**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\stxav\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'),

 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,

b.boarding\_no,

b.seat\_no,

t.passenger\_id,

t.passenger\_name

from tickets t

join BOARDING\_PASSES b

on t.ticket\_no = b.ticket\_no

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

**Answer:**

select

seat\_no

from boarding\_passes

group by 1

having count(seat\_no) = 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(b.book\_date, 'Mon-YY') AS month\_name,

t.passenger\_id,

 t.passenger\_name,

 MAX(b.total\_amount) AS total\_amount

FROM bookings b

join tickets t

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

GROUP BY TO\_CHAR(book\_date, 'Mon-YY'), passenger\_id, passenger\_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:** SELECT TO\_CHAR(b.book\_date, 'Mon-YY') AS month\_name,

t.passenger\_id,

 t.passenger\_name,

 min(b.total\_amount) AS total\_amount

FROM bookings b

join tickets t

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

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

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(f.flight\_id) as flight\_count

from TICKETS t

join TICKET\_FLIGHTS f

on t.ticket\_no = f.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(ticket\_no)

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\_no,

departure\_airport,

arrival\_airport,

aircraft\_code,

TIMESTAMPDIFF(SECOND,scheduled\_departure,scheduled\_arrival) AS DURATION

FROM flights

ORDER BY 5 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

FROM flights

WHERE EXTRACT(HOUR FROM scheduled\_departure) >= 6 AND EXTRACT(HOUR FROM scheduled\_departure) < 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 morn as(select

flight\_id,

flight\_no,

scheduled\_departure,

scheduled\_arrival,

departure\_airport,

rank() over(partition by departure\_airport order by scheduled\_departure) as rnk

from flights

where EXTRACT(HOUR FROM scheduled\_departure) >= 6 AND EXTRACT(HOUR FROM scheduled\_departure) < 11)

select

flight\_id,

flight\_no,

scheduled\_departure,

scheduled\_arrival,

departure\_airport

from morn

where rnk = 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)

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:** with an as (select

departure\_airport,

count( distinct flight\_id)

from flights

group by 1

order by 2 desc

limit 1),

mf as (select

airport\_code,

airport\_name

from AIRPORTS)

select

mf.airport\_name

from an

join mf

on mf.airport\_code = an.departure\_airpor

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

Expected Output : Airport\_name

**Answer:** with an as (select

departure\_airport,

count( distinct flight\_id)

from flights

group by 1

order by 2

limit 1),

mf as (select

airport\_code,

airport\_name

from AIRPORTS)

select

mf.airport\_name

from an

join mf

on mf.airport\_code = an.departure\_airport

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

Expected Output : Flight Count

**Answer:** select

count(flight\_id)

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 aircrafts a

join flights f

on a.aircraft\_code = f.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(flight\_id)

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)

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,

a.aircraft\_code,

a.range,

f.departure\_airport

from aircrafts a

join flights f

on a.aircraft\_code = f.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

f.flight\_id,

a.model

from aircrafts a

join flights f

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

where a.model ilike '%Airbus%' and status ='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

from aircrafts a

join flights f

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

where a.model ilike '%Boeing%' and status ='Scheduled'

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

Expected Output : Airport\_name

with an as (select

distinct departure\_airport

from flights

where

actual\_arrival is null),

mf as (select

airport\_code,

airport\_name

from AIRPORTS)

select

mf.airport\_name

from an

join mf

on mf.airport\_code = an.departure\_airport

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

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

**Answer:**

 select

f.flight\_id,

a.model

from aircrafts a

join flights f

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

where a.model ilike '%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

f.flight\_id,

f.flight\_no,

f.scheduled\_departure,

f.departure\_airport,

MAX(scheduled\_departure) OVER(PARTITION BY departure\_airport, DATE(scheduled\_departure)) AS max\_scheduled\_departure FROM flights AS f)

SELECT

flight\_id,

flight\_no,

scheduled\_departure,

 departure\_airport

 FROM LastFlights

 WHERE max\_scheduled\_departure = scheduled\_departure

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)

from bookings b

join tickets t

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

 join ticket\_flights tf

 on t.ticket\_no = tf.ticket\_no

 join flights f

 on tf.flight\_id= f.flight\_id

 where actual\_departure is null

 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 FirstFlights AS (

SELECT

f.flight\_id,

f.flight\_no,

f.scheduled\_departure,

f.departure\_airport,

f.actual\_departure,

MIN(scheduled\_departure) OVER(PARTITION BY departure\_airport, DATE(scheduled\_departure)) AS min\_scheduled\_departure FROM flights AS f)

SELECT

flight\_id,

flight\_no,

scheduled\_departure,

 departure\_airport

 FROM FirstFlights

 WHERE actual\_departure is null

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 a.aircraft\_code = f.aircraft\_code

where a.model ilike '%Airbus%' and actual\_departure is null

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

*Expected Output : Flight\_no, range*

**Answer:**  select

f.flight\_id,

Max(a.range)

from aircrafts a

join flights f

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

group by 1