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***Logo, company name

Description automatically generated*Software Requirements**

**Specifications**

UNDER THE SUPERVISION OF

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**Table of Contents**

Table of Contents

**1. Introduction1**

1.1 Purpose3

1.2 Scope3

1.3 Technologies used3

1.4 Methodology4

1.5 Intended Audience4

1.6 Overview4

**2. Overall Description4**

2.1 Product perspective5

2.2 User Characteristics5

2.3 Operating Environment5

2.4 Constraints5

2.5 Assumptions and Dependencies6

**3. Interfaces7**

3.1 System Interface 7

3.2 Software Interface8

**1.Introduction**

**1.1 Purpose of the Air Line Reservation project:**

The project of the airline reservation system is used for many purposes, which are flight booking system, as the system allows the passengers to search and book a flight between two cities in a specific time, customer booking counters, pricing updates, hotels availability, offers available, tickets and much more. The project is built for the administration, thus only the administration has the access to all the information.

The purpose is to streamline the project using computerized equipment and a unique computer software that meets the requirements, so that the data can be saved for a longer period and easily accessed by management.

**1.2 Scope of the project:**

The project's primary goal will be to make airline reservations easier and automated with shorter reservation times while enhancing passenger interaction and engagement. Some features that will differentiate our project from any other one which are the database will be used to make the UX better. We will design a UI to make it user-friendly. This project is expected to be ready by the end of this course, between December 20, 2022 and December 30, 2022.

**1.3 Technologies Used:**

1. Coding Language: Java

2- Frontend Implementation: Gui (javafx)

3- Backend: MySQL

**1.4 Methodology:**

The development methodology adopted for the proposed system is Agile model.

**1.5 Intended Audience:**

**Developers**: To have ease of implementation.

**Software Tester**: To be able to develop the correct test cases for the system

and test it to improve the system's quality.

**Project Manager/SCRUM Master:** To be able to develop a good plan to work

on the project and construct the team.

**Project Supervisor:** To be able to mentor the teams’ work and assist with any

advices and make sure that the goals are met within the time allotted.

**Customer:** to follow up with project team if there is a requirement change.

**1.6 Overview of the document:**

In the upcoming chapter of the SRS documents the detailed information explaining the airline reservation system will be explained, where the exact requirements and user specification will be explained in very detailed manner. Chapter 3 of the SRS document will explain the implementation details of the interface. The functional and nonfunctional requirements, diagrams, and other pertinent requirements for the "Airline Reservation System" Application are then presented in the remaining chapters.

**2.Overall Description**

**2.1 Product Perspective:**

* The "Travelito" application is an identity and self-contained System with a satisfactory user interface.
* The system has two kinds of users The first type is the user, and the second type is the administrator. Each type has distinctive activities they can do with the system.
* The system makes use of a centralized database that contains all of the information. It is compatible with any Android phone running version 2.2 or higher.

**2.2 User Characteristics:**

There are two kinds of users for the airline reservation system. One is the customer and the other is the administrator.

* The customer should be comfortable with English language and have prior experience using general android applications or on the computer.
* The Administrators need to be trained to use the application.

**2.3 Operating Environment:**

The system will run on Android operating system version 2.2 or higher. Therefore, any devices that support this version of the android OS or higher can easily run the application anytime indoor or outdoor.

**2.4 Constraints:**

A working internet connection is a constraint for the system as all the data, passenger information and flight information, needed for the application to function is stored in a database which needs to be always accessible by the system. Thus, it is a must for there to be a stable internet connection for the application to operate.

**2.4.1 Software Constraints**

* Programming language used is Java in addition to the JavaFX SDK.
* System uses MySQL for database.

**2.5 Assumptions and Dependencies:**

Users will download the application from their respective computer app store.

* It is assumed that all users of the system have access to the internet.
* All users are assumed to understand English and be familiar with online booking applications.
* The system is dependent on an up-to-date database which stores all updated user, booking and flight information.

**3. Interfaces**

**3.1 System Interface:**

When a first-time user opens the mobile application, he or she should see the log-in page; see Figures 01&02. If a user is not yet registered in the system, he or she should be able to access the Sign-Up page. As a result, he or she will create an account in order to use the system's features.

Graphical user interface, application

Description automatically generatedA screenshot of a video game

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Figure 01 Travelito App and Login Page

Figure 02 Sign Up Page

When the user opens the app on the mobile, he will see a log in page to open his account. If he doesn’t have one he can enter to the sign-up page and create one or enter by his google or Facebook account. There is an option also if he forgot his password to create a new one.

**2.1 Software Interface:**

The Airline reservation app will be developed as a native mobile application for the Android operating system using the Java JDK and Android SDK tools. Android studio, as well as packages and libraries, are used. The following are the app development process's primary stages, followed by each stage's details.

The System interacts with the database on the server side. To run <MySQL> data queries, the system must communicate with <phpMyAdmin>. Within the System class, the username and password are set for MySQL﻿ login in the connection object.

The Service class is responsible for communication with the server through HTTP Post requests and communicates with the API using Retrofit Library and Volley Library.

Upon receiving login credentials from the User class, the database is connected by using the driver class that was constructed earlier. After successfully connecting to the Database, we retrieve the record that contains information about flights according to the customer’s input and compare it against our reference data. If a match is found, a message is sent to notify the user and the retrieved information is displayed to the user in a list format. Each flight is displayed on the screen with relevant information such as date, time, price, duration etc. The user may also add or delete flights from this list according to his preferences. Once the user is done with his booking he can choose to complete the booking process by confirming the order or by paying via PayPal or with credit card. Once the payment is complete and the order is confirmed the system will notify the user of the flight details and the payment status.