**Please answer the following questions using Airline DB database.**

**Instruction to attempt questions:**

* Students need to write queries for the questions mentioned in the using Airline DB database
* Read the questions carefully before writing the query in **Airline Playground** (in the Playground chapter of SQL)
* Airline DB: [C:\Users\Admine\Downloads\• https:\www.skillovilla.com\playground\sql?exerciseId=0181e251-6ea8-4595-ae2b-0c690119f8db](file:///C:\Users\Admine\Downloads\•%09https:\www.skillovilla.com\playground\sql%3fexerciseId=0181e251-6ea8-4595-ae2b-0c690119f8db) [https://www.skillovilla.com/playground/sql?exerciseId=0181e251-6ea8-4595-ae2b-0c690119f8db](file:///C:\Users\Admine\Downloads\•%09https:\www.skillovilla.com\playground\sql%3fexerciseId=0181e251-6ea8-4595-ae2b-0c690119f8db)

**How to submit the capstone:**

* Copy the SQL query code and paste it in the answer section in this file.
* Once the assignment is done, submit the file over LMS.

**Invalid Submissions:**

* Pasting pictures of the code as answer is **NOT** acceptable.
* Uploading output data (CSVs) of the SQL queries is **NOT** acceptable.

**Write your answers(query) in the answer and submit it. To write the answer in the assignment, please follow the below example in yellow**

Example:

Questions*: Extract all the columns of the flights table*

Answer: *SELECT \* FROM flights*

**Attempt the following Questions-**

1. ***Represent the “book\_date” column in “yyyy-mmm-dd” format using Bookings table***

*Expected output: book\_ref, book\_date (in “yyyy-mmm-dd” format) , total amount*

**Answer: SELECT Book\_ref,**

**TO\_CHAR(Book\_date,'yyyy-Mon-dd') AS Book\_date,**

**Total\_amount**

**FROM Bookings**

1. **Get the following columns in the exact same sequence.**

Expected columns in the output: ticket\_no, boarding\_no, seat\_number, passenger\_id, passenger\_name.

**Answer:**

**SELECT**

**B.ticket\_no,**

**B.boarding\_no,**

**B.seat\_no,**

**T.passenger\_id,**

**T.passenger\_name**

**FROM Boarding\_passes AS B**

**JOIN Tickets AS T**

**ON B.ticket\_no=T.ticket\_no**

1. **Write a query to find the seat number which is least allocated among all the seats?**

**Answer:**

**WITH TAB1 AS**

**(SELECT**

**B.ticket\_no,**

**B.boarding\_no,**

**B.seat\_no,**

**T.passenger\_id,**

**T.passenger\_name**

**FROM Boarding\_passes AS B**

**JOIN Tickets AS T**

**ON B.ticket\_no=T.ticket\_no )**

**SELECT**

**seat\_no,**

**COUNT(\*)**

**FROM TAB1**

**GROUP BY seat\_no**

**ORDER BY 2 ASC**

**LIMIT 1**

1. ***In the database, identify the month wise highest paying passenger name and passenger id.***

Expected output: Month\_name(“mmm-yy” format), passenger\_id, passenger\_name and total amount

**Answer:**

**WITH TABLE1 AS**

**(**

**SELECT**

**TO\_CHAR(B.book\_date, 'Mon-yy') AS Month\_name,**

**T.passenger\_id,**

**T.passenger\_name,**

**SUM(B.total\_amount) AS TOTAL**

**FROM Bookings AS B**

**JOIN Tickets AS T**

**ON B.book\_ref=T.book\_ref**

**GROUP BY 1,2,3**

**)**

**SELECT**

**tt.Month\_name,**

**tt.passenger\_id,**

**tt.passenger\_name,**

**MAX(Total)**

**FROM TABLE1 AS tt**

**GROUP By 1,2,3**

**ORDER BY 4 DESC**

1. ***In the database, identify the month wise least paying passenger name and passenger id?***

Expected output: Month\_name(“mmm-yy” format), passenger\_id, passenger\_name and total amount

**Answer:**

**WITH TABLE1 AS**

**(**

**SELECT**

**TO\_CHAR(B.book\_date, 'Mon-yy') AS Month\_name,**

**T.passenger\_id,**

**T.passenger\_name,**

**SUM(B.total\_amount) AS TOTAL**

**FROM Bookings AS B**

**JOIN Tickets AS T**

**ON B.book\_ref=T.book\_ref**

**GROUP BY 1,2,3**

**)**

**SELECT**

**tt.Month\_name,**

**tt.passenger\_id,**

**tt.passenger\_name,**

**MIN(Total)**

**FROM TABLE1 AS tt**

**GROUP By 1,2,3**

**ORDER BY 4 ASC**

1. **Identify the travel details of non stop journeys or return journeys (having more than 1 flight).**

Expected Output: Passenger\_id, passenger\_name, ticket\_number and flight count.

**Answer:**

**WITH CTE AS (**

**SELECT**

**T.Passenger\_id,**

**T.passenger\_name,**

**T.ticket\_no,**

**COUNT(F.Flight\_id) AS Flight\_count**

**FROM Flights AS F**

**JOIN Ticket\_flights AS TF**

**ON TF.Flight\_id=f.Flight\_id**

**JOIN Tickets AS T**

**ON T.Ticket\_no=TF.Ticket\_no**

**Group By 1,2,3**

**)**

**SELECT**

**C.Passenger\_id,**

**C.passenger\_name,**

**C.ticket\_no,**

**COUNT(Flight\_count)**

**FROM CTE AS C**

**GROUP BY 1,2,3**

**HAVING COUNT(flight\_Count) = 1 -- Non-stop journeys**

**OR COUNT(flight\_Count) > 1 -- Return journeys**

1. **How many tickets are there without boarding passes?**

Expected Output: just one number is required.

**Answer:**

**SELECT**

**COUNT(BP.Ticket\_no) As Tickets\_boarding\_passes**

**FROM Tickets AS T**

**LEFT JOIN Boarding\_passes AS BP**

**ON BP.Ticket\_no=T.Ticket\_no**

**WHERE BP.Boarding\_no IS NULL**

1. **Identify details of the longest flight (using flights table)?**

Expected Output: Flight number, departure airport, arrival airport, aircraft code and durations.

**Answer:**

**SELECT**

**flight\_no,**

**departure\_airport,**

**arrival\_airport,**

**aircraft\_code,**

**(scheduled\_arrival - scheduled\_departure) AS duration**

**FROM flights**

**ORDER BY duration DESC**

**LIMIT 1**

1. **Identify details of all the morning flights (morning means between 6AM to 11 AM, using flights table)?**

Expected output: flight\_id, flight\_number, scheduled\_departure, scheduled\_arrival and timings.

**Answer:  
SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**(scheduled\_arrival - scheduled\_departure) AS timings**

**FROM**

**flights**

**GROUP BY 1,2**

**Having**

**(scheduled\_arrival-scheduled\_departure) BETWEEN '06:00:00' AND '11:00:00'**

1. **Identify the earliest morning flight available from every airport.**

Expected output: flight\_id, flight\_number, scheduled\_departure, scheduled\_arrival, departure airport and timings.

**Answer:**

**SELECT f.flight\_id, f.flight\_no, MIN(f.scheduled\_departure) AS earliest\_departure, f.scheduled\_arrival, f.departure\_airportFROM flights fGROUP BY f.flight\_id, f.departure\_airport, f.flight\_no, f.scheduled\_arrival, f.departure\_airportORDER BY 5,3**

1. **Questions:** **Find list of airport codes in Europe/Moscow timezone**

Expected Output: Airport\_code.

**Answer:**

**SELECT airport\_codeFROM airportsWHERE timezone = 'Europe/Moscow'**

1. **Write a query to get the count of seats in various fare condition for every aircraft code?**

Expected Outputs: Aircraft\_code, fare\_conditions ,seat count

**Answer:**

**SELECT**

**Aircraft\_code,**

**fare\_conditions,**

**COUNT(seat\_no) AS Seat\_count**

**FROM seats**

**GROUP BY 1,2**

**ORDER BY 2 , 3**

1. **How many aircrafts codes have at least one Business class seats?**

Expected Output : Count of aircraft codes

**Answer:**

**WITH TAB1 AS (**

**SELECT**

**Aircraft\_code,**

**fare\_conditions,**

**COUNT(seat\_no) AS Seat\_count**

**FROM seats**

**GROUP BY 1,2**

**ORDER BY 3 ASC)**

**SELECT**

**COUNT(DISTINCT aircraft\_code) AS aircraft\_code\_count**

**FROM TAB1**

**WHERE fare\_conditions = 'Business'**

**AND Seat\_count >=1**

1. **Find out the name of the airport having maximum number of departure flight**

Expected Output : Airport\_name

**Answer:**

**WITH TAB1 AS(SELECT departure\_airport, COUNT(flight\_id) AS departure\_countFROM flightsGROUP BY departure\_airportORDER BY departure\_count DESC)SELECT departure\_airportFROM TAB1Limit 1**

1. **Find out the name of the airport having least number of scheduled departure flights**

Expected Output : Airport\_name

**Answer:**

**WITH TAB1 AS(SELECT departure\_airport, COUNT(flight\_id) AS departure\_countFROM flightsGROUP BY departure\_airportORDER BY departure\_count ASC)SELECT departure\_airportFROM TAB1Limit 1**

1. **How many flights from ‘DME’ airport don’t have actual departure?**

Expected Output : Flight Count

**Answer:**

**SELECT**

**COUNT(flight\_id) AS Flight\_count**

**FROM**

**flights**

**WHERE**

**Actual\_arrival IS NULL**

**AND**

**Departure\_airport = 'DME'**

1. **Identify flight ids having range between 3000 to 6000**

Expected Output : Flight\_Number , aircraft\_code, ranges

**Answer:**

**SELECT**

**F.Flight\_no,**

**A.aircraft\_code,**

**A.Range**

**FROM Flights F**

**JOIN Aircrafts A**

**ON F.aircraft\_code=A.aircraft\_code**

**WHERE**

**Range BETWEEN 3000 AND 6000**

**ORDER BY 3**

1. **Write a query to get the count of flights flying between URS and KUF?**

Expected Output : Flight\_count

**Answer:**

**SELECT**

**COUNT(Flight\_id) Flight\_count**

**FROM Flights**

**WHERE Departure\_airport = 'URS'**

**AND**

**Arrival\_airport = 'KUF'**

1. **Write a query to get the count of flights flying from either from NOZ or KRR?**

Expected Output : Flight count

**Answer:**

**SELECT COUNT(Flight\_id) Flight\_countFROM FlightsWHERE Departure\_airport = 'NOZ'ORDeparture\_airport = 'KRR'**

1. **Write a query to get the count of flights flying from KZN,DME,NBC,NJC,GDX,SGC,VKO,ROV**

Expected Output : Departure airport ,count of flights flying from these airports.

**Answer:**

**SELECT Departure\_airport, COUNT(flight\_no) Flight\_countFROM FlightsWHERE Departure\_airport IN ('KZN','DME','NBC','NJC','GDX','SGC','VKO','ROV')GROUP BY 1**

1. **Write a query to extract flight details having range between 3000 and 6000 and flying from DME**

Expected Output :Flight\_no,aircraft\_code,range,departure\_airport

**Answer:**

**SELECT F.Flight\_no, A.aircraft\_code, A.Range,F.departure\_airportFROM Flights F JOIN Aircrafts A ON F.aircraft\_code=A.aircraft\_code WHERE Range BETWEEN 3000 AND 6000 AND departure\_airport = 'DME'ORDER BY 3**

1. **Find the list of flight ids which are using aircrafts from “Airbus” company and got cancelled or delayed**

Expected Output : Flight\_id,aircraft\_model

**Answer:**

**SELECT F.Flight\_id, A.model Aircraft\_modelFROM Flights F JOIN aircrafts A ON A.Aircraft\_code=f.Aircraft\_codeWHERE A.Model LIKE '%Airbus%' AND (F.Status = 'Cancelled'OR F.Status = 'Delayed')**

1. **Find the list of flight ids which are using aircrafts from “Boeing” company and got cancelled or delayed**

Expected Output : Flight\_id,aircraft\_model

**Answer:**

**SELECT F.Flight\_id, A.model Aircraft\_model**

**FROM Flights F JOIN aircrafts A ON A.Aircraft\_code=f.Aircraft\_codeWHERE A.Model LIKE '%Boeing%' AND (F.Status = 'Cancelled'OR F.Status = 'Delayed')**

1. **Which airport(name) has most cancelled flights (arriving)?**

Expected Output : Airport\_name

**Answer:**

**WITH TAB1 AS(SELECT Arrival\_airport AS Airport\_name, COUNT(Status)FROM Flights WHERE Status = 'Cancelled'GROUP BY 1ORDER BY 2 DESC)SELECT Airport\_nameFROM TAB1 LIMIT 1**

1. ***Identify flight ids which are using “Airbus aircrafts”***

*Expected Output : Flight\_id,aircraft\_model*

**Answer:**

**SELECT Flight\_id, Model As aircraft\_modelFROM Aircrafts A JOIN Flights F On A.aircraft\_code=F.aircraft\_codeWHERE model like '%Airbus%'**

1. ***Identify date-wise last flight id flying from every airport?***

*Expected Output: Flight\_id,flight\_number,schedule\_departure,departure\_airport*

**Answer:**

**WITH LastFlights AS (**

**SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport,**

**ROW\_NUMBER() OVER (PARTITION BY DATE(scheduled\_departure), departure\_airport ORDER BY scheduled\_departure DESC) AS rn**

**FROM**

**Flights**

**)**

**SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport**

**FROM**

**LastFlights**

**WHERE**

**rn = 1**

1. ***Identify list of customers who will get the refund due to cancellation of the flights and how much amount they will get?***

*Expected Output : Passenger\_name,total\_refund.*

**Answer:**

**SELECT T.passenger\_name, SUM(B.Total\_amount) AS total\_refundFROM Tickets TJOIN Bookings B ON T.Book\_ref= B.Book\_refJOIN Boarding\_passes BP ON T.ticket\_no=BP.ticket\_noJOIN Flights F ON BP.Flight\_id=F.Flight\_idWHERE f.status = 'Cancelled'GROUP BY 1**

1. ***Identify date wise first cancelled flight id flying for every airport?***

*Expected Output : Flight\_id,flight\_number,schedule\_departure,departure\_airport*

**Answer:**

**WITH CancelledFlights AS (**

**SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport,**

**ROW\_NUMBER() OVER (PARTITION BY DATE(scheduled\_departure), departure\_airport ORDER BY scheduled\_departure ASC) AS rn**

**FROM**

**Flights**

**WHERE**

**status = 'Cancelled'**

**)**

**SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport**

**FROM**

**CancelledFlights**

**WHERE**

**rn = 1;**

1. ***Identify list of Airbus flight ids which got cancelled.***

*Expected Output : Flight\_id*

**Answer:**

**SELECT**

**F.flight\_id**

**FROM**

**Aircrafts A**

**JOIN**

**Flights F ON F.aircraft\_code = A.aircraft\_code**

**WHERE A.model LIKE '%Airbus%'**

**AND F.status = 'Cancelled'**

1. ***Identify list of flight ids having highest range.***

*Expected Output : Flight\_no, range*

**Answer:**

**SELECT F.flight\_no, A.rangeFROM Flights FJOIN Aircrafts A ON F.aircraft\_code = A.aircraft\_codeWHERE A.range = (SELECT MAX(range) FROM Aircrafts)**