**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: [https://www.skillovilla.com/playground/sql?exerciseId=0181e251-6ea8-4595-ae2b-0c690119f8db](file:///C:\Users\hp\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-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:** select T.ticket\_no,boarding\_no,seat\_no,passenger\_id,passenger\_name from tickets t join boarding\_passes p on t.ticket\_no = p.ticket\_no

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

**Answer:** SELECT seat\_no

FROM seats

group by 1

ORDER BY count(seat\_no) 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 MonthlyPayments AS (

    SELECT

        TO\_CHAR(book\_date, 'Mon-YYYY') AS Month\_Name,

        passenger\_id,

        passenger\_name,

        SUM(total\_amount) AS total\_paid,

        ROW\_NUMBER() OVER (PARTITION BY TO\_CHAR(book\_date, 'Mon-YYYY')

                           ORDER BY SUM(total\_amount) DESC) AS rank

    FROM bookings b join tickets t on t.book\_ref = b.book\_ref

    GROUP BY TO\_CHAR(book\_date, 'Mon-YYYY'), passenger\_id, passenger\_name

)

SELECT

    Month\_Name,

    passenger\_id,

    passenger\_name,

    total\_paid

FROM MonthlyPayments

WHERE rank = 1;

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 MonthlyPayments AS (

    SELECT

        TO\_CHAR(book\_date, 'Mon-YYYY') AS Month\_Name,

        passenger\_id,

        passenger\_name,

        SUM(total\_amount) AS total\_paid,

        ROW\_NUMBER() OVER (PARTITION BY TO\_CHAR(book\_date, 'Mon-YYYY')

                           ORDER BY SUM(total\_amount) asc) AS rank

    FROM bookings b join tickets t on t.book\_ref = b.book\_ref

    GROUP BY TO\_CHAR(book\_date, 'Mon-YYYY'), passenger\_id, passenger\_name

)

SELECT

    Month\_Name,

    passenger\_id,

    passenger\_name,

    total\_paid

FROM MonthlyPayments

WHERE rank = 1;

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:** select passenger\_id,passenger\_name,t.ticket\_no,count(f.flight\_id) as flight\_count from ticket\_flights tf join flights f on tf.flight\_id = f.flight\_id join tickets t on t.ticket\_no = tf.ticket\_no group by 1,2,3 having count(f.flight\_id)>1

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

Expected Output: just one number is required.

**Answer:** select count(\*) as tickets\_without\_boarding\_pass from boarding\_passes where 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\_id,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 where scheduled\_departure :: 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:** select flight\_id,flight\_no,scheduled\_departure,scheduled\_arrival,departure\_airport,(scheduled\_arrival-scheduled\_departure) as timings from flights where scheduled\_departure :: time between '02:00:00' and '06:00:00'

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

Expected Output: Airport\_code.

**Answer:** select airport\_code from airports where timezone in ('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 seats from seats group by 1,2

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

Expected Output : Count of aircraft codes

**Answer:** select count(distinct aircraft\_code) 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 a join flights f on a.airport\_code = f.departure\_airport group by airport\_name order by count(f.flight\_id) 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 a join flights f on a.airport\_code = f.departure\_airport group by airport\_name order by count(f.flight\_id) asc limit 1

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

Expected Output : Flight Count

**Answer:** select 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 flight\_no,a.aircraft\_code,range from flights f join aircrafts a on f.aircraft\_code=a.aircraft\_code where f.flight\_id between 3000 and 6000

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

Expected Output : Flight\_count

**Answer:** select count(flight\_id) as flight\_count from flights where arrival\_airport between 'KUF' and 'URS'

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) 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,count(flight\_id) as flight\_count from flights where departure\_airport in ('KZN','DME','NBC','NJC','GDX','SGC','VKO','ROV') group by departure\_airport

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 flight\_no,a.aircraft\_code,range,departure\_airport from flights f join aircrafts a on f.aircraft\_code=a.aircraft\_code where range between 3000 and 6000 and departure\_airport = 'DME'

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 flight\_id,model from flights f join aircrafts a on f.aircraft\_code = a.aircraft\_code where model like '%Airbus%' and status ='Cancelled' or 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 flight\_id,model from flights f join aircrafts a on f.aircraft\_code =a.aircraft\_code where model like '%Boeing%' and status ='delayed' or status='Cancelled'

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

Expected Output : Airport\_name

**Answer:** select arrival\_airport as airport\_name from flights where status='Cancelled' group by 1 order by count(\*) desc limit 1

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

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

**Answer:** select flight\_id,model from flights f join aircrafts a on f.aircraft\_code=a.aircraft\_code where 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:** select flight\_id,flight\_no,max(scheduled\_departure) as last\_flight\_departure,departure\_airport from flights group by flight\_id,flight\_no,departure\_airport

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,tf.amount  AS total\_refund

FROM Ticket\_flights tf

JOIN tickets t ON tf.ticket\_no = t.ticket\_no

JOIN Flights f ON tf.flight\_id = f.flight\_id

WHERE f.status = 'Cancelled';

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,min(scheduled\_departure) ,departure\_airport from flights where status='Cancelled' group by 1,2,4

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 flight\_no,max(range) as range from flights f join aircrafts a on f.aircraft\_code = a.aircraft\_code group by flight\_no