CSP 584

Project Report
on
AIRLINE TICKET PURCHASE

Brief Project Subscription:

Flyers Airline Booking System is a user friendly and easy to use web application for the customers willing to travel around the globe. It also has users like System Admin and Airlines. In depth development of the task will result in well equipped and economical software for the the travellers to book a flight ticket for their desired route and this shall also allow the individual airlines to generate the report on the basis of the various activities of the flyers.

Requirements:

1) Customer:
    - Check flight availability between Departure and Arrival places. (The cheapest flights for the desired route will be shown in the carousel.)
    - Can Book and cancel tickets online
    - Can view and modify tickets.
    - Can make own profile and manage their account
    - Must be able to use bonus offers.
    - Must first register if customer is visiting site for the first time
    - Must be logged in the system to book their tickets. However, they can search flight availability and prices without being logged in.
    - Group Travel:More than 1 passengers needed to use this feature
        - Let all the members of an organization travel together in the same flight with same ticket fare.
    - Let users download their ticket in the form of PDF. They can also email their ticket to their respective email.
    - Must be able to pay using payment card
    - Must be able to check flight status
    - Can select a seat of their own choice
    - Must get option to ask for wheelchair(at free of cost) and food(which might be complimentary or has to be purchased by the traveller)
    - Must be able to give their own reviews about the facility of airline

2) Site Admin
    - Must be able to register not only the customer but also the airline
    - Add/delete/modify any customer's (passenger) information and any airline's information.
    - Can view the review report for each airline
    - Must be able to add a new route in the system (from:to)
    - Add and put a new offer on the site which shall be visible to any customer
    - Add aircraft
    - Update any flight any airlines
    - Search any flight by Flight ID which in turn will display all the details and also show the total number of customers who have booked that particular flight.
    - Real time update about flight status for any flight

- Check any ticket with Ticket ID number

3) Airlines
   - Update own flights(add/remove/change schedule of the flights)
   - Can view all flights of their own airlines.
   - Must be able to view customer details
   - They must be able to create their own page linked with the site
   - Can View Customer details by flight, date, checked-in customer
   - Can generate the sale view
   - Can generate report per flight in pdf
   - Can view the flight history of all the customers who travel through their airline.

Data Dictionary:

	Table Name	*login*			
	Column Name	**Type**	**Default**	**Comments**	**Constraints**
1	username	varchar		emailid	PK
2	password	varchar			
3	datecreated	timestamp	null	Joined Date	
4	usertype	int	0	0=customer,1=admin,2=airline	
5	fname	varchar	null	First Name	
6	lname	varchar	null	Last Name	
7	streetaddress	varchar	null	Street Address	
8	city	varchar	null	City Name	
9	state	varchar	null	State Name	
10	lastlogin	timestamp	null	Last Login information	
11	balance	double	0	points achieved for each transaction/purchase	

Table Name	*airline*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
username	varchar			PK, FK
airlinename	varchar			
image	varchar			
description	varchar			

Table Name	*Aircraft*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
aircraftid	int			PK
model	varchar		Name of Aircraft (ex. Boing 777)	
capacity	int		capacity	

Table Name	*Route*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
routeid	int			
airport	varchar		Departure airport	PK(airport , destination)
destination	varchar		arrival airport	

Table Name	*FlightSchedule*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
fsid	int			PK
Flightdate	datetime		Departure Date and time of flight	
arrivaldate	datetime		Arrival date and time of flight	
fareeconomy	double		total Fare per passanger (Child 20% off) economy	
farebusiness	double		total Fare per passanger (Child 20% off) Business	

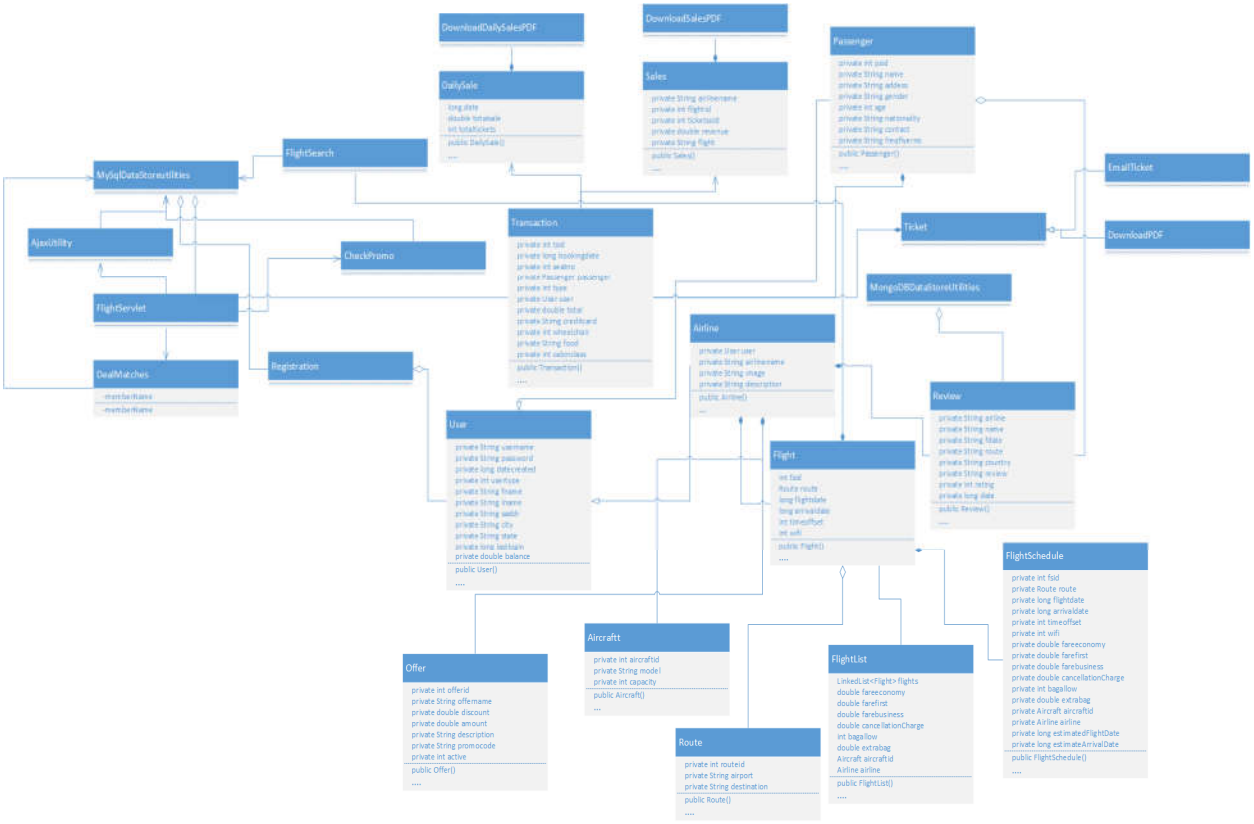
farefirst	double		total Fare per passanger (Child 20% off) First	
aircraftid	int		Aircraft id to know total capacity	FK
routeid	int		Route id to know route info	FK
bagallow	int		baggage allowance per passagner	
extrabagfare	double		extra baggage allowance per 50 lb bag	
timeoffset	int	0	to identify flight status -- late by timeoffset or cancel if negative value	
username	varchar		To identify airline	fk
wifi	tinyint		1 = available 0 = unavailable	
cancellationcharge	double		charger for cancellation or reschedule	

Table Name	*Offers*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
offersid	Int			PK
offername	varchar		Name of the offer (i.e. Summer Sale)	
discount	double		percentage off (either discount or amount)	
Amount	double		amount off	
Description	varchar		Description of offer applied and the price that can be deducted from fare	
username	varchar		userid of airline to identify if any airline giving special offers to their freqflyer customer	fk
promocode	varchar		Promocode	PK
active	tinyint		offer status 0 = deactive 1 = active	

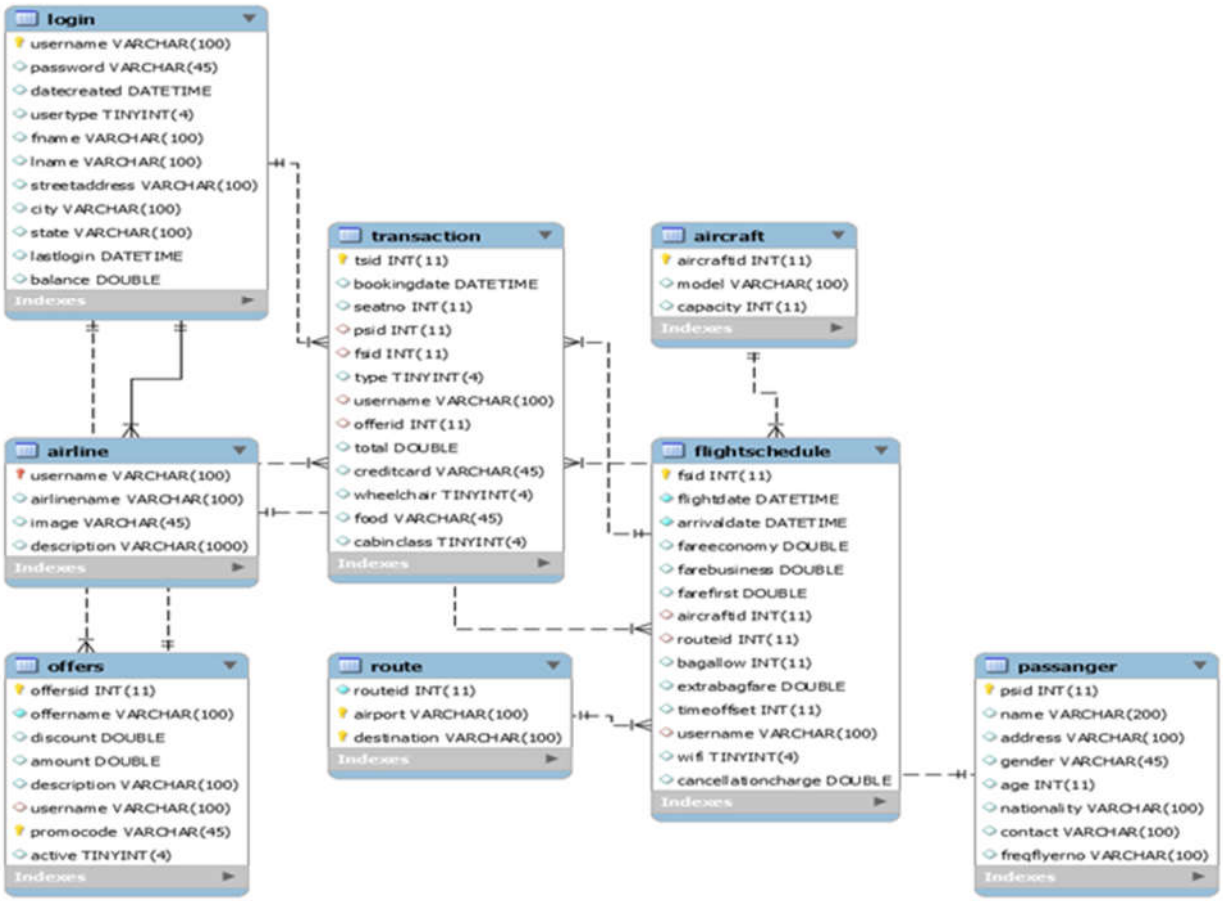
Table Name	*Passengers*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
psid	int		Passenger Id	PK
Name	varchar		Name of the Passenger (fname + lname)	
address	varchar		Address of the Passenger	
gender	varchar		gender of the passenger	
age	int		age of the passenger	
Nationality	varchar		country of the passenger	
contacts	varchar		contact no of the passenger	
freqflyerno	varchar		frequent flyer id of passenger if he/she provides _-Airline manage this info	

Table Name	*Transaction*			
Column Name	**Type**	**Default**	**Comments**	**Constraints**
tsid	int			PK
bookingdate	datetime		Ticket purchase date	
departuredate	datetime		Flight departure date	
seatno	int		Seat no	
psid	int		passenger id	FK
fsid	int		flight schedule id	FK
type	tinyint		type of transaction -- 0: cancel or 1: booking or 2: reschedule 3:cancelledbyAirline	
username	varchar		email id	FK
afid	int		aircraft id	FK
offerid	int		Offer applied if any	FK
total	double		Total Ticket fare	FK
creditcard	int		Card details	
wheelchair	tinyint			
food	varchar			
cabinclass	tinyint		0 = Economy 1 = Business 2 = First	

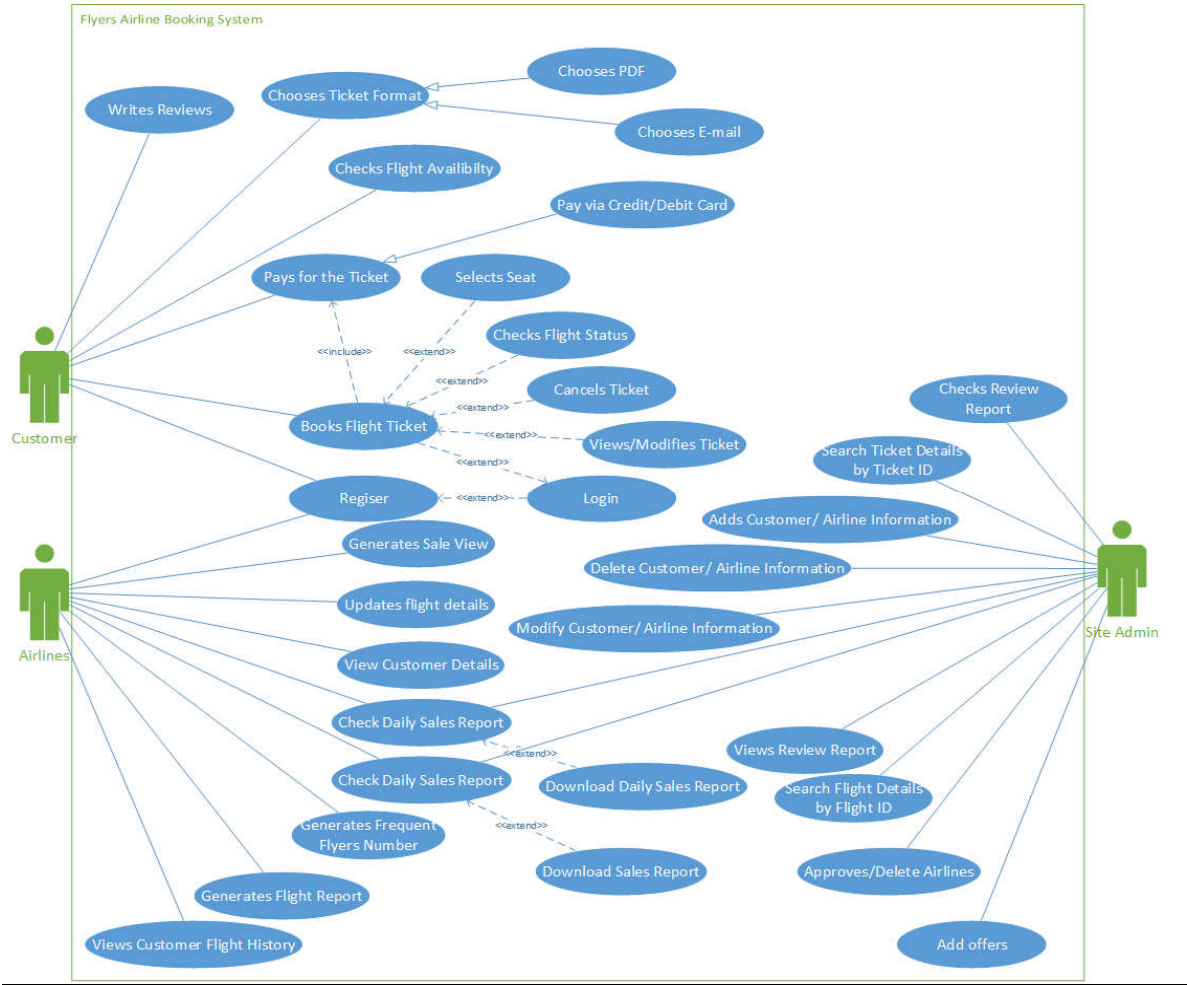
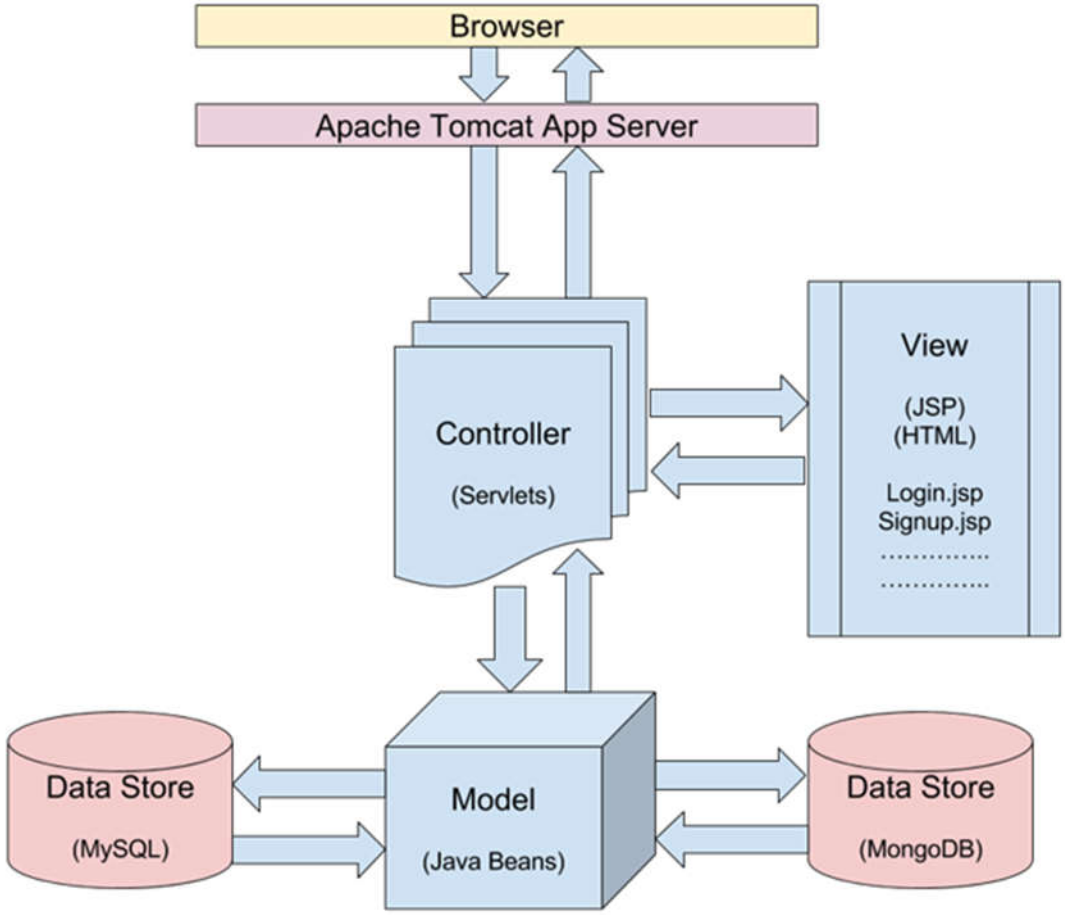
Class Diagram:



E-R Diagram:


login
username VARCHAR(100)
password VARCHAR(45)
datecreated DATETIME
usertype TINYINT(4)
fname VARCHAR(100)
lname VARCHAR(100)
streetaddress VARCHAR(100)
city VARCHAR(100)
state VARCHAR(100)
lastlogin DATETIME
balance DOUBLE
Indexes
transaction
tsid INT(11)
bookingdate DATETIME
seatno INT(11)
psid INT(11)
fsid INT(11)
type TINYINT(4)
username VARCHAR(100)
offerid INT(11)
total DOUBLE
creditcard VARCHAR(45)
wheelchair TINYINT(4)
food VARCHAR(45)
cabinclass TINYINT(4)
Indexes
aircraft
aircraftid INT(11)
model VARCHAR(100)
capacity INT(11)
Indexes
airline
username VARCHAR(100)
airlinename VARCHAR(100)
image VARCHAR(45)
description VARCHAR(1000)
Indexes
flightschedule
fsid INT(11)
flightdate DATETIME
arrivaldate DATETIME
fareeconomy DOUBLE
farebusiness DOUBLE
farefirst DOUBLE
aircraftid INT(11)
routeid INT(11)
bagallow INT(11)
extrabagfare DOUBLE
timeoffset INT(11)
username VARCHAR(100)
wifi TINYINT(4)
cancellationcharge DOUBLE
Indexes
offers
offersid INT(11)
offername VARCHAR(100)
discount DOUBLE
amount DOUBLE
description VARCHAR(100)
username VARCHAR(100)
promocode VARCHAR(45)
active TINYINT(4)
Indexes
route
routeid INT(11)
airport VARCHAR(100)
destination VARCHAR(100)
Indexes
passanger
psid INT(11)
name VARCHAR(200)
address VARCHAR(100)
gender VARCHAR(45)
age INT(11)
nationality VARCHAR(100)
contact VARCHAR(100)
freqflyerno VARCHAR(100)
Indexes

Use Case Diagram:



Application Structure: