**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\Asus\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 bp.ticket\_no, bp.boarding\_no, bp.seat\_no, t.passenger\_id, t.passenger\_name

from boarding\_passes bp

inner join tickets t

on bp.ticket\_no=t.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 seat\_no

Order by count(\*) 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:** select to\_char(book\_date,’mmm-yy’) as month\_name

t.passenger\_id, t.passenger\_name, b.total\_amount

from bookings b

join tickets t

on b.book\_ref=t.book\_ref

order by b.total\_amount desc

limit 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:** select to\_char(book\_date,’mmm-yy’) as month\_name

t.passenger\_id, t.passenger\_name, b.total\_amount

from bookings b

join tickets t

on b.book\_ref=t.book\_ref

order by b.total\_amount asc

limit 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

 t.passenger\_id, t.passenger\_name, t.ticket\_no,

 count(distinct f.flight\_id) as flights\_count

 from flights f

 join boarding\_passes bp

 on f.flight\_id=bp.flight\_id

 join tickets t

 on bp.ticket\_no=t.ticket\_no

 group by 1,2,3

 having count(distinct f.flight\_id)>1

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

Expected Output: just one number is required.

**Answer:** select count(\*)

 from tickets

 where ticket\_no not in (

 select ticket\_no

 from boarding\_passes

 );

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,

actual\_departure-actual\_arrival as duration

 from flights

 order by duration

 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

 from flights

 where extract(hour from scheduled\_departure) between 6 and 11;

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 earliestflights as (

 select

 flight\_id,flight\_no,scheduled\_departure,scheduled\_arrival,departure\_airport,

  row\_number()over(partition by departure\_airport order by scheduled\_departure asc)as row\_num

  from flights

  where extract(hour from scheduled\_departure) between 6 and 11

  )

  select flight\_id,flight\_no,scheduled\_departure,scheduled\_arrival,departure\_airport

  from earliestflights

  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(seat\_no) as seat\_count

 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)as aircraft\_count

 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 a.airport\_name

FROM flights f

JOIN airports a ON f.departure\_airport = a.airport\_code

GROUP BY a.airport\_name

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 a.airport\_name

FROM flights f

JOIN airports a ON f.departure\_airport = a.airport\_code

GROUP BY a.airport\_name

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(flight\_id)as flight\_count\_without\_departure

 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

 inner join aircrafts A

 on f.aircraft\_code=A.aircraft\_code

where range 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(\*)as flight\_count

 from flights

 where (departure\_airport = 'URS' AND arrival\_airport = 'KUF')

 OR (departure\_airport = 'KUF' AND arrival\_airport = '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(\*)as flight\_count

 from flights

 where (departure\_airport = 'NOZ' AND arrival\_airport = 'KRR')

 OR (departure\_airport = 'NOZ' AND arrival\_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(\*) AS flight\_count

FROM flights

WHERE 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\_airport

 from flights f

 join aircrafts a

 on f.aircraft\_code=a.aircraft\_code

 where range between 3000 and 6000 and f.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

 f.Flight\_id,a.model,f.status

 from flights f

 join aircrafts a

 on f.aircraft\_code=a.aircraft\_code

 where model like'%Airbus%' and f.status in ('Arrived','Scheduled'**);**

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,f.status

 from flights f

 join aircrafts a

 on f.aircraft\_code=a.aircraft\_code

 where model like'%Boeing%' and f.status in ('Arrived','Scheduled');

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

Expected Output : Airport\_name

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

FROM flights f

JOIN airports a ON f.arrival\_airport = a.airport\_code

WHERE f.status = 'Scheduled'

GROUP BY a.airport\_name

ORDER BY COUNT(\*) DESC

LIMIT 1;

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

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

**Answer**: select

f.flight\_id,a.model

from flights f

join aircraft 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,scheduled\_departure,departure\_airport

 from flights

 wHERE scheduled\_departure IN (

 SELECT MAX(scheduled\_departure)

 FROM flights

 GROUP BY  departure\_airport

    )

 ORDER BY  scheduled\_departure DESC;

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(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 = 'Scheduled'

 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:**SELECT

    flight\_id,

    flight\_no,

    scheduled\_departure,

    departure\_airport

FROM flights

WHERE

    status = 'Scheduled'

    AND scheduled\_departure IN (

        SELECT  MIN(scheduled\_departure)

        FROM flights

        WHERE status = 'Scheduled'

        GROUP BY  departure\_airport

    )

ORDER BY  scheduled\_departure ASC;

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 a.aircraft\_code = f.aircraft\_code

WHERE a.model LIKE '%Airbus%'

AND f.status = 'Scheduled';

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

*Expected Output : Flight\_no, range*

**Answer:** select

  f.flight\_no,a.range

  from fflights f

  join aircrafts a

  on f.aircraft\_code=a.aircraft\_code

  order by range desc

  limit 1