**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](•%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 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') as book\_date\_new,

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

b.ticket\_no,

b.boarding\_no,

b.seat\_no,

t.passenger\_id,

t.passenger\_name

from boarding\_passes b

Join tickets t

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

order by 2 Asc

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 1

order by 2 Asc

limit 1) as seat\_count\_details

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\_amount as (

select

to\_char(book\_date,'MON-YY') as month\_name,

passenger\_id,

passenger\_name,

total\_amount

from bookings b

join tickets t

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

),

Highest\_paid\_amount as(

select  
\*,   
row\_number() over(partition by month\_name order by total\_amount Desc) as rank

from monthly\_amount)

select

month\_name,

passenger\_id,

passenger\_name,

total\_amount

from Highest\_paid\_amount

where rank=1

order by 1 Asc

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\_amount as (

select

to\_char(book\_date,'mon-yy') as month\_name,

passenger\_id,

passenger\_name,

total\_amount

from bookings b

join tickets t

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

),

lowest\_paid\_amount as(

select  
\*,   
row\_number() over(partition by month\_name order by total\_amount Asc) as rank

from monthly\_amount)

select

month\_name,

passenger\_id,

passenger\_name,

total\_amount

from lowest\_paid\_amount

where rank=1

order by 1 Asc

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 OR 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 count\_of\_ticket\_without\_boarding\_pass

from tickets t

Join boarding\_passes b

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

Where b.ticket\_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,

(scheduled\_arrival-scheduled\_departure) 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,

cast(scheduled\_departure as time) as timings

from

flights

where cast(scheduled\_departure as time) between '06:00:00' and '11:00:00'

order by 5 Asc

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\_arrival,

scheduled\_departure,

Departure\_airport,

timings

from

(select

flight\_id,

flight\_no,

scheduled\_departure,

scheduled\_arrival,

Departure\_airport,

cast(scheduled\_departure as time) as timings,

row\_number() over (partition by Departure\_airport order by scheduled\_departure Asc) as rank

from

flights

where cast(scheduled\_departure as time) between '06:00:00' and '11:00:00'

order by 5 ASC) as subquery

where rank=1

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

Expected Output: Airport\_code.

**Answer:**select

Distinct 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

order 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 count\_of\_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

(select

airport\_name,

count(scheduled\_departure) as count

from flights f

Join airports a

on f.Departure\_airport=a.airport\_code

group by 1

order by 2 Desc) as count\_of\_scheduled\_flights

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

airport\_name,

count(scheduled\_departure) as count

from flights f

Join airports a

on f.Departure\_airport=a.airport\_code

group by 1

order by 2 Asc) as count\_of\_scheduled\_flights

Limit 1

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

Expected Output : Flight Count

**Answer:**select

count(\*) as count\_of\_scheduled\_flights

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

distinct f.flight\_no,

a.aircraft\_code,

a.range

from flights f

join aircrafts a

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

where range between 3000 AND 6000

order by 1 Asc

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

Expected Output : Flight\_count

**Answer:**select

count(\*) 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(flights) 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(flights) flight\_count

from

flights

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

group by 1

order by 2

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

Distinct 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 departure\_airport='DME'

order by 3 Asc

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,

count(status)

from airports a

Join flights f

on a.airport\_code=f.arrival\_airport

where status='Cancelled'

group by 1

order by 2 Desc

limit 1) as highest\_cancellation

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,

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

from flights) as subquery  
order by 4

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

passenger\_name,

sum(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 status= 'Cancelled'

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

(select

flight\_id,

flight\_no,

scheduled\_departure,

Departure\_airport,

row\_number() over(partition by departure\_airport order by scheduled\_departure Asc) as rank

from flights

where status='Cancelled') as subquery

where rank=1

order by 4

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

*Expected Output : Flight\_id*

**Answer:**select

flight\_id

from flights f

Join Aircrafts a

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

where model like '%Airbus%'

and status='Cancelled'

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

*Expected Output : Flight\_no, range*

**Answer:** select

flight\_no,

max(range) as highest\_range

from flights f

Join Aircrafts a

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

group by 1

order by 2 Desc