

Software Requirements Specification (SRS)

for

Egypt Airline Company

Version 3.0

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Revision History

Name	Date	Reason For Changes	Version
EAC	1/11/2019	Update information of the software(Project purpose & Scope and Reference)	1.0
EAC	8/11/2019	Adding User Interfaces & class diagram & use case and activity diagram and functions	2.0
EAC	15/11/2019	Adding SSD & State Diagram & Domain Diagram & Object Diagram	3.0

1. Introduction

1.1 Purpose

Create a website for EAC, so that easier for customer to book tickets in which where he is.....

1.2 Project Scope

Two different area

- 1_ The website for the EAC, just user and admin can use the application.
- 2_ The desktop application in which the branch location is in, just employee and admin can use the application.

1.3 References

- Expedia
- Egypt airline company website
- Flynas
- Customers feedback

2. Overall Description

The SRS contains an analysis of the requirements necessary to help easy design.

2.1 Product Overview

The overall description provides interface requirements for the Airline Reservation system, product perspective, hardware interfaces software interfaces, product functions, user characteristics and other constraints.

2.2 Product perspective

2.2.1 Hardware interfaces

Hard disk: The database connectivity requires a hardware configuration with a fast database system running on high rpm hard-disk permitting complete data redundancy and back-up systems to support the primary goal of reliability.

The system must interface with the standard output device, keyboard and mouse to interact with this software.

2.2.2 Software interfaces

- Sql server 2015 for database
- Microsoft Visual Studio 2015

2.2.3 Operations

On the website

- The customer login and give the required information, Then can access to the application to book his ticket or modify another and give the way of payment...

On the desktop application

- The employee login to the application , and then can book ticket or modify one or cancel one

2.3 Product Features

As technology improving day to day,users needs are also increasing.so we have to update our applications time to time in order to satisfy the customers.These are the specifications which are not provided for now in the current version of EAC but which could be incorporated into future versions. Some of these need advanced technologies and interfaces with other systems. The EAC could be designed in future to enhance the existing capabilities or add entirely new ones.The assumptions and limitations of the EAC have been interspersed in the SRS to present the same in their proper context.

2.3 User Classes and Characteristics

There are three kinds of users for the EA{. One is the customer , the second is the administrator and the third is Employees . The customers do not need to have any prior training to use the system. However, instructions for making flight would be provided to them on the airline website. The employees would however need to be trained in order to use the system.The last is the administrator would manage all of these operations.

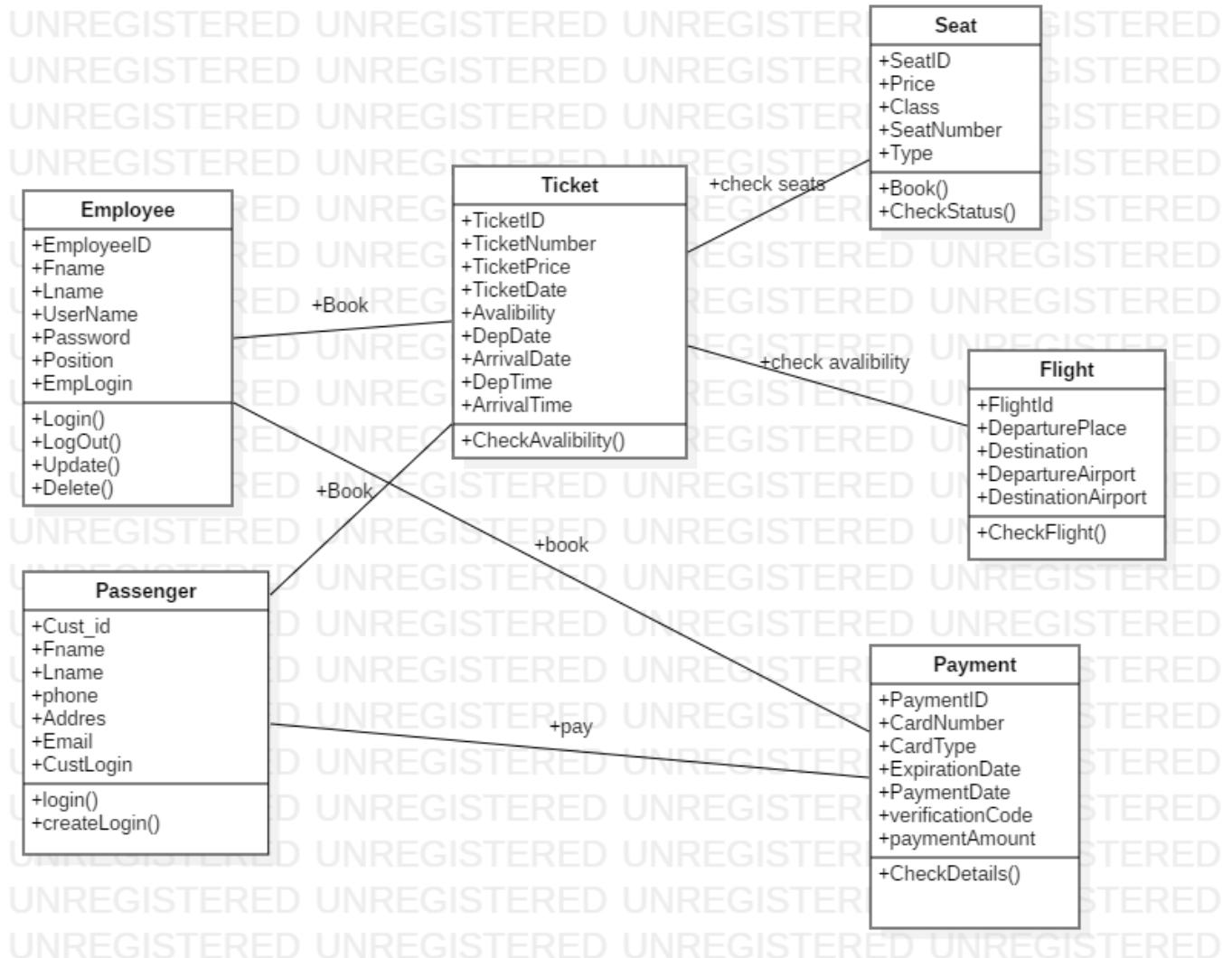
2.4 Operating Environment

The system will be operating on :
Windows operating system (windows 8.0 or higher)
Web browser

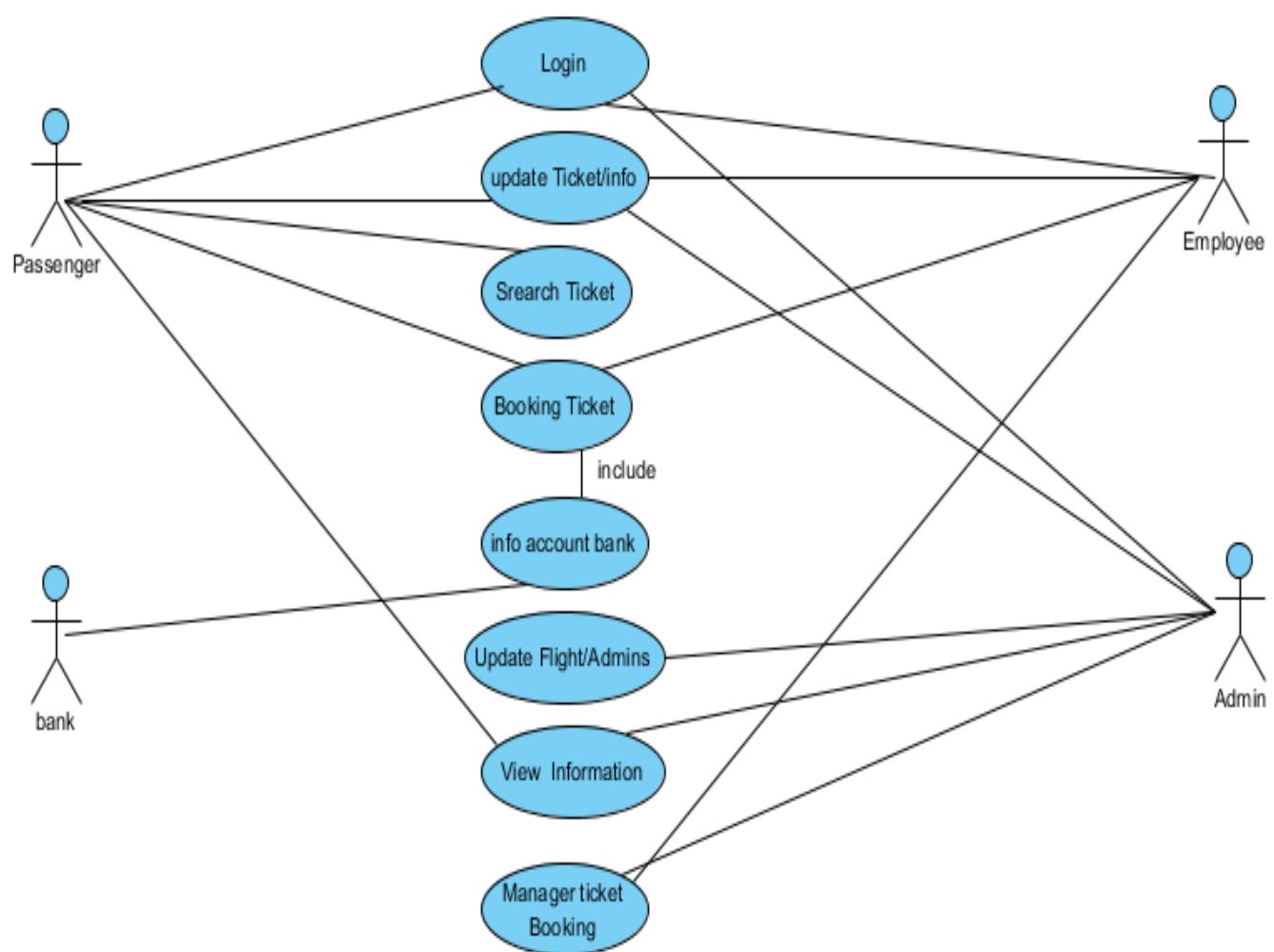
User Documentation

Download manual documentation

2.5 Class diagram

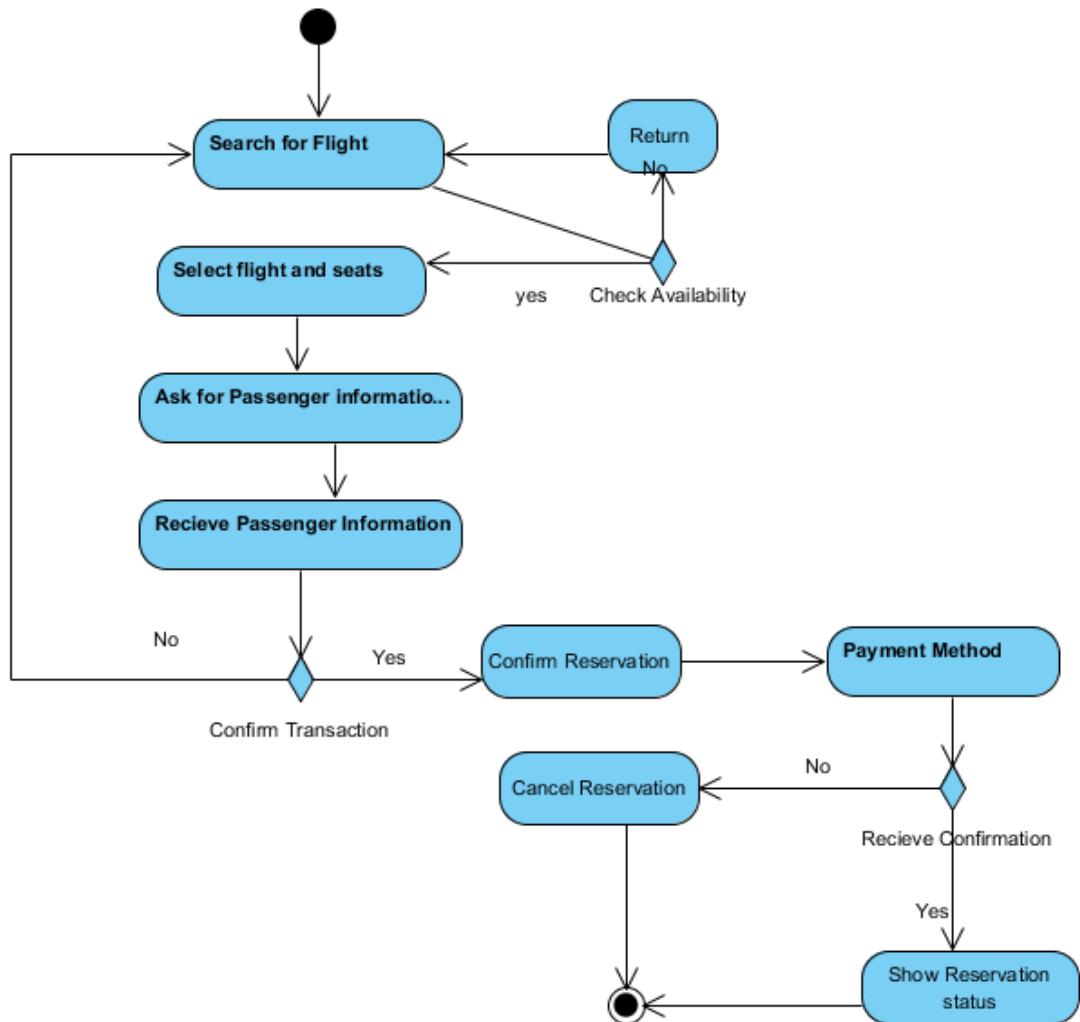


2.6 Use case

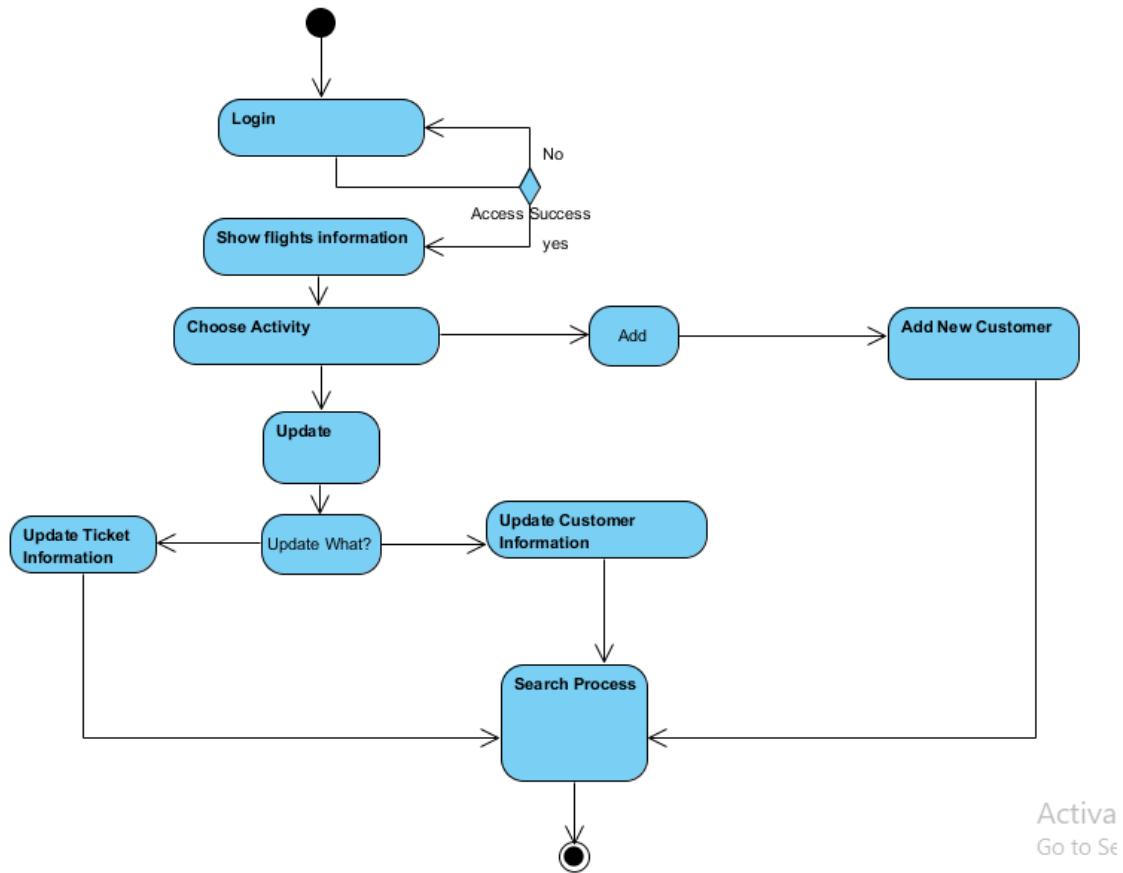


2.7 Activity Diagram

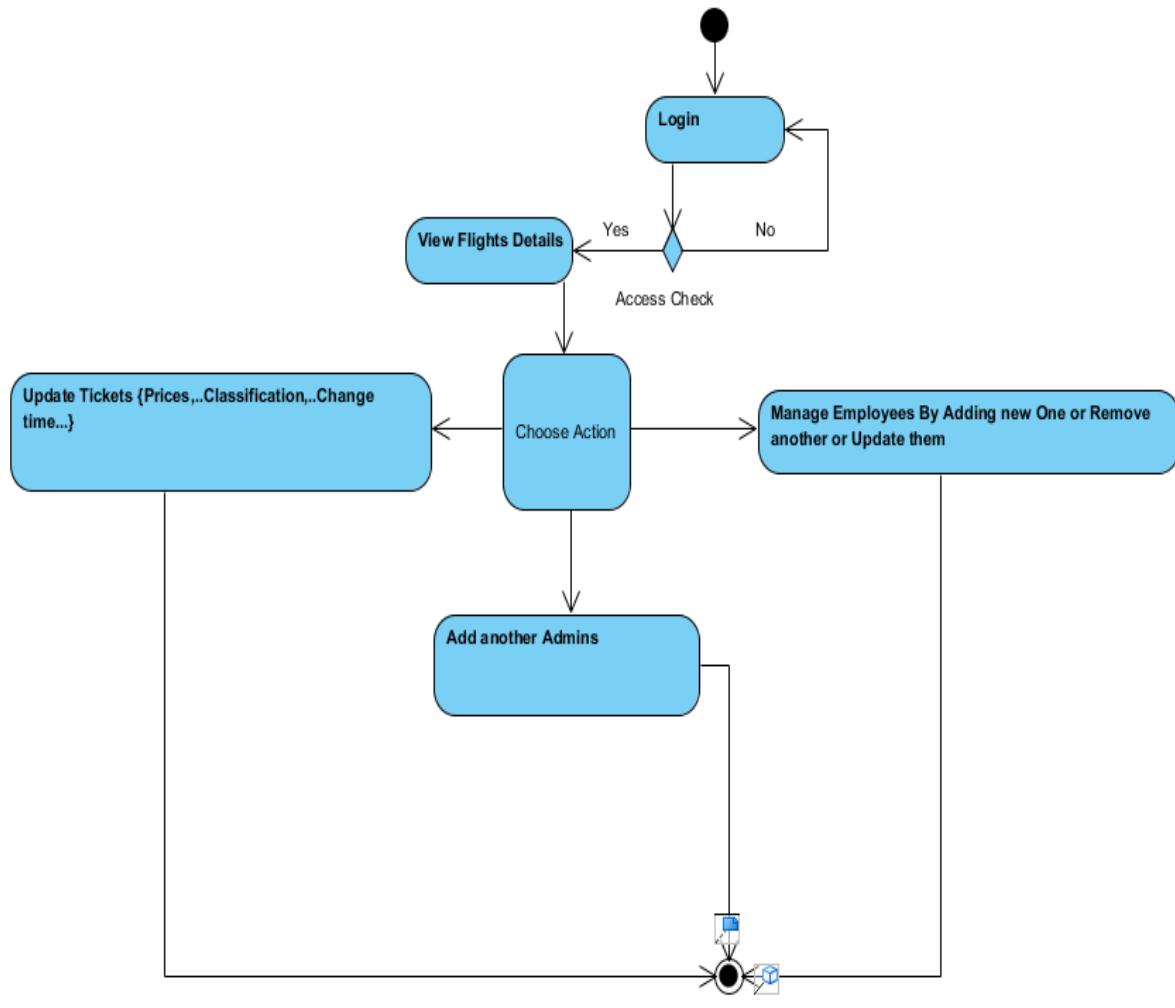
2.7.1 Booking Ticket activity (passenger)



2.7.2 Employee activity diagram

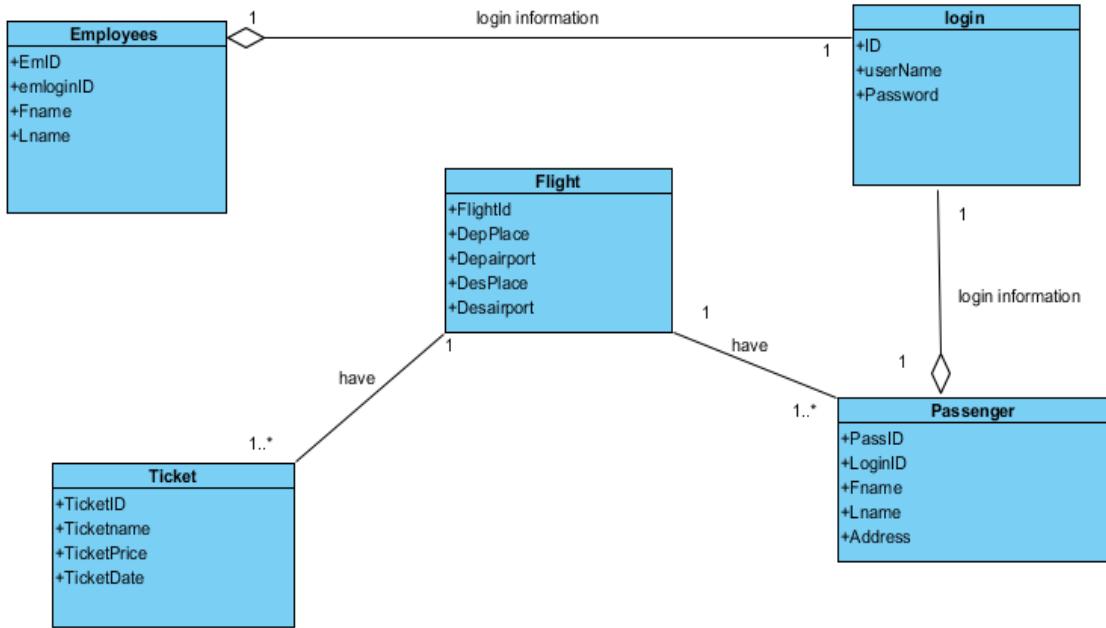


2.7.3 Admin activity diagram

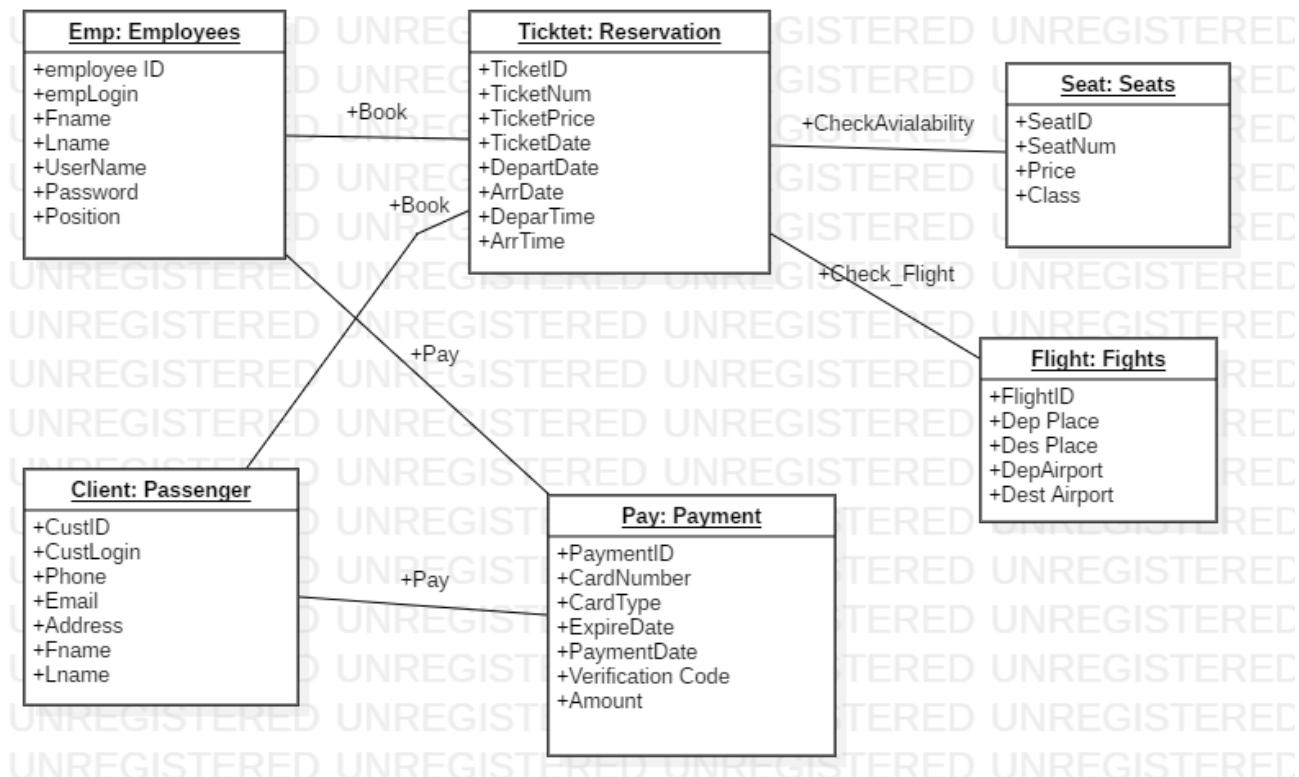


Act
Got

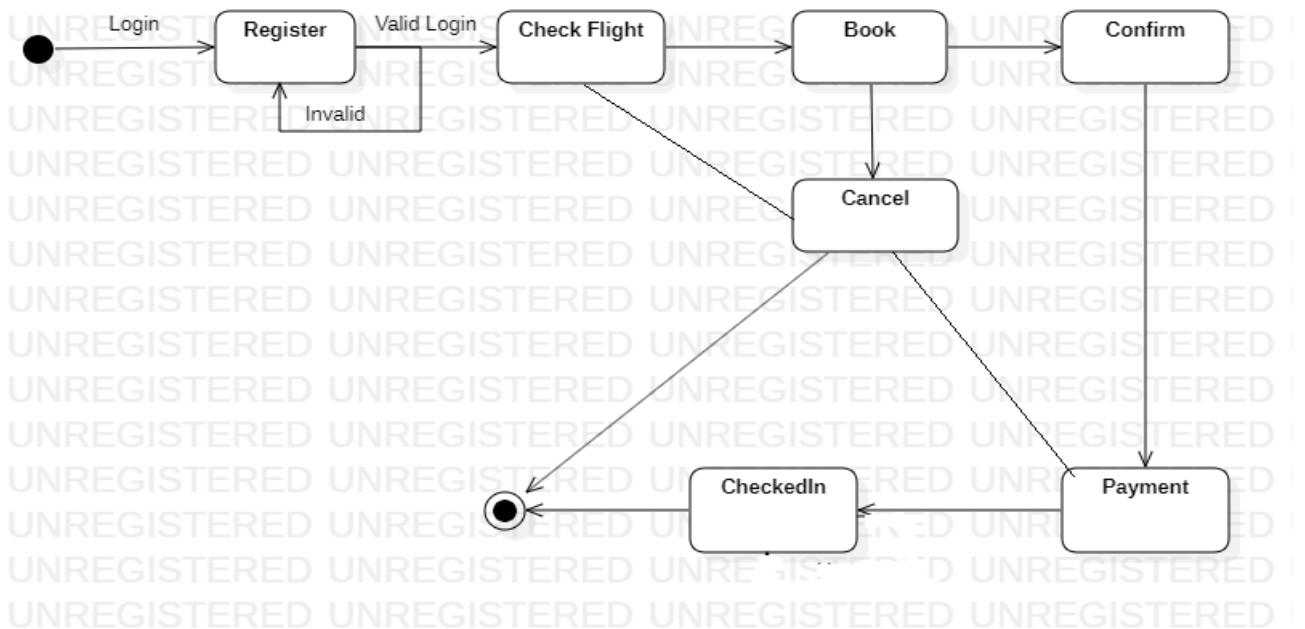
2.7.4 Domain Diagram



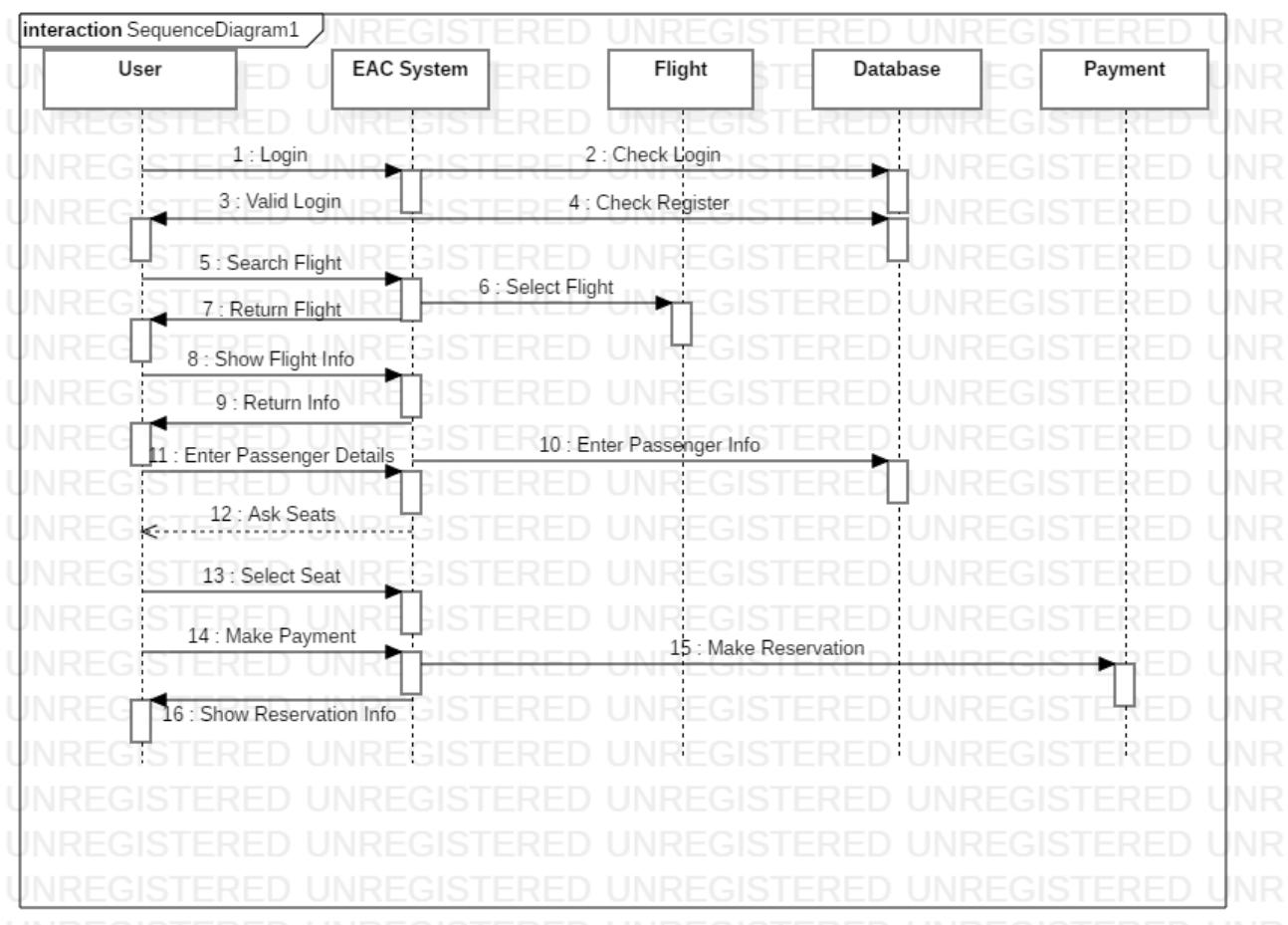
2.7.5 Object Diagram



2.7.6 State Diagram



2.7.7 Sequence Diagram



3. System Functions

Viewing Flight Details

- *Flight number*
- *Flight Name*
- *Flight route(Start and Destination stations)*
- *Flight timings*
- *Seat availability.*

Reserving Tickets

- *Flight number*
- *Flight Route*
- *Flight Time*
- *Selecting class*
- *Making payment*

Cancelling Tickets

The user must be able to cancel tickets that he has earlier reserved by quoting the ticket number, credit card number and bank name.

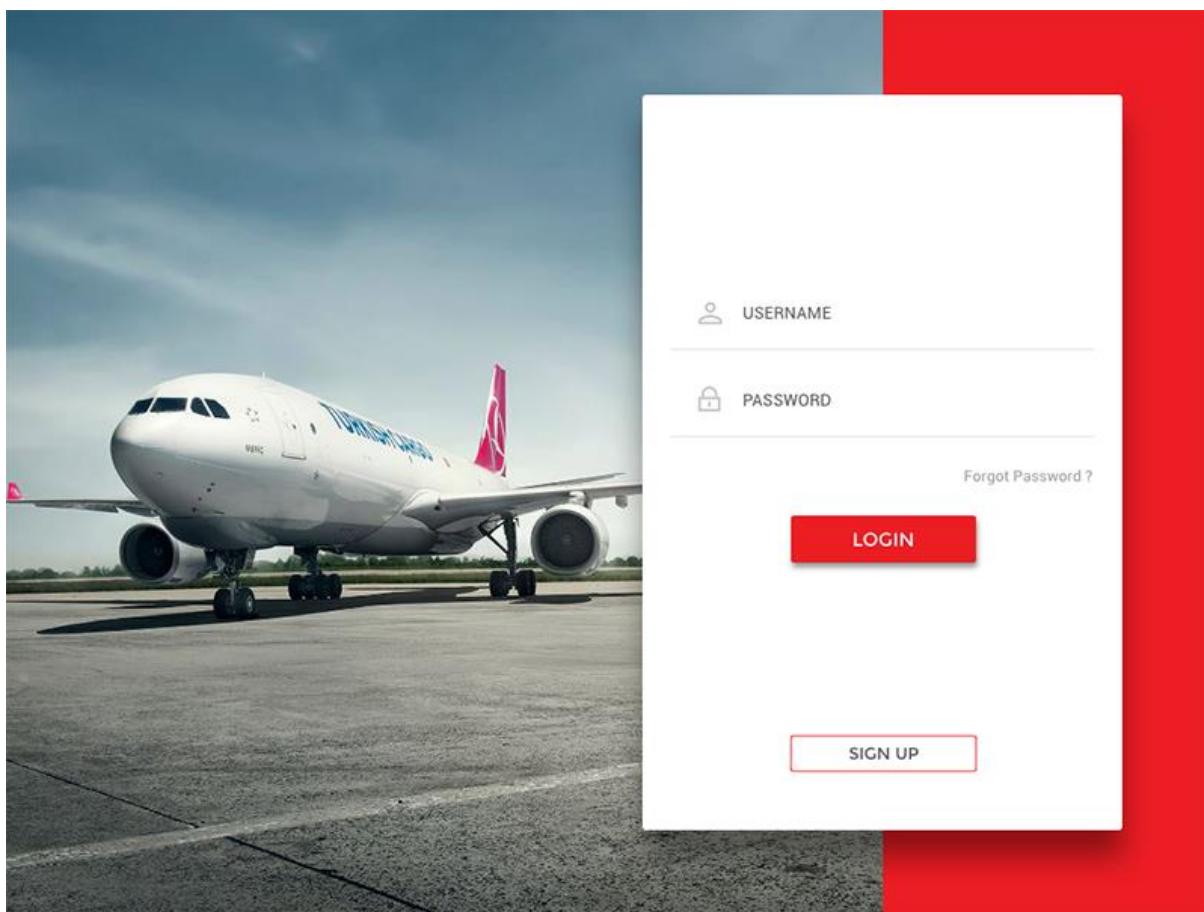
Constraints

- *At the time of reservation, each user is provided a unique ticket number*
- *20% of the ticket will be deducted in case of cancellation*
- *The maximum cancellation date is 2 day*

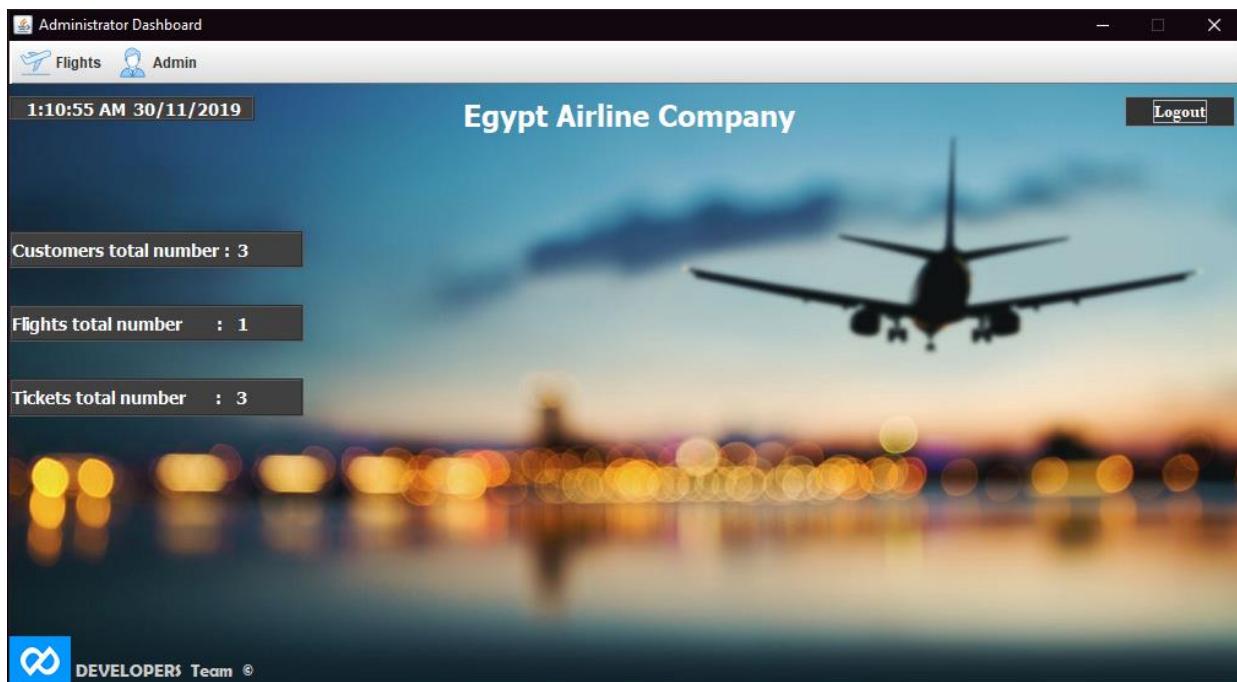
4. External Interface Requirements

4.1 User Interfaces

1-The login page show that the users should give the required information to access the application. Continue to the login page required information should be [Name, SSN, Mobile Phone, Email (Optional),Payment ways....].



2-After the administrator login to the system this form (administrator board)will appear that shown Information about the total numbers of customers & flights and tickets , And show the functions that he can access



3-Only the administrator can update flights

A screenshot of a Windows application window titled "Add New Flight". The window has a title bar with a plus sign icon and the text "Add New Flight". The form contains several input fields: "Flight ID" (set to 2), "Departure's Place" (set to Egypt), "Destination" (set to Afghanistan), "Departure's Airport" (set to Alexandria International Airport), "Destination Airport" (set to Hamid Karzai International ...), "Departure's Date" (set to Nov 1, 2019), "Arrival Date" (set to Nov 1, 2019), "Departure's Time" (set to 12.30 AM), "Arrival Time" (set to 8.00 PM), "Class A" (set to 50), "Class B" (set to 100), and "Class C" (set to 200). At the bottom center is a blue "Add" button.

4-The Administrator can add & delete and update employees

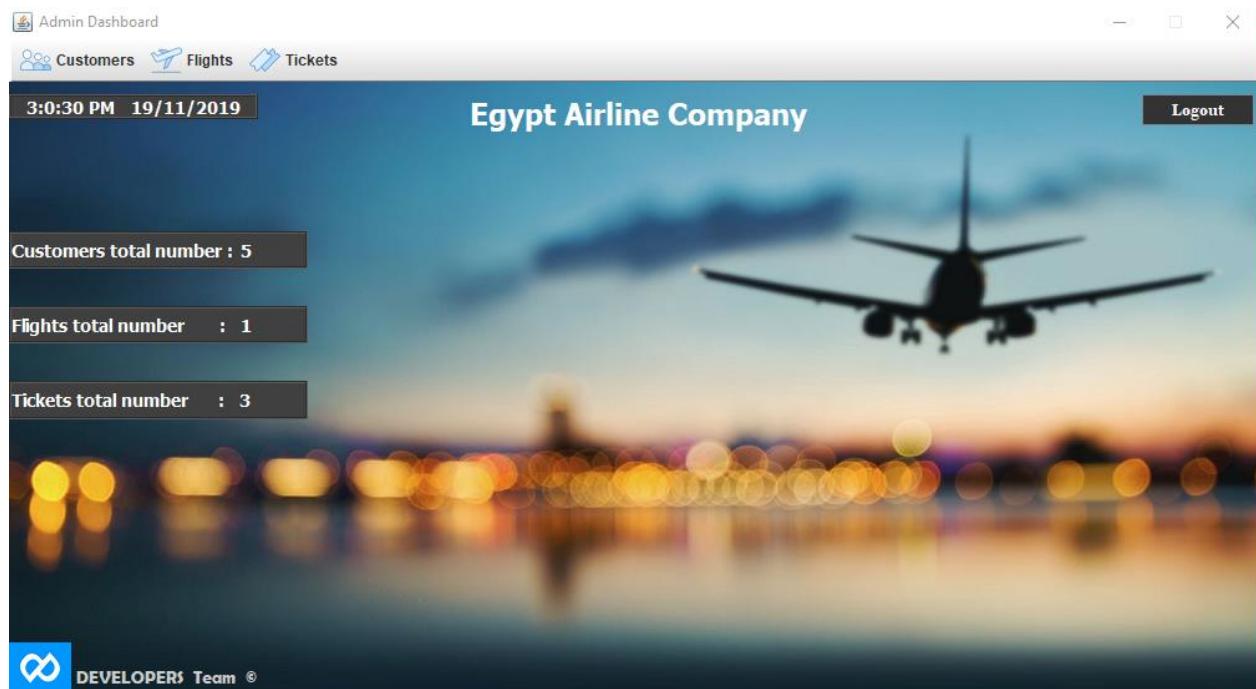
The screenshot shows a Windows application window titled "New Admin". The title bar includes standard window controls (minimize, maximize, close). The main area contains three text input fields: "Admin Id", "Password", and "Admin Type". Below these fields is a note: "* '1' For Administrator and '0' for Normal Admin". At the bottom center is a blue "Add" button.

5-The administrator can view currently admins

The screenshot shows a Windows application window titled "Admins". The title bar includes standard window controls. The main area features a search bar with a "Search" button and buttons for "Delete" and "Update". Below this is a table with two rows. The first row has columns for "Admin Id" and "Admin Type". The second row displays specific data: "admin" in the Admin Id column and "Admin" in the Admin Type column. A third row is partially visible below it.

Admin Id	Admin Type
admin	Admin
administrator	Administrator
osama	Administrator

6-After the employee login to the system this form (admin board)will appear that shown Information about the total numbers of customers & flights and tickets , And show the functions that he can access



7-The employees only can add new customers from this form

A screenshot of the "New Customer" addition form. The title bar says "New Customer". The main heading is "Add New Customer" with a user icon. The form contains the following fields:

- Customer ID:** A text input field containing the value "4".
- Name:** A text input field.
- Email:** A text input field.
- Phone:** A text input field.
- Birthday:** A text input field with a small calendar icon to its right.
- Gender:** A dropdown menu showing "Male".
- Address:** A text input field.
- Payment:** A dropdown menu showing "Credit card".

In the bottom right corner, there is a green "Add Customer" button.

8-The employees can update customers information here

The screenshot shows a Windows application window titled "Update Customer". At the top left is a circular arrow icon. To its right, the title "Update Customer" is displayed. Below the title is a search bar labeled "Customer Id :" followed by a text input field and a "Search Id" button. The main area contains four text input fields: "Name", "Email", "Phone", and "Address", each preceded by a label. At the bottom right of this area is a green "Update" button.

9- Employees can add flights from this form

The screenshot shows a Windows application window titled "Add Ticket". At the top center is a ticket icon followed by the title "Add Ticket". Below the title is a search bar labeled "Customer Name" with a text input field and a "Search" button. To the right of the search bar is a "Book" button. The main area contains several input fields and dropdown menus: "ID" (set to 4), "Customer Name" (text input), "Search" (button), "Add" (button), "Id", "Name", "Email", and "Phone" (all in a single row). Below these is a large empty text area. Further down are sections for "Departure's Place" (set to Egypt), "Destination" (dropdown menu), "Destination Airport" (dropdown menu), "Search" (button), and "Add" (button). At the very bottom is a horizontal table with columns for "Id", "Departure's Airport", "Destination", "Destination's Airport", "Departure's Date ...", "Arrival Date & Time", "Class A", "Class B", and "Class C".

10-Employees can view available flights that can be booked

The screenshot shows a Windows application window titled "Flights". At the top, there is a search bar with a placeholder "Destination" and a "Search" button. Below the search bar is a table header row with columns: Id, Departure's Airport, Destination, Destination's Airp..., Departure's Date ..., Arrival Date & Time, Class A, Class B, and Class C. Underneath this header is a single data row. The data row contains the following values:

Id	Departure's Airport	Destination	Destination's Airp...	Departure's Date ...	Arrival Date & Time	Class A	Class B	Class C
1	Alexandria Intern...	Afghanistan	Hamid Karzai Int...	2019-01-07 10:0	2019-01-08 11:30	300	250	200

11- On the Customers page Employees can view customers here

The screenshot shows a Windows application window titled "View All Customers". At the top, there is a logo icon and the word "Customers". Below the title bar are four buttons: "Delete All" (red), "Delete Selected Customer" (red), "View Selected Customer" (blue), and "Update" (blue). Underneath these buttons is a table with columns: Id, Name, Email, and Phone. There are three data rows in the table:

Id	Name	Email	Phone
1	osama	osama@yahoo.com	1150998907
2	Anwar	Anwar@yahoo.com	12456788
3	Hussin	Hussin@yahoo.com	1023849

12- - On the Tickets page Employees can view tickets here

The screenshot shows a software application window titled "Tickets". At the top, there is a search bar with fields for "Customer Name" and a "Search" button, along with a "Delete" button. Below the search bar is a table header row with columns: Ticket Id, Customer Name, Flight Id, Ticket Date, Class, and Payment Id. Underneath this header is a large empty table body. At the bottom of the page, there is a table containing three rows of ticket information:

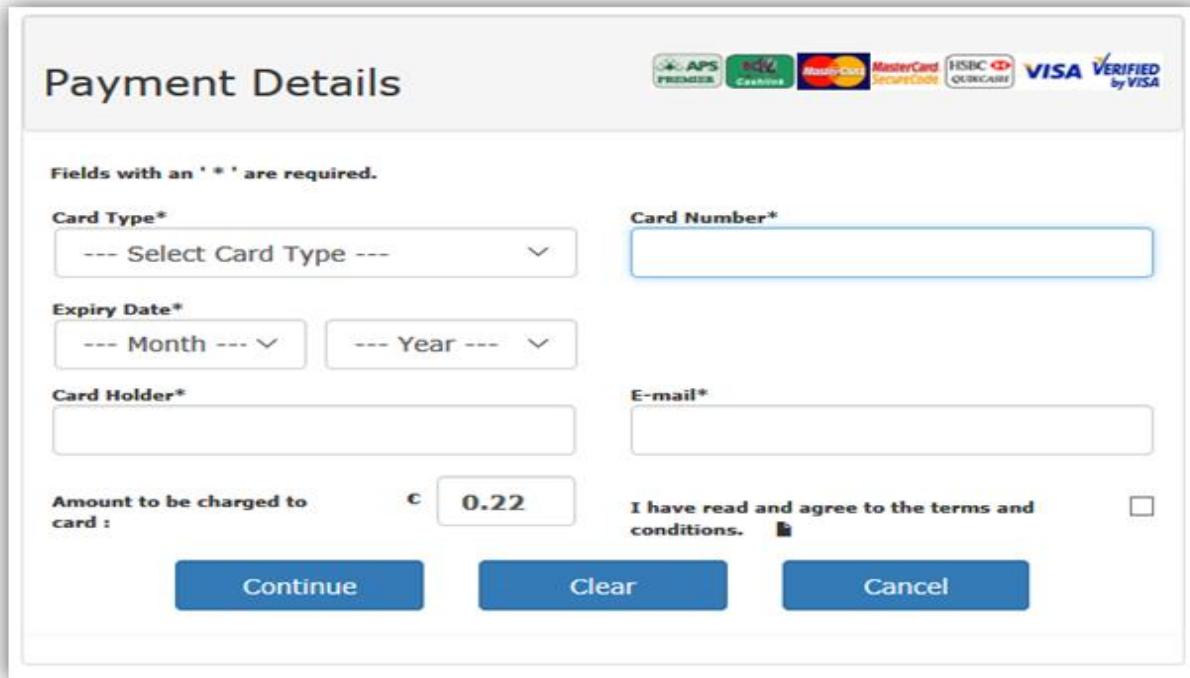
Ticket Id	Customer Name	Flight Id	Ticket Date	Class	Payment Id
1	osama	1	2019-01-06	class A	1
2	Anwar	1	2019-01-06	class B	2
3	Hussin	1	2019-01-06	class A	11

13- On the booking page, the client can choose the Flight Destination & Arrival Date and Time & Date of Trarvel Class of Flight and so on..

The screenshot shows a software application window titled "Add New Flight" with a sub-section titled "Book Flight". The page includes the following fields:

Flight ID	2		
Departure's Place	Egypt	Destination	Select
Departure's Airport	Select	Destination Airport	Select
Departure's Date	<input type="text"/>	Arrival Date	<input type="text"/>
Departure's Time	12.30 AM	Arrival Time	8.00 PM
Payment	Credit card	Number of Seats	<input type="text"/>
Class	Business	Book	

14-On the payment page client can select the payment method



The image shows a "Payment Details" form. At the top right, there are logos for various payment methods: American Express (APS PREMIER), Diners Club (DINERS CLUB), MasterCard (MasterCard SecureCode), HSBC (HSBC QUICKCARD), VISA, and Verified by VISA.

Fields with an * are required.

Card Type*: A dropdown menu with the placeholder "--- Select Card Type ---".

Expiry Date*: Two dropdown menus for "Month" and "Year".

Card Holder*: An input field for the card holder's name.

E-mail*: An input field for the card holder's email address.

Amount to be charged to card : A text input field containing "0.22".

I have read and agree to the terms and conditions.: A checkbox with the text "I have read and agree to the terms and conditions." next to it.

Buttons: "Continue" (blue), "Clear" (blue), and "Cancel" (blue).

4.1 Hardware Interfaces

Airline Ticket System is a web-based project. So any smart phone or computer, which has an internet browser, is enough to use this system.
And Desktop application may be on any PC has the required properties.

4.2 Software Interfaces

Users will use application program via the user interface program. The System must has connection to the database management system.

4.3 Communications Interfaces

Hypertext Transfer Protocol (HTTP) shall be used to provide a communication between system and users. Because, Airline Ticket System is a web-based system which should be reached on World Wide Web by user..It used to transfer information on intranets and the World Wide Web.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The EAC system can capable to accept 500 connections.

This design is to satisfy each user's usability and connection quality.

The system shall update all flight status information every 5 minutes

5.2 Security Requirements

- Passwords must be a minimum of eight characters and must contain one to seven digits.
- Email addresses should be verified before the system grants user access. This verification shall be exercised by sending the prospective user a confirmation email after enrollment, this email must contain information specific to completing the enrollment process.
- All data from client to system involving private data must be high secured

5.3 Software Quality Attributes

Usability

The EAC system design allow deployment on Windows. The design should support Windows Server 2010 or later.

Robustness

The system design shall include recovery scenarios allowing the ability to restore a state no older than one business day old.