

## Home Page When Not Logged In:

### 1. View Public Info

- getFlightsStatement = "SELECT \* FROM Flight WHERE departure\_airport LIKE CONCAT('%%',%s) AND arrival\_airport LIKE CONCAT('%%',%s) AND departure\_date LIKE CONCAT('%%',%s) AND arrival\_date LIKE CONCAT('%%',%s)"
  - Used to get all flights satisfying search criteria
- getFlightStatus = "SELECT \* FROM Flight WHERE airline\_name LIKE CONCAT('%%',%s) AND flight\_number LIKE CONCAT('%%',%s) AND departure\_date LIKE CONCAT('%%',%s) AND arrival\_date LIKE CONCAT('%%',%s)"
  - Used to get all flights and their status satisfying a different search criteria

### 2. Register

- checkUserStatement = "SELECT \* FROM Customer WHERE email=%s"
  - Used to check that the username doesn't already exist when registering
- createUserStatement = "INSERT INTO Customer(email, password, name, building\_number, street, city, state, phone\_number, passport\_number, passport\_expiration, passport\_country, date\_of\_birth) VALUES (%s, md5(%s), %s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s)"
  - Used to create new customer account
- checkUserStatement = "SELECT \* FROM Staff WHERE username=%s"
  - Used to check that the staff username doesn't already exist when registering
- createUserStatement = "INSERT INTO Staff(username, password, first\_name, last\_name, date\_of\_birth, airline\_name) VALUES (%s, md5(%s), %s, %s, %s, %s)"
  - Used to create a new staff account

### 3. Login

- getUserStatement = "SELECT email, name FROM Customer WHERE email=%s AND password=md5(%s)"
  - Used to authenticate customer login attempt
- getUserStatement = "SELECT username, first\_name, last\_name FROM Staff WHERE username=%s AND password=md5(%s)"
  - Used to authenticate staff login attempt

## Customer Use Cases:

### 1. View My Flights

- getTicketsStatement = "SELECT \* FROM Ticket LEFT OUTER JOIN Flight ON Ticket.airline\_name=Flight.airline\_name AND Ticket.flight\_number=Flight.flight\_number AND Ticket.departure\_date=Flight.departure\_date AND Ticket.departure\_time=Flight.departure\_time WHERE customer\_email=%s"
  - Used to get all flights that the customer has tickets for

### 2. Search For Flights

- getFlightsStatement = "SELECT \* FROM Flight WHERE departure\_airport LIKE CONCAT('%%',%s) AND arrival\_airport LIKE CONCAT('%%',%s) AND departure\_date LIKE CONCAT('%%',%s) AND arrival\_date LIKE CONCAT('%%',%s) AND departure\_date > NOW()"
  - Used to get all future flights satisfying search criteria

### 3. Purchase Tickets

- getID = 'SELECT MAX(id) as maxID FROM Ticket'
  - Used to get max ticket ID to calculate next ID
- purchaseTicket = 'INSERT INTO Ticket(id, travel\_class, sold\_price, purchase\_date, purchase\_time, airline\_name, flight\_number, departure\_date, departure\_time, customer\_email) VALUES(%s, %s, %s, DATE(NOW()), TIME(NOW()), %s, %s, %s, %s, %s)'
  - Used to purchase new ticket
- getFlightInfo = 'SELECT \* FROM Flight WHERE airline\_name=%s AND flight\_number=%s AND departure\_date=%s AND departure\_time=%s'
  - Used to get flight information

### 4. Cancel Trip

- getID = 'SELECT id FROM Ticket WHERE airline\_name=%s AND flight\_number=%s AND departure\_date=%s AND departure\_time=%s AND customer\_email=%s'
  - Used to get ticketID that is canceled by customer
- deleteTicket = 'DELETE FROM Ticket WHERE id=%s'
  - Used to delete ticket

### 5. Give Ratings and Comment on Previous Flights

- createReview = 'INSERT INTO Review(customer\_email, airline\_name, flight\_number, departure\_date, departure\_time, rating, comment) VALUES(%s, %s, %s, %s, %s, %s, %s)'
  - Used to create a new review for flight

### 6. Track My Spending

- yearlySpendingStatement = "SELECT SUM(sold\_price) as past\_year\_total FROM Ticket WHERE customer\_email=%s AND DATEDIFF(NOW(), purchase\_date) < 366"
  - Used for getting total spending for past year

- monthlySpendingStatement = "SELECT customer\_email, purchase\_date, YEAR(purchase\_date) as year, MONTH(purchase\_date) as month, SUM(sold\_price) as monthly\_spending FROM Ticket GROUP BY MONTH(purchase\_date), YEAR(purchase\_date), customer\_email HAVING customer\_email=%s AND TIMESTAMPDIFF(MONTH, purchase\_date, NOW()) < 5 ORDER BY purchase\_date"
  - Used for getting total spending for past 6 months

#### Staff Use Cases:

##### 1. View Flights

- getFlightsStatement = "SELECT \* FROM Flight LEFT OUTER JOIN Staff ON Flight.airline\_name=Staff.airline\_name WHERE username=%s AND DATEDIFF(departure\_date, NOW()) < 31 AND DATEDIFF(departure\_date, NOW()) > -1"
  - Used to get flights from staff's airline for the next 30 days

##### 2. Create New Flights

- getFlightsStatement = "SELECT \* FROM Flight LEFT OUTER JOIN Staff ON Flight.airline\_name=Staff.airline\_name WHERE username=%s AND DATEDIFF(departure\_date, NOW()) < 31 AND DATEDIFF(departure\_date, NOW()) > -1"
  - Used to get flights from staff's airline for the next 30 days
- createFlightStatement = "INSERT INTO Flight(airline\_name, flight\_number, departure\_date, departure\_time, arrival\_date, arrival\_time, base\_price, airplane\_id, departure\_airport, arrival\_airport, status) VALUES (%s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s)"
  - Used to create new flight
- getStaffInfo = "SELECT DISTINCT airline\_name FROM Staff WHERE username=%s"
  - Used to get staff's airline name

##### 3. Change Status of Flights

- getStaffInfo = "SELECT DISTINCT airline\_name FROM Staff WHERE username=%s"
  - Used to get staff's airline name
- changeStatus = "UPDATE Flight SET status=%s WHERE airline\_name=%s AND flight\_number=%s AND departure\_date=%s AND departure\_time=%s"
  - Used to change status of flights
- checkFlight = "SELECT \* FROM Flight WHERE airline\_name=%s AND flight\_number=%s AND departure\_date=%s AND departure\_time=%s"
  - Used to check that flights satisfying form criteria exists

##### 4. Add Airplane to System

- getStaffInfo = "SELECT DISTINCT airline\_name FROM Staff WHERE username=%s"
  - Used to get staff's airline name
- createAirplane = "INSERT INTO Airplane(airline\_name, id, seats, manufacturer, age) VALUES (%s, %s, %s, %s, %s)"
  - Used to create new airplane
- getAirplanes = "SELECT \* FROM Airplane WHERE airline\_name=%s"
  - Used to get all airplanes owned by staff's airline

#### 5. Add New Airport to System

- createAirport = "INSERT INTO Airport(id, name, city, country, type) VALUES (%s, %s, %s, %s, %s)"
  - Used to create new airport
- getAirports = "SELECT \* FROM Airport"
  - Used to get all airports

#### 6. View Flight Ratings

- getReviews = "SELECT \* FROM Review WHERE airline\_name=%s"
  - Used to get all reviews for that airline
- getStaffInfo = "SELECT DISTINCT airline\_name FROM Staff WHERE username=%s"
  - Used to get staff's airline name

#### 7. View Frequent Customers

- getFrequent = "SELECT \*, COUNT(\*) as count FROM Ticket LEFT OUTER JOIN Flight ON Ticket.airline\_name=Flight.airline\_name AND Ticket.flight\_number=Flight.flight\_number AND Ticket.departure\_date=Flight.departure\_date AND Ticket.departure\_time=Flight.departure\_time WHERE Ticket.airline\_name=%s AND TIMESTAMPDIFF(MONTH, NOW(), Ticket.departure\_date) < 11 GROUP BY Ticket.customer\_email ORDER BY count DESC"
  - Used to get most frequent customers
- getStaffInfo = "SELECT DISTINCT airline\_name FROM Staff WHERE username=%s"
  - Used to get staff's airline name

#### 8. View Reports

#### 9. View Earned Revenue

- getPastMonthRevenue = "SELECT SUM(sold\_price) as past\_month\_total FROM Ticket WHERE DATEDIFF(NOW(), purchase\_date) < 31"
  - Used to get past month revenue
- getPastYearRevenue = "SELECT SUM(sold\_price) as past\_year\_total FROM Ticket WHERE DATEDIFF(NOW(), purchase\_date) < 366"
  - Used to get past year revenue

#### 10. View Earned Revenue by Class

- getTotalByClass = "SELECT SUM(sold\_price) as total FROM Ticket WHERE travel\_class=%s"
  - Used to get total revenue by class

#### 11. View Top Destinations

- getDestMonths = "SELECT \*, COUNT(\*) as count FROM Ticket LEFT OUTER JOIN Flight ON Ticket.airline\_name=Flight.airline\_name AND

Ticket.flight\_number=Flight.flight\_number AND  
Ticket.departure\_date=Flight.departure\_date AND  
Ticket.departure\_time=Flight.departure\_time LEFT OUTER JOIN Airport ON  
Flight.arrival\_airport=Airport.id\ WHERE TIMESTAMPDIFF(MONTH, NOW(),  
Ticket.departure\_date) < 2 GROUP BY Flight.arrival\_airport ORDER BY count DESC"

- Used to get destinations ranked by tickets sold for the past 3 months
- getDestYear = "SELECT \*, COUNT(\*) as count FROM Ticket LEFT OUTER JOIN Flight  
ON Ticket.airline\_name=Flight.airline\_name AND  
Ticket.flight\_number=Flight.flight\_number AND  
Ticket.departure\_date=Flight.departure\_date AND  
Ticket.departure\_time=Flight.departure\_time LEFT OUTER JOIN Airport ON  
Flight.arrival\_airport=Airport.id WHERE TIMESTAMPDIFF(MONTH, NOW(),  
Ticket.departure\_date) < 11 GROUP BY Flight.arrival\_airport ORDER BY count DESC"
  - Used to get destinations ranked by tickets sold for the past 1 year