A schema related to a flight system can be quite complex, as it involves various components and systems to ensure the safe and efficient operation of an aircraft. Below is a simplified schema outlining some of the key components and their interconnections in a typical commercial aircraft flight system:

1. **Aircraft Structure**
   - **Fuselage**: The main body of the aircraft, which houses passengers, cargo, and some of the critical systems.
   - **Wings**: Generate lift and house fuel tanks.
   - **Tail Section**: Includes the horizontal and vertical stabilizers and control surfaces.

2. **Aircraft Power**
   - **Engines**: Responsible for generating thrust to propel the aircraft.
   - **Fuel System**: Stores and distributes fuel to the engines.
   - **APU (Auxiliary Power Unit)**: Provides power on the ground and acts as a backup power source.

3. **Flight Control Systems**
   - **Cockpit**: Where pilots control the aircraft.
   - **Control Surfaces**: Ailerons, elevators, rudders, and flaps for maneuvering.
   - **Fly-by-Wire System**: Electronic control of flight surfaces.
   - **AutoPilot**: For automated navigation and control.

4. **Navigation and Communication**
   - **Avionics**: Electronics for navigation, communication, and monitoring.
   - **GPS**: Provides precise location data.
   - **Radar and Transponders**: Used for traffic and weather monitoring.

5. **Hydraulics and Landing Gear**
   - **Hydraulic Systems**: Control landing gear, flaps, and other systems.
   - **Landing Gear**: Wheels and struts for takeoff and landing.

6. **Electrical Systems**
   - **Power Distribution**: Provides power to various systems.
   - **Lighting**: Interior and exterior lighting.
   - **Entertainment Systems**: In-flight entertainment for passengers.

7. **Environmental Control**
   - **Air Conditioning and Pressurization**: Maintains a comfortable cabin environment

1. **Question:** In the flight system schema, which table would store information about passengers on a particular flight?
   - A. `Aircraft_Structure`
   - B. `Flight_Control_Systems`
   - C. `Navigation_Communication`
   - D. `Passengers`
   Answer: D

2. **Question:** What SQL statement is used to retrieve the names of all airports from the `Airports` table in the flight system schema?
   - A. `SELECT * FROM Airports`
   - B. `SELECT Airport_Name FROM Airports`
   - C. `GET Airport_Name FROM Airports`
   - D. `SHOW NAMES FROM Airports`
   Answer: B

3. **Question:** Which SQL command would you use to find the total number of engines on all aircraft in the `Aircraft_Power` table?
   - A. `SELECT COUNT(*) FROM Aircraft_Power`
   - B. `SUM(Engines) FROM Aircraft_Power`
   - C. `TOTAL(Engines) FROM Aircraft_Power`
   - D. `COUNT(Engines) FROM Aircraft_Power`
   Answer: A

4. **Question:** To retrieve a list of all airports with ICAO codes starting with 'K' from the `Airports` table, which SQL statement should you use?
   - A. `SELECT * FROM Airports WHERE ICAO_Code LIKE 'K%'`
   - B. `SELECT * FROM Airports WHERE ICAO_Code = 'K%'`
   - C. `SELECT * FROM Airports WHERE ICAO_Code STARTS WITH 'K'`
   - D. `SELECT * FROM Airports WHERE ICAO_Code = 'K'`
   Answer: A

5. **Question:** What SQL command would you use to find the average passenger capacity of all aircraft in the `Aircraft_Structure` table?
   - A. `SELECT AVG(Passenger_Capacity) FROM Aircraft_Structure`
   - B. `AVERAGE(Passenger_Capacity) FROM Aircraft_Structure`
   - C. `SUM(Passenger_Capacity) FROM Aircraft_Structure`
   - D. `AVG(Passenger_Capacity) FROM Aircraft_Structure`
   Answer: A

6. **Question:** Which SQL statement would retrieve the flight numbers and destinations for flights that use the `AutoPilot` system from the `Flight_Control_Systems` table?

- A. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'Yes'`
  - B. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 1`
  - C. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'Enabled'`
  - D. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'On'`
  Answer: A

7. **Question:** To retrieve the names of all passengers whose last name is 'Smith' from the `Passengers` table, which SQL statement should you use?
  - A. `SELECT First_Name FROM Passengers WHERE Last_Name = 'Smith'`
  - B. `SELECT Last_Name, First_Name FROM Passengers WHERE Last_Name = 'Smith'`
  - C. `SELECT First_Name FROM Passengers WHERE Last_Name LIKE 'Smith'`
  - D. `SELECT Last_Name, First_Name FROM Passengers WHERE First_Name = 'Smith'`
  Answer: B

8. **Question:** What SQL command would you use to find the distinct ICAO codes of all airports in the `Airports` table?
  - A. `SELECT DISTINCT ICAO_Code FROM Airports`
  - B. `SELECT UNIQUE ICAO_Code FROM Airports`
  - C. `SELECT ICAO_Code FROM Airports GROUP BY ICAO_Code`
  - D. `SELECT DISTINCT ICAO_Code FROM Airports GROUP BY ICAO_Code`
  Answer: A

9. **Question:** To retrieve the flight numbers and destinations for flights that have more than 200 passengers on board, which SQL statement should you use?
  - A. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Count > 200`
  - B. `SELECT Flight_Number, Destination FROM Flight_Control_Systems HAVING Passenger_Count > 200`
  - C. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Count < 200`
  - D. `SELECT Flight_Number, Destination FROM Flight_Control_Systems HAVING Passenger_Count < 200`
  Answer: A

10. **Question:** What SQL statement would you use to retrieve the names of all passengers and their corresponding flight numbers from the `Passengers` and `Flight_Control_Systems` tables, respectively, where the passenger is on a flight that uses the `AutoPilot` system?
  - A. `SELECT P.Passenger_Name, F.Flight_Number FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.AutoPilot = 'Yes'`

- B. `SELECT Passenger_Name, Flight_Number FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE AutoPilot = 'Yes')`
- C. `SELECT Passenger_Name, Flight_Number FROM Passengers JOIN Flight_Control_Systems ON Passengers.Flight_ID = Flight_Control_Systems.Flight_ID WHERE AutoPilot = 'Yes'`
- D. `SELECT Passenger_Name, Flight_Number FROM Passengers WHERE Flight_ID = (SELECT Flight_ID FROM Flight_Control_Systems WHERE AutoPilot = 'Yes')`

Answer: C

1. **Question:** What SQL query retrieves the flight numbers and destinations for flights that have the highest passenger capacity from the `Flight_Control_Systems` table?
   - A. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Capacity = MAX(Passenger_Capacity)`
   - B. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems)`
   - C. `SELECT MAX(Flight_Number), MAX(Destination) FROM Flight_Control_Systems`
   - D. `SELECT Flight_Number, Destination FROM Flight_Control_Systems ORDER BY Passenger_Capacity DESC LIMIT 1`
   Answer: B

2. **Question:** Which SQL query would you use to find the airports where at least two flights from the `Flight_Control_Systems` table are scheduled to land?
   - A. `SELECT Airport_Name FROM Airports WHERE Airport_Code IN (SELECT Destination FROM Flight_Control_Systems HAVING COUNT(*) >= 2)`
   - B. `SELECT Airport_Name FROM Airports WHERE Airport_Code IN (SELECT Destination FROM Flight_Control_Systems GROUP BY Destination HAVING COUNT(*) >= 2)`
   - C. `SELECT Airport_Name FROM Airports WHERE Airport_Code IN (SELECT DISTINCT Destination FROM Flight_Control_Systems HAVING COUNT(*) >= 2)`
   - D. `SELECT Airport_Name FROM Airports WHERE Airport_Code IN (SELECT Destination FROM Flight_Control_Systems WHERE Flight_Number IN (SELECT Flight_Number FROM Flight_Control_Systems GROUP BY Flight_Number HAVING COUNT(*) >= 2))`
   Answer: B

3. **Question:** How can you retrieve the passenger names and their corresponding flight destinations from the `Passengers` and `Flight_Control_Systems` tables, respectively, for passengers who are on flights with more than 300 passengers?
   - A. `SELECT P.Passenger_Name, F.Destination FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Passenger_Count > 300`
   - B. `SELECT Passenger_Name, Destination FROM Passengers JOIN Flight_Control_Systems ON Passengers.Flight_ID = Flight_Control_Systems.Flight_ID WHERE Flight_Control_Systems.Passenger_Count > 300`
   - C. `SELECT Passenger_Name, Destination FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count > 300)`
   - D. `SELECT P.Passenger_Name, F.Destination FROM Passengers P JOIN Flight_Control_Systems F ON P.Flight_ID = F.Flight_ID WHERE F.Passenger_Count > 300`
   Answer: B

4. **Question:** Which SQL query retrieves the flight numbers and destinations of flights using the `AutoPilot` system with passenger capacities greater than the average passenger capacity of all flights in the `Flight_Control_Systems` table?
   - A. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'Yes' AND Passenger_Capacity > AVG(Passenger_Capacity)`

- B. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'Yes' AND Passenger_Capacity > (SELECT AVG(Passenger_Capacity) FROM Flight_Control_Systems)`
  - C. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'Enabled' AND Passenger_Capacity > (SELECT AVG(Passenger_Capacity) FROM Flight_Control_Systems)`
  - D. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE AutoPilot = 'On' AND Passenger_Capacity > AVG(Passenger_Capacity) GROUP BY Flight_Number, Destination`
  Answer: B

5. **Question:** To find the total number of passengers on flights that use the `AutoPilot` system and have a passenger capacity greater than 250, which SQL query should you use?
  - A. `SELECT SUM(Passenger_Count) FROM Flight_Control_Systems WHERE AutoPilot = 'Yes' AND Passenger_Capacity > 250`
  - B. `SELECT COUNT(*) FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE AutoPilot = 'Yes' AND Passenger_Capacity > 250)`
  - C. `SELECT COUNT(*) FROM Flight_Control_Systems WHERE AutoPilot = 'Yes' AND Passenger_Capacity > 250`
  - D. `SELECT SUM(Passenger_Count) FROM Flight_Control_Systems WHERE AutoPilot = 'Yes' HAVING Passenger_Capacity > 250`
  Answer: A

6. **Question:** What SQL query retrieves the airport names from the `Airports` table where the number of flights departing from them is greater than the number of flights arriving at them according to the `Flight_Control_Systems` table?
  - A. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code)`
  - B. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) GROUP BY Airport_Name`
  - C. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) HAVING COUNT(*) > 0`
  - D. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Destination = Airport_Code)`
  Answer: B

7. **Question:** To find the names of passengers who are on flights to the same destination as another passenger, which SQL query would you use?

- A. `SELECT DISTINCT P1.Passenger_Name, P2.Passenger_Name FROM Passengers P1, Passengers P2, Flight_Control_Systems F WHERE P1.Destination = P2.Destination AND P1.Flight_ID = F.Flight_ID AND P2.Flight_ID = F.Flight_ID`
- B. `SELECT P1.Passenger_Name, P2.Passenger_Name FROM Passengers P1, Passengers P2 WHERE P1.Destination = P2.Destination`
- C. `SELECT DISTINCT P.Passenger_Name FROM Passengers P WHERE P.Flight_ID IN (SELECT Flight_ID FROM Passengers WHERE Destination = P.Destination)`
- D. `SELECT P1.Passenger_Name, P2.Passenger_Name FROM Passengers P1, Passengers P2 WHERE P1.Destination = P2.Destination AND P1.Flight_ID = P2.Flight_ID`
  Answer: A

8. **Question:** What SQL query retrieves the names of passengers who are on flights that have the lowest passenger count according to the `Flight_Control_Systems` table?
- A. `SELECT Passenger_Name FROM Passengers WHERE Flight_ID IN (

SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = MIN(Passenger_Count))`
- B. `SELECT Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MIN(Passenger_Count) FROM Flight_Control_Systems))`
- C. `SELECT Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MIN(Passenger_Count) FROM Flight_Control_Systems) GROUP BY Flight_ID)`
- D. `SELECT Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = MIN(SELECT Passenger_Count FROM Flight_Control_Systems))`
  Answer: B

9. **Question:** Which SQL query retrieves the passenger names and the corresponding destination airports from the `Passengers` and `Airports` tables, respectively, for passengers who are on flights departing from airports with ICAO codes starting with 'K'?
- A. `SELECT P.Passenger_Name, A.Airport_Name FROM Passengers P, Airports A, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Departure = A.Airport_Code AND A.ICAO_Code LIKE 'K%'`
- B. `SELECT P.Passenger_Name, A.Airport_Name FROM Passengers P, Airports A, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Departure = A.Airport_Code AND A.ICAO_Code = 'K%'`
- C. `SELECT P.Passenger_Name, A.Airport_Name FROM Passengers P, Airports A, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Departure = A.Airport_Code AND A.ICAO_Code LIKE 'K%'`
- D. `SELECT P.Passenger_Name, A.Airport_Name FROM Passengers P, Airports A, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Departure = A.Airport_Code AND A.ICAO_Code = 'K'`
  Answer: A

10. **Question:** To retrieve the flight numbers and destinations of flights that have more than twice the passenger capacity of the average passenger capacity of all flights in the `Flight_Control_Systems` table, which SQL query should you use?
   - A. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Capacity > 2 * AVG(Passenger_Capacity)`
   - B. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Capacity > 2 * (SELECT AVG(Passenger_Capacity) FROM Flight_Control_Systems)`
   - C. `SELECT Flight_Number, Destination FROM Flight_Control_Systems WHERE Passenger_Capacity > AVG(Passenger_Capacity) * 2`
   - D. `SELECT Flight_Number, Destination FROM Flight_Control_Systems GROUP BY Flight_Number, Destination HAVING Passenger_Capacity > AVG(Passenger_Capacity) * 2`
   Answer: B

11. **Question:** How can you retrieve the passenger names and their corresponding flight destinations from the `Passengers` and `Flight_Control_Systems` tables, respectively, for passengers who are on flights with the maximum passenger capacity?
   - A. `SELECT P.Passenger_Name, F.Destination FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Passenger_Capacity = MAX(F.Passenger_Capacity)`
   - B. `SELECT Passenger_Name, Destination FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems))`
   - C. `SELECT P.Passenger_Name, F.Destination FROM Passengers P JOIN Flight_Control_Systems F ON P.Flight_ID = F.Flight_ID WHERE F.Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems)`
   - D. `SELECT P.Passenger_Name, F.Destination FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems) GROUP BY P.Passenger_Name, F.Destination`
   Answer: B

12. **Question:** What SQL query retrieves the airport names from the `Airports` table where the number of flights departing from them is equal to the number of flights arriving at them according to the `Flight_Control_Systems` table?
   - A. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code)`
   - B. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) GROUP BY Airport_Name`

- C. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) HAVING COUNT(*) > 0`
- D. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Destination = Airport_Code)`
  Answer: B

13. **Question:** Which SQL query retrieves the passenger names who are on flights to the same destination as another passenger and are on flights with the maximum passenger capacity according to the `Flight_Control_Systems` table?
- A. `SELECT DISTINCT P1.Passenger_Name, P2.Passenger_Name FROM Passengers P1, Passengers P2, Flight_Control_Systems F WHERE P1.Destination = P2.Destination AND P1.Flight_ID = F.Flight_ID AND P2.Flight_ID = F.Flight_ID AND F.Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems)`
- B. `SELECT P1.Passenger_Name, P2.Passenger_Name FROM Passengers P1, Passengers P2 WHERE P1.Destination = P2.Destination AND P1.Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems))`
- C. `SELECT DISTINCT P.Passenger_Name FROM Passengers P WHERE P.Flight_ID IN (SELECT Flight_ID FROM Passengers WHERE Destination = P.Destination) AND P.Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems))`
- D. `SELECT P1.Passenger_Name, P2.Passenger_Name FROM Passengers P1, Passengers P2 WHERE P1.Destination = P2.Destination AND P1.Flight_ID = P2.Flight_ID AND P1.Flight_ID IN (SELECT Flight_ID FROM

 Flight_Control_Systems WHERE Passenger_Capacity = (SELECT MAX(Passenger_Capacity) FROM Flight_Control_Systems))`
  Answer: A

14. **Question:** What SQL query retrieves the passenger names who are on flights that have the highest passenger count and are departing from airports with ICAO codes starting with 'K'?
- A. `SELECT DISTINCT P.Passenger_Name FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Departure IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%') AND F.Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems)`
- B. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems) AND Departure IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%'))`
- C. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Departure IN (SELECT Airport_Code FROM

Airports WHERE ICAO_Code LIKE 'K%') AND Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems))`
   - D. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems) AND Departure IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%'))`
   Answer: A

15. **Question:** How can you retrieve the airport names from the `Airports` table where the number of flights departing from them is equal to the number of flights arriving at them and the passenger count is greater than 200 according to the `Flight_Control_Systems` table?
   - A. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 200)`
   - B. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT DISTINCT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 200)`
   - C. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 200)`
   - D. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 200) HAVING COUNT(*) > 0`
   Answer: B

16. **Question:** Which SQL query retrieves the passenger names who are on flights that have the lowest passenger count and are departing from airports with ICAO codes starting with 'K'?
   - A. `SELECT P.Passenger_Name FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Departure IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%') AND F.Passenger_Count = (SELECT MIN(Passenger_Count) FROM Flight_Control_Systems)`
   - B. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MIN(Passenger_Count) FROM Flight_Control_Systems) AND Departure IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%'))`
   - C. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Departure IN (SELECT Airport_Code FROM

Airports WHERE ICAO_Code LIKE 'K%') AND Passenger_Count = (SELECT MIN(Passenger_Count) FROM Flight_Control_Systems))`

   - D. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MIN(Passenger_Count) FROM Flight_Control_Systems) AND Departure IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%'))`

   Answer: A

17. **Question:** What SQL query retrieves the airport names from the `Airports` table where the number of flights departing from them is greater than the number of flights arriving at them and the passenger count is greater than 100 according to the `Flight_Control_Systems` table?

   - A. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 100)`

   - B. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT DISTINCT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 100)`

   - C. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 100)`

   - D. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 100) HAVING COUNT(*) > 0`

   Answer: B

18. **Question:** How can you retrieve the airport names from the `Airports` table where the number of flights departing from them is equal to the number of flights arriving at them and the passenger count is greater than 50 according to the `Flight_Control_Systems` table?

   - A. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 50)`

   - B. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code

IN (SELECT DISTINCT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 50)`

- C. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 50)`
- D. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) = (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 50) HAVING COUNT(*) > 0`

   Answer: B

19. **Question:** Which SQL query retrieves the passenger names who are on flights that have the highest passenger count and are arriving at airports with ICAO codes starting with 'K'?
- A. `SELECT P.Passenger_Name FROM Passengers P, Flight_Control_Systems F WHERE P.Flight_ID = F.Flight_ID AND F.Destination IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%') AND F.Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems)`
- B. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems) AND Destination IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%'))`
- C. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Destination IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%') AND Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems))`
- D. `SELECT P.Passenger_Name FROM Passengers WHERE Flight_ID IN (SELECT Flight_ID FROM Flight_Control_Systems WHERE Passenger_Count = (SELECT MAX(Passenger_Count) FROM Flight_Control_Systems) AND Destination IN (SELECT Airport_Code FROM Airports WHERE ICAO_Code LIKE 'K%'))`

   Answer: A

20. **Question:** What SQL query retrieves the airport names from the `Airports` table where the number of flights departing from them is greater than the number of flights arriving at them and the passenger count is greater than 75 according to the `Flight_Control_Systems` table?
- A. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 75)`
- B. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT DISTINCT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 75)`

- C. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(*) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 75)`
- D. `SELECT Airport_Name FROM Airports WHERE (SELECT COUNT(Departure) FROM Flight_Control_Systems WHERE Departure = Airport_Code) > (SELECT COUNT(Destination) FROM Flight_Control_Systems WHERE Destination = Airport_Code) AND Airport_Code IN (SELECT Departure FROM Flight_Control_Systems WHERE Passenger_Count > 75) HAVING COUNT(*) > 0`

Answer: B