5	Make sure signup successful.
6	Make sure that all posting queries on specific categories done successfully’
7	Make sure all the user can see all tours easily
8	Make sure that the changes and any activity performed by user is going to be save in database and all the services are running in actual condition.
9	Make sure that queries filter from categories successfully

6.13 Test Result

The results that come after testing the different functions of discussion panel described in Table

CRITERIA	Test Status	REMARKS
All the graphical user interface options display successfully.	Test successful	None
Enter valid login user email address and password and phone number then press login	Test successful	None
Book, pay, and cancel tour using database	Test successful	None
All details are shown against specific user's ID.	Test successful	None
Run system in different platforms	Test successful	None
Receive payment	Test successful	None
Payment using card	Test successful	None
Find queries	Test successful	None

6.14 Summary of Test Result

The objective of this test is to demonstrate that the performance of the Android app meets all requirements of Google. All modules have been successfully unit tested in the first phase. Then, the modules are incremented to perform integration testing. The performance of the integrated system is according to Google specifications. Finally, the system is fully tested for security testing, stress testing, and performance testing. Therefore, the system fulfills all Google firebase requirements.

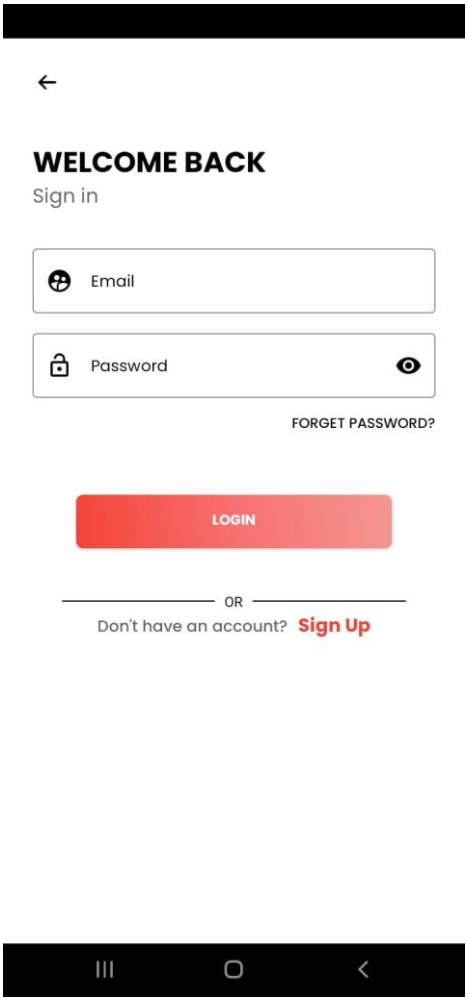
6.15 Operation and Maintenance

As in proposed solution we have stated that our system is Android App so we provide a platform for the people who want to discover different places or want to visit different places in low expense. Maintenance may be on project demand with the passage of time.

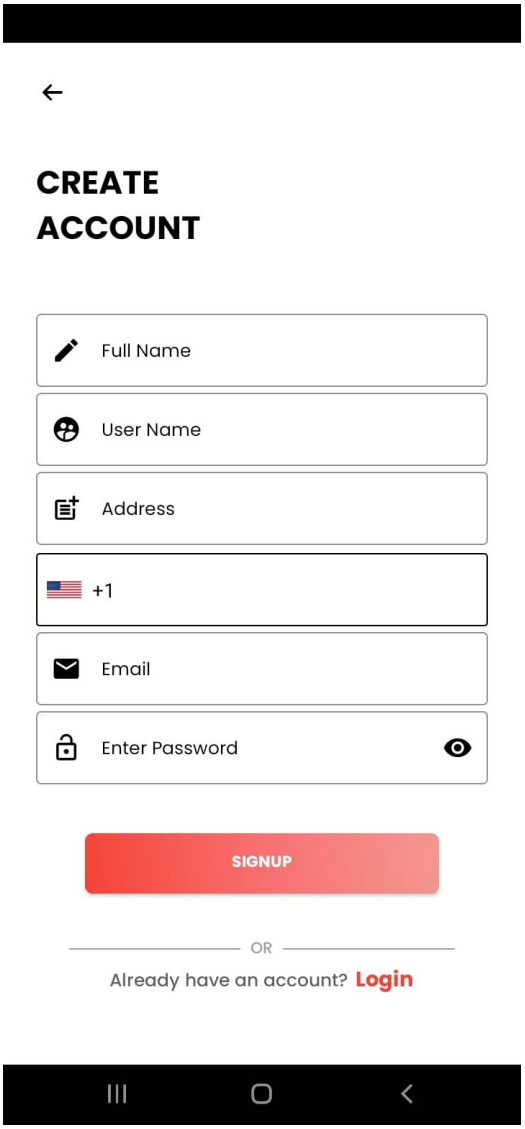
Appendices

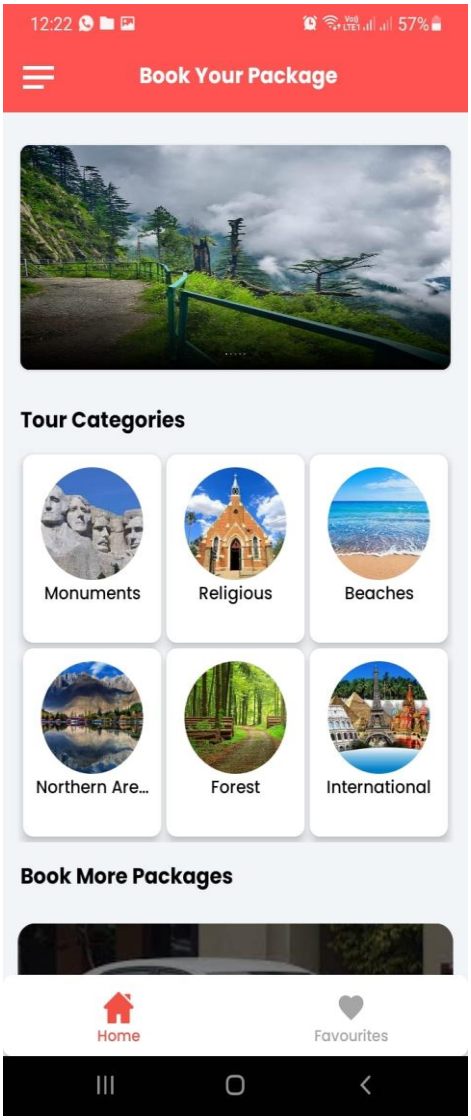
Appendix A: Information / Promotional Material

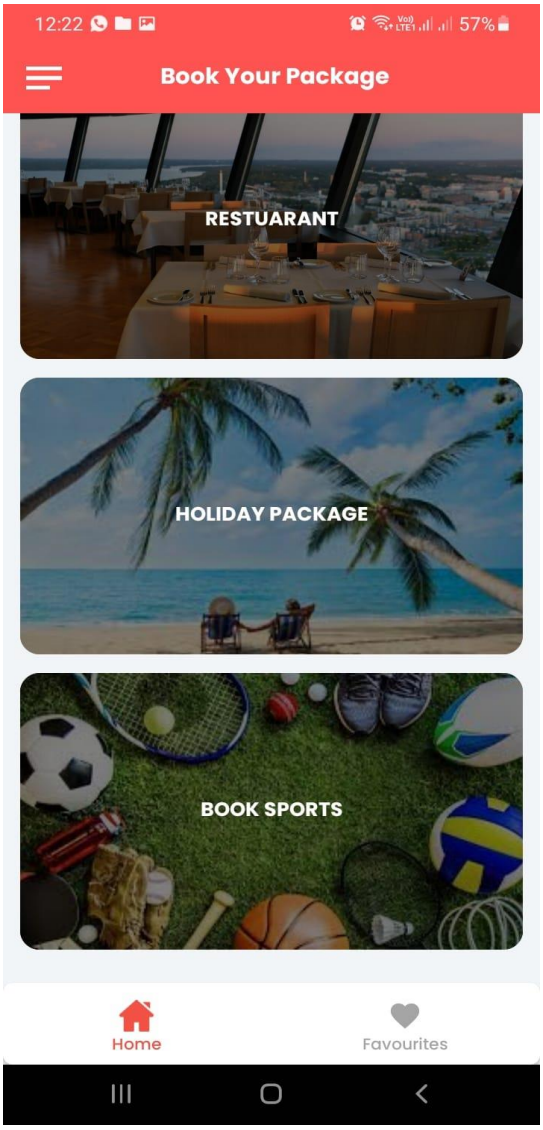
A.1. Broacher

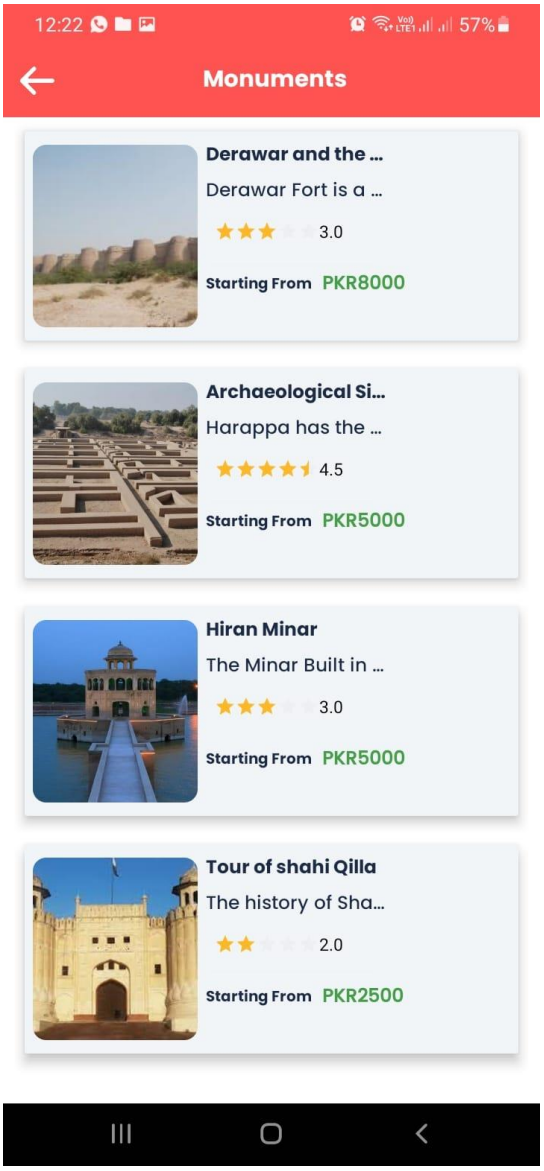


A.2. Flyer


CREATE
ACCOUNT
Full Name
User Name
Address
+1
Email
Enter Password
SIGNUP
OR
Already have an account? Login


12:22
57%
Book Your Package
Tour Categories
Monuments
Religious
Beaches
Northern Are...
Forest
International
Book More Packages
Home
Favourites


12:22
57%
Book Your Package
RESTUARANT
HOLIDAY PACKAGE
BOOK SPORTS
Home
Favourites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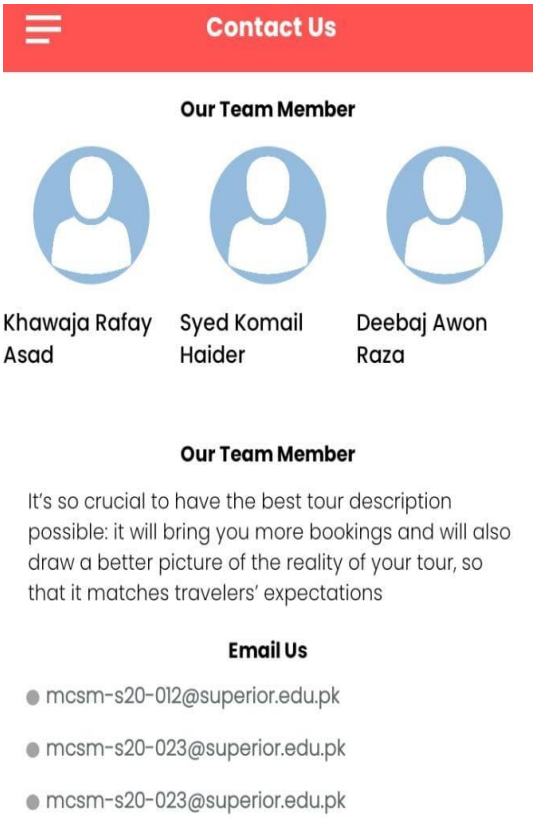
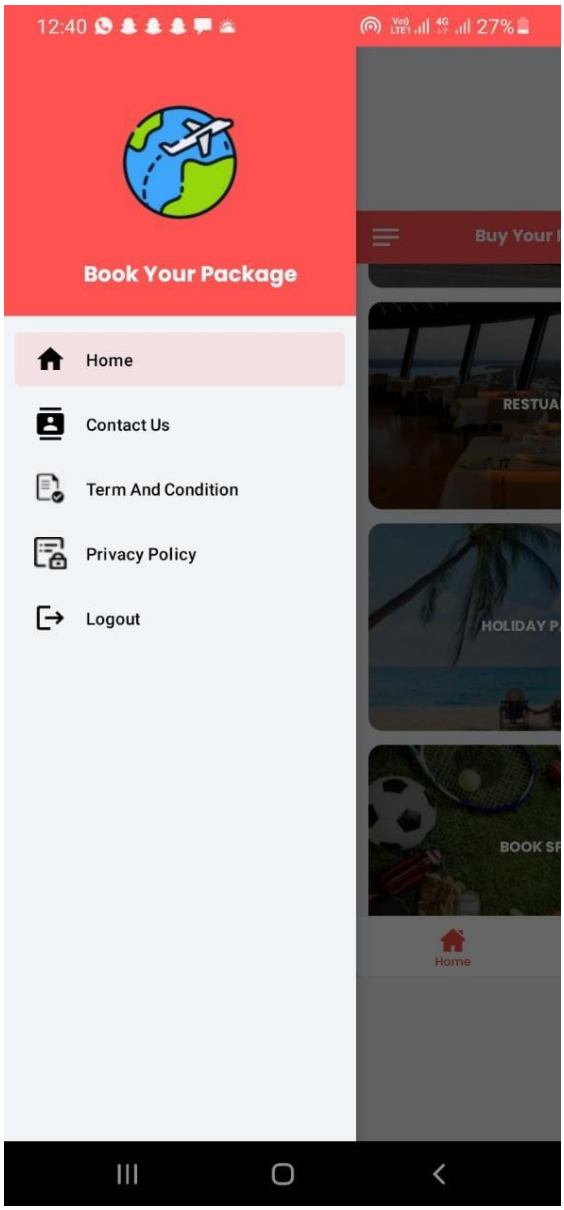
Monuments
Derawar and the ...
Derawar Fort is a ...
3.0
Starting From PKR8000
Archaeological Si...
Harappa has the ...
4.5
Starting From PKR5000
Hiran Minar
The Minar Built in ...
3.0
Starting From PKR5000
Tour of shahi Qilla
The history of Sha...
2.0
Starting From PKR2500


Contact Us
Our Team Member
Khawaja Rafay Asad
Syed Komail Haider
Deebaj Awon Raza
Our Team Member
It's so crucial to have the best tour description possible: it will bring you more bookings and will also draw a better picture of the reality of your tour, so that it matches travelers' expectations
Email Us
mcsm-s20-012@superior.edu.pk
mcsm-s20-023@superior.edu.pk
mcsm-s20-023@superior.edu.pk


12:40
27%
Book Your Package
Home
Contact Us
Term And Condition
Privacy Policy
Logout
Buy Your
Home

V

Reference and Bibliography

Reference and Bibliography

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