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

**Instructionto 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: [https://www.skillovilla.com/playground/sql?exerciseId=0181e251-6ea8-4595-ae2b-0c690119f8db](•%09https:/www.skillovilla.com/playground/sql?exerciseId=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 theassignment, 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-mmm-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:**

1. **SELECT b.ticket\_no,b.boarding\_no,b.seat\_no,**

**t.passenger\_id,t.passenger\_name**

**FROM BOARDING\_PASSES B**

**JOIN TICKETS T**

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

**ORDER BY b.boarding\_no**

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

**Answer:**

**SELECT Seat\_no FROM (SELECT Seat\_no,COUNT(\*)AS seat\_count**

**FROM BOARDING\_PASSES GROUP BY Seat\_no ORDER BY seat\_count**

**LIMIT 1) AS Seat\_no**

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 MONTHLY\_MAXIMUM\_AMOUNT AS (SELECT**

**TO\_CHAR(book\_date, 'mmm-yy') AS month\_name,**

**t.passenger\_id,**

**t.passenger\_name,**

**b.total\_amount,**

**ROW\_NUMBER()OVER(PARTITION BY TO\_CHAR(book\_date, 'mmm-yy') ORDER BY b.total\_amount DESC) AS number**

**FROM BOOKINGS B**

**JOIN TICKETS T**

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

**SELECT month\_name,**

**passenger\_id,**

**passenger\_name,**

**total\_amount**

**FROM MONTHLY\_MAXIMUM\_AMOUNT**

**WHERE number=1**

**ORDER BY month\_name**

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 MONTHLY\_MAXIMUM\_AMOUNT AS (SELECT**

**TO\_CHAR(book\_date, 'mmm-yy') AS month\_name,**

**t.passenger\_id,**

**t.passenger\_name,**

**b.total\_amount,**

**ROW\_NUMBER()OVER(PARTITION BY TO\_CHAR(book\_date, 'mmm-yy') ORDER BY b.total\_amount ASC) AS number**

**FROM BOOKINGS B**

**JOIN TICKETS T**

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

**SELECT month\_name,**

**passenger\_id,**

**passenger\_name,**

**total\_amount**

**FROM MONTHLY\_MAXIMUM\_AMOUNT**

**WHERE number=1**

**ORDER BY month\_name**

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

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

**Answer:** **SELECT t.passenger\_id,**

**t.passenger\_name,**

**t.ticket\_no,**

**COUNT(tf.flight\_id) AS flight\_count**

**FROM TICKETS T**

**JOIN TICKET\_FLIGHTS TF**

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

**GROUP BY t.passenger\_id,t.passenger\_name,t.ticket\_no**

**HAVING COUNT(tf.flight\_id)=1 OR COUNT(tf.flight\_id)>1**

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

Expected Output: just one number is required.

**Answer: 251**

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\_id,**

**flight\_no,**

**departure\_airport,**

**arrival\_airport,**

**(actual\_departure-actual\_arrival)/60 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,**

**CAST(scheduled\_departure AS time) AS TIMING**

**FROM FLIGHTS**

**WHERE CAST(scheduled\_departure AS time) 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:**

**WITH EARLY\_MORNING\_FLIGHTS AS (SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**departure\_airport,**

**CAST(scheduled\_departure AS time) AS timing,**

**ROW\_NUMBER ()OVER (PARTITION BY departure\_airport ORDER BY scheduled\_departure) AS row\_num**

**FROM FLIGHTS**

**WHERE CAST(scheduled\_departure AS time) BETWEEN '06:00:00' AND '11:00:00')**

**SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**departure\_airport,**

**timing**

**FROM EARLY\_MORNING\_FLIGHTS**

**WHERE row\_num=1**

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

Expected Output: Airport\_code.

**Answer:**

**SELECT**

**airport\_code**

**FROM AIRPORTS**

**WHERE 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 (\*) AS seat\_count**

**FROM SEATS**

**GROUP BY aircraft\_code,fare\_conditions**

**ORDER BY aircraft\_code,fare\_conditions**

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

Expected Output : Count of aircraft codes

**Answer:** **SELECT**

**COUNT (DISTINCT aircraft\_code) AS count\_of\_aircraft**

**FROM SEATS**

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

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

Expected Output :Airport\_name

**Answer: SELECT**

**airport\_name**

**FROM AIRPORTS**

**WHERE airport\_code=(SELECT**

**departure\_airport**

**FROM FLIGHTS**

**GROUP BY departure\_airport**

**ORDER BY COUNT (\*) DESC LIMIT 1)**

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

Expected Output :Airport\_name

**Answer:**

**SELECT**

**airport\_name**

**FROM AIRPORTS**

**WHERE airport\_code=(SELECT**

**departure\_airport**

**FROM FLIGHTS**

**GROUP BY departure\_airport**

**ORDER BY COUNT (\*) ASC LIMIT 1)**

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

Expected Output : Flight Count

**Answer:** **SELECT**

**COUNT(\*) AS FLIGHT\_COUNT**

**FROM FLIGHTS**

**WHERE departure\_airport ='DME' AND actual\_departure IS NULL**

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

**WHERE a.range BETWEEN 3000 AND 6000**

**GROUP BY f.flight\_no,a.aircraft\_code,a.range**

**ORDER BY a.range**

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

Expected Output :Flight\_count

**Answer:** **SELECT**

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

**FROM FLIGHTS**

**WHERE departure\_airport='NOZ'**

**OR departure\_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 AS departure\_airport,**

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

**FROM FLIGHTS**

**WHERE departure\_airport IN ('KZN','DME','NBC','NJC','GDX','SGC','VKO','ROV')**

**GROUP BY departure\_airport**

**ORDER BY flight\_count**

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,**

**f.aircraft\_code,**

**a.range,**

**f.departure\_airport**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

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

**WHERE a.range BETWEEN 3000 AND 6000 AND departure\_airport='DME'**

**GROUP BY f.flight\_no,f.aircraft\_code,a.range,f.departure\_airport**

**ORDER BY a.range**

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 AS aircraft\_model**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

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

**WHERE 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 AS aircraft\_model**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

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

**WHERE 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:** **SELECT a.airport\_name**

**FROM AIRPORTS A**

**JOIN FLIGHTS F**

**ON A.airport\_code=F.arrival\_airport**

**WHERE f.status='Cancelled'**

**GROUP BY a.airport\_name**

**ORDER BY COUNT(\*) DESC**

**LIMIT 1**

**Answer: {en": "Begishevo Airport", "ru": "}**

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

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

**Answer:**

**SELECT f.flight\_id,**

**a.model AS aircraft\_model**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

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

**WHERE a.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 LAST\_FLIGHT AS (SELECT f.flight\_id,**

**f.flight\_no,**

**f.scheduled\_departure,**

**f.departure\_airport,**

**MAX(f.scheduled\_departure)OVER (PARTITION BY f.departure\_airport,**

**DATE(f.scheduled\_departure)) AS max\_scheduled\_departure**

**FROM FLIGHTS AS F)**

**SELECT flight\_id,**

**flight\_no,scheduled\_departure,**

**departure\_airport**

**FROM LAST\_FLIGHT**

**WHERE scheduled\_departure=max\_scheduled\_departure**

**ORDER BY 2**

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:** **WITH REFUND\_PASSENGER AS (SELECT t.passenger\_name,**

**f.status,**

**SUM(tf.amount) as total\_refund**

**FROM TICKETS T**

**INNER JOIN TICKET\_FLIGHTS TF**

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

**INNER JOIN FLIGHTS F**

**ON TF.flight\_id=F.flight\_id**

**WHERE f.status='Cancelled'**

**GROUP BY t.passenger\_name,f.status)**

**SELECT passenger\_name,total\_refund**

**FROM REFUND\_PASSENGER**

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

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

**Answer:** **SELECT flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport**

**FROM(SELECT flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport,**

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

**FROM FLIGHTS**

**WHERE status='Cancelled') AS C**

**WHERE R=1**

**ORDER BY departure\_airport,scheduled\_departure**

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

*Expected Output :Flight\_id*

**Answer:** **SELECT**

**f.flight\_id**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

**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,**

**MAX(a.range) AS range**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

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

**GROUP BY f.flight\_no**