Please answer the following questions using Airline DB database.

**How 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)

**How to submit the Assignment:**

* 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

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(distinct seat\_no) as seat\_count

FROM seats

GROUP 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\_codes

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 (SELECT a.airport\_name AS Airport\_name,COUNT(f.flight\_id) AS Departure\_flights\_count

FROM airports a

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

GROUP BY a.airport\_name) AS flight\_count

ORDER BY Departure\_flights\_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 (SELECT a.airport\_name AS Airport\_name,COUNT(f.flight\_id) AS Departure\_flights\_count

FROM airports a

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

GROUP BY a.airport\_name) AS flight\_count

ORDER BY Departure\_flights\_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

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,

 f.aircraft\_code,

 a.range as ranges

 FROM flights f

 JOIN aircrafts as a

 on f.aircraft\_code=a.aircraft\_code

 where a.range between 3000 AND 6000

 GROUP BY 1,2,3

 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(DISTINCT flight\_id) AS Flight\_count

FROM flights

WHERE departure\_airport IN ('URS',’KUF’) AND arrival\_airport IN ( ‘URS’,'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) 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 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,

 f.aircraft\_code,

 a.range as ranges,

 departure\_airport

 FROM flights f

 join aircrafts a

 on f.aircraft\_code=a.aircraft\_code

 where a.range between 3000 AND 6000

 AND f.departure\_airport='DME'

 GROUP BY 1,2,3,4

 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 AS aircraft\_model

FROM flights f

JOIN aircrafts a ON f.aircraft\_code = a.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 f.aircraft\_code = a.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 airport\_name

FROM (

    SELECT airport\_name,

    ROW\_NUMBER() OVER (ORDER BY COUNT(flight\_id) DESC) AS rnk

    FROM flights f

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

    WHERE f.status = 'Cancelled'

    GROUP BY airport\_name

) AS ranked\_airports

WHERE rnk = 1;

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 f.aircraft\_code = a.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:** 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, DATE(scheduled\_departure) ORDER BY scheduled\_departure DESC) AS rn

    FROM flights

) AS ranked\_flights

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,

tf.amount as total\_refund

FROM tickets t

JOIN ticket\_flights tf

on t.ticket\_no=tf.ticket\_no

JOIN flights f

on tf.flight\_id = f.flight\_id

WHERE f.status='Cancelled'

group by 1,2

order 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 (

    SELECT Flight\_id, flight\_no, scheduled\_departure, departure\_airport,

           DENSE\_RANK() OVER (PARTITION BY departure\_airport, DATE(scheduled\_departure) ORDER BY scheduled\_departure) AS rn

    FROM flights

    WHERE status = 'Cancelled'

) AS ranked\_flights

WHERE rn = 1

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 f.status = 'Cancelled' AND a.model LIKE '%Airbus%'

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

***Expected Output : Flight\_no, range***

**Answer:**

    SELECT DISTINCT f.Flight\_no, a.range

    FROM flights f

    JOIN aircrafts a ON f.aircraft\_code = a.aircraft\_code

WHERE range in (select max(range) from aircrafts)