**Victor Yu**

**Public Home:**

**Check flight status**: Enables users to search flight information according to other pieces of information.

Queries: search flights information that match users’ inputs and display them

**Check upcoming flight**: Enables users to search only upcoming flight information according to other pieces of information.

Queries: search flights information that match users’ inputs and are upcoming and then display them

**Customer:**

**Login check**: Check if username and passwords are in the database and then decide to let users in or not

Queries: search customer information that match the input of username and passwords.

**Register check**: Check if user information are duplicate in the database and then decide to let him register or not. Insert the new user information into the customer table if it is not there.

Queries: : search if registration information are in the database already

**Customer Page**: display the customer’s all flight information

Queries: search flight information using the keyword customer email

**Search/Purchase**: allow customer to search for flight and then buy tickets of flights.

Queries: search flights information that match customers’ inputs and then display them

Queries: search ariline name and flight number according to the flights being searched by the user and then insert a ticket tuple and its corresponding foreign keys into the database if the user decides to buy.

**Spending**: allow customer to check total spending and monthly spending based on certain range of time.

Queries: search the ticket price and sum them up between a time range using the keyword customer email

Queries: search the ticket price and sum them up between a time range using the keyword customer email on a monthly scale

**Agent:**

**Login check**: Check if username and passwords are in the database and then decide to let agents in or not

Queries: search agent information that match the input of username and passwords.

**Register check**: Check if agent information are duplicate in the database and then decide to let him register or not. Insert the new agent information into the agent table if it is not there.

Queries: : search if registration information are in the database already

**Agent Page**: display the agent’ all flight information for customers

Queries: search flight information using the keyword customer email

**Search/Purchase**: allow agents to search for flight and then buy tickets of flights for customers

Queries: search flights information that match agents’ inputs and then display them

Queries: search ariline name and flight number according to the flights being searched by the agent and then insert a ticket tuple and its corresponding foreign keys into the database according the customer that he bought for

**Commission**: allow agents to check total commission and average commission and number of tickets on certain range of time.

Queries: search the ticket price and sum them up using a commission percentage formula and average them and sum up the number of tickets between a time range using the keyword agent email

**Top Customer**: Top 5 customers based on number of tickets bought from the booking agent in the past 6 months and top 5 customers based on amount of commission received in the last year.

Queries: search customers and number of tickets bought by them in a descending order using the keyword agent email

Queries: search customers and number of tickets and sum the price of the tickets bought by them in a descending order using the keyword agent email

**Staff:**

**Login check**: Check if username and passwords are in the database and then decide to let staff in or not

Queries: search staff information that match the input of username and passwords.

**Register check**: Check if staff information are duplicate in the database and then decide to let him register or not. Insert the new staff information into the staff table if it is not there.

Queries: search if registration information are in the database already

**Staff Home**: display all flights information for the airline that the staff is in.

Queries: search flight information using the keyword staff username to select the specific airline

**Search /Change Status of Flight**: allow staff to search for flights in his airline and then change the status of flights.

Queries: search flights information that match staffs’ inputs and then display them

Queries: search flight number and update the status of the flight being chosen

**Add Flight/Airplane/Airport**: allows staffs to add flights, airplanes, and airports to the system

Queries: select from the airplane and flight and airport table to check of any input information is valid and then insert a new flight/airplane/airport correspondingly.

**View Top Agents**: allow staffs to view Top 5 booking agents based on number of tickets sales for the past month and past year and top 5 booking agents based on the amount of commission received for the last year.

Queries: search agent email and id and number of tickets sold by them and sum up the commission and then display them in a descending order using the keyword agent email and the constraint of the time range(last month)

Queries: search agent email and id and number of tickets sold by them then display them in a descending order using the keyword agent email and the constraint of the time range(last month)

Queries: search agent email and id and number of tickets sold by them then display them in a descending order using the keyword agent email and the constraint of the time range(last year)

Queries: search all agent emails and ids and then display them

**View Customers**: Airline Staff will also be able to see the most frequent customer within the last year. In addition, Airline Staff will be able to see a list of all flights a particular Customer has taken only on that particular airline.

Queries: search customer email and name and number of tickets bought by them then display the first one in the descending order using the keyword agent email and the constraint of the time range(last year)

Queries: search flight information using the key word customer email and staff email and then display all flights of the customer under the airline which the staff belongs to.

**View Top Destination**: Find the top 3 most popular destinations for last 3 months and last year.

Queries: search airport and number of tickets using keyword arrival airport and the constraint of the time range(last month) and display the first three in the descending order.

Queries: search airport and number of tickets using keyword arrival airport and the constraint of the time range(last year) and display the first three in the descending order.

**Staff Revenue**: shows the total amount of revenue earned from direct sales (when customer bought tickets without using a booking agent) and total amount of revenue earned from indirect sales (when customer bought tickets using booking agents) in the last month and last year.

Queries: select the prices of tickets and sum them up using the keyword staff name and the constraint of the booking\_agent id being null and the time range(last month).

Queries: select the prices of tickets and sum them up using the keyword staff name and the constraint of the booking\_agent id being null and the time range(last year).

Queries: select the prices of tickets and sum them up using the keyword staff name and the constraint of the booking\_agent id being not null and the time range(last month).

Queries: select the prices of tickets and sum them up using the keyword staff name and the constraint of the booking\_agent id being not null and the time range(last year).

**View Tickets Sold:** Total amounts of ticket sold based on range of dates/last year/last month

Queries: select the purchase date and the number of tickets sold using the keyword staff name and the constraint that the difference between the current date and the purchase is less than 30 days.

Queries: select the purchase date and the number of tickets sold using the keyword staff name and the constraint that the difference between the current date and the purchase is less than 365 days.

Queries: select the purchase date and the number of tickets sold using the keyword staff name and the constraint that the purchase date is between the input of starting date and the input of ending date.