Software Design Document

for

Airline Reservation System

Version 1.0

Prepared by

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1. INTRODUCTION

1.1 Purpose

This software design document describes the architecture and system design of the Airline Reservation System project, which helps the customers to search the availability and prices of various airline tickets.
The purpose of the Software Design Document is to provide a description of the design of a system fully enough to allow for software development to proceed with an understanding of what is to be built and how it is expected to built.

1.2 Scope

This project designs and implements ARS to fulfill all the vision statements. The Airline Reservation System project is an implementation of a Airline Ticketing website. This project also covers various features like online registration of the users, reports generation, as well as managing all the data.
In general, this website shall be designed to perform like any other airline ticketing website available online.
Subject facet: User Interface, Searching one-way flights, Searching round trip flights, Searching multiple destinations, Flight reservations, Reservation cancellation, Online payment, Request and response for reservation cancellation, Displaying warning messages.
Usage facet: Searching, Sorting of flights, Reservation of tickets, Managing existing reservation, Managing flight details, Keeping the flights up to date.
IT facet: Database, Web-based software system, AAS for logins, Performance maintenance.
Development facet: Internal policy and culture of the airlines company should be taken under consideration.

1.3 Overview

For this particular Software Design Document, the focus is placed on the architecture and the design of the application. In this section you can find general information about the project, such as the purpose and the scope. The remainder of this document consist of six chapters:

- *SYSTEM OVERVIEW - gives general description of the functionality, context and design of your project*
- *SYSTEM ARCHITECTURE - describes the architectural style and includes subsystem diagrams.*
- *DATA DESIGN - describes how the major data is stored and lists the database and each class's attributes and methods.*
- *COMPONENT DESIGN*
- *HUMAN INTERFACE DESIGN - describes the functionality of the system from the user's perspective and displays schemes showing the interface.*

- *REQUIREMENTS MATRIX*

1.4 Reference Material

1. IEEE Software Engineering Standards Committee, "IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements Specifications", October 20, 1998.
2. https://online.visual-paradigm.com/
3.https://www.visual-paradigm.com/guide/data-flow-diagram/what-is-data-flow-diagram/
4.https://www.coursehero.com/file/p51lrjg4/Explain-how-the-user-will-be-able-to-use-your-system-to-complete-all-the/

1.5 Definitions and Acronyms

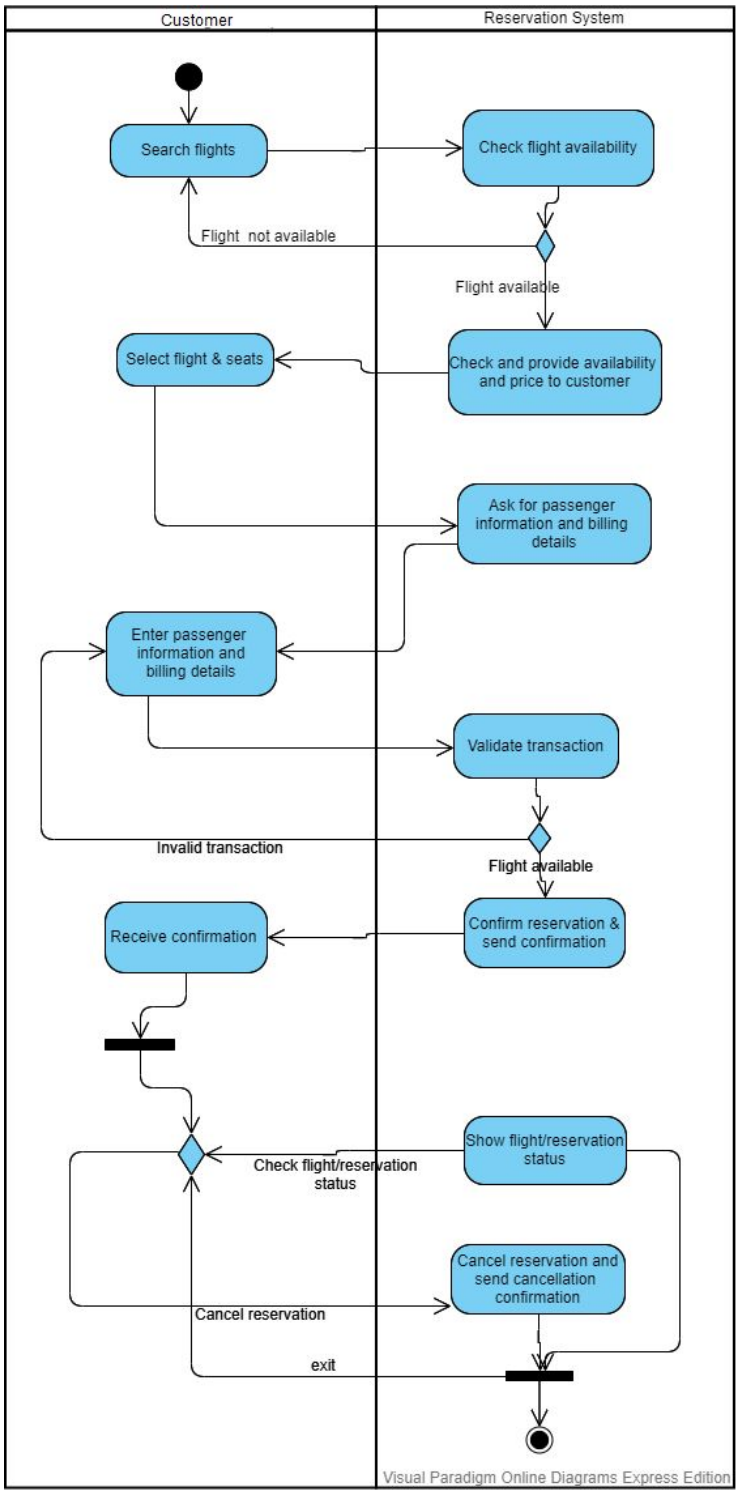
Definitions

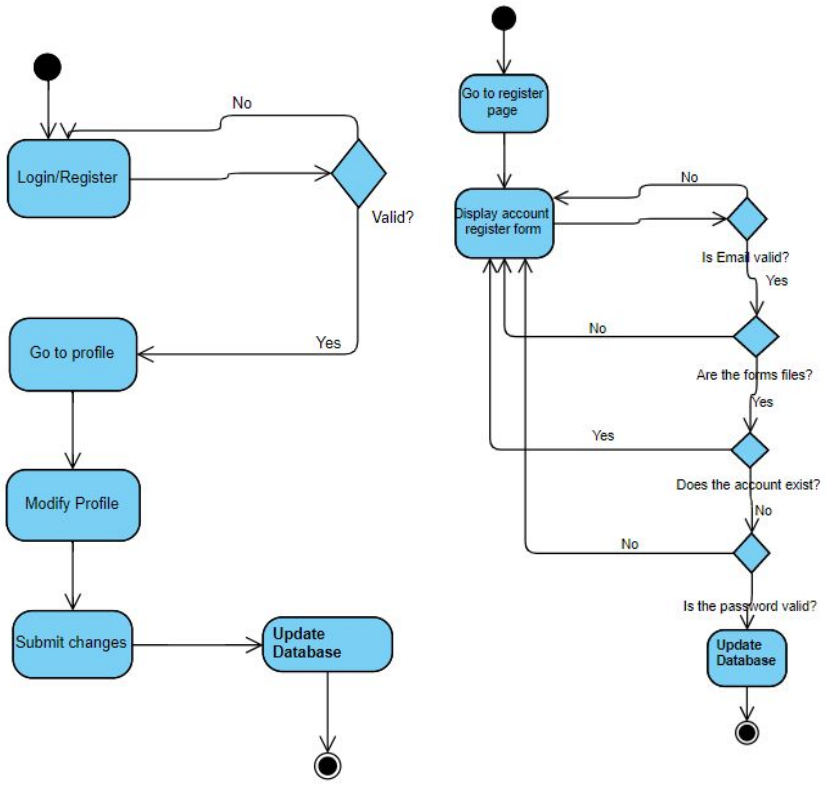
#	Term	Definition
1	User	Someone who interacts with the web application
2	Admin/Administrator	System administrator who is given specific permission for managing and controlling the system
3	Web-Portal	A web application which present special facilities for the airline company and admin.
4	Stakeholder	Any person who has interaction with the system who is not a developer

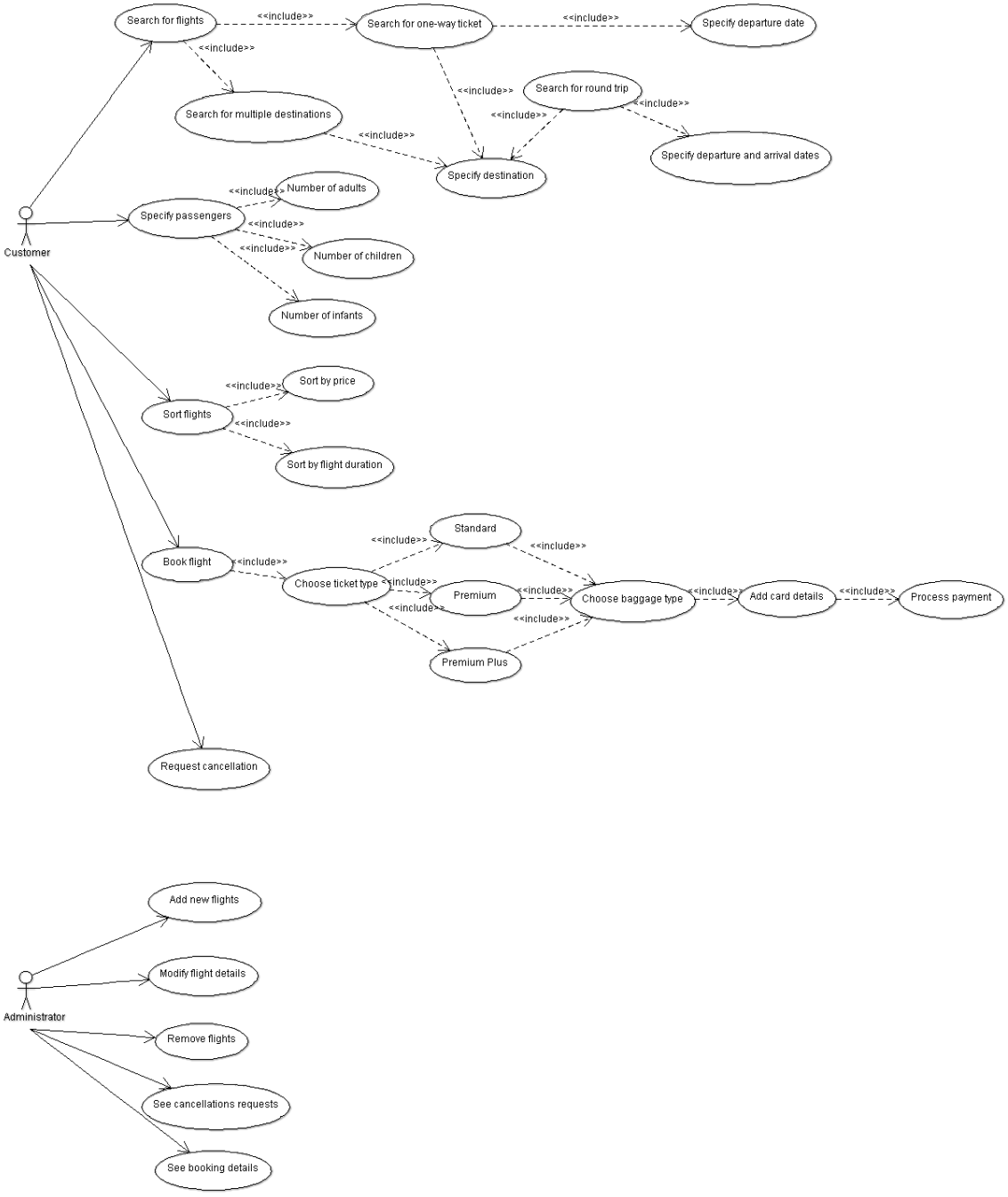
Acronyms

#	Acronym	Meaning
1	ARS	Airline Reservation System
2	AAS	Authentication and Authorization System
3	IEEE	The Institute of Electrical and Electronics Engineers
4	SDD	Software Design Document
5	DFD	Data Flow Diagram

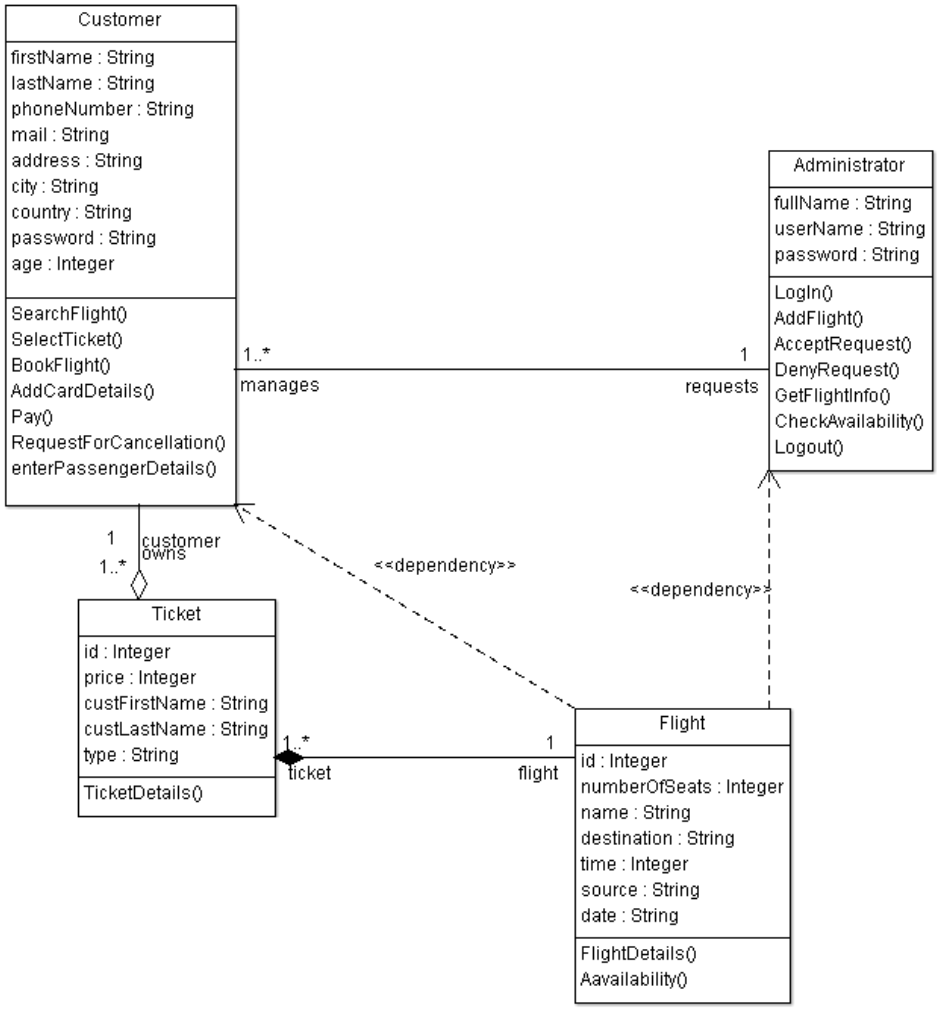
5. COMPONENT DESIGN




No
Login/Register
Valid?
Yes
Go to profile
Modify Profile
Submit changes
Update Database
Go to register page
Display account register form
No
Is Email valid?
Yes
No
Are the forms files?
Yes
Yes
Does the account exist?
No
No
Is the password valid?
Update Database



Use Case Diagram



Class Diagram

6. HUMAN INTERFACE DESIGN

6.3 Screen Objects and Actions

All the pages that the customer has access to contain a navigation bar. It contains the logo of the airline company, which links to the home page; About, which goes to the general information page, where the users can see instructions on how to make a reservation and more frequently asked questions; Flights, which goes to the Flight page, where users can see a list of upcoming flights; Blog, which redirects the users to the News page; Contact, which redirects users to the Contact page; My Account, which redirects users to the Register page, where they can either login or create an account.
The home page contains a search form, where users can add the details of the desired flight and press the Search button.
If the user is registered, they can choose one or more flights that match the search filters and add them to the reservation by pressing the <<Choose ticket type>> and <<Add>> buttons.
The Contact page contains a button which allows users to send the form to the company.
The application also includes an interface for the administrator, which has buttons allowing the administrator to manage Reservations, Flights, Customers and Cancellations. Each table has buttons to create, edit and delete fields.