**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%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') 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,

 BP.boarding\_no,

 BP.seat\_no as seat\_number,

 T.passenger\_id,

 T.passenger\_name

 from TICKETS T

 Join BOARDING\_PASSES BP  
 on T.ticket\_no = BP.ticket\_no

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

**Answer:**

 with count\_table as(

select

seat\_no,

count(\*)

from BOARDING\_PASSES

group by 1

order by 2

limit 1)

select

seat\_no

from count\_table

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 table1 as(

select

to\_char(B.book\_date, 'mon-yy') as Month\_name,

T.passenger\_id,

T.passenger\_name,

sum(B.total\_amount) as total\_amount,

rank() over(partition by to\_char(B.book\_date, 'mon-yy') order by sum(B.total\_amount) desc) as rank\_col

from TICKETS T

join BOOKINGS B

on T.book\_ref = B.book\_ref

group by 1, 2, 3)

select

Month\_name,

passenger\_id,

passenger\_name,

total\_amount

from table1

where rank\_col = 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 table1 as(

select

to\_char(B.book\_date, 'mon-yy') as Month\_name,

T.passenger\_id,

T.passenger\_name,

sum(B.total\_amount) as total\_amount,

rank() over(partition by to\_char(B.book\_date, 'mon-yy') order by sum(B.total\_amount) asc) as rank\_col

from TICKETS T

join BOOKINGS B

on T.book\_ref = B.book\_ref

group by 1, 2, 3)

select

Month\_name,

passenger\_id,

passenger\_name,

total\_amount

from table1

where rank\_col = 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 as ticket\_number,

count(flight\_id) as flight\_count

from TICKET\_FLIGHTS TF

join TICKETS T

on TF.ticket\_no = T.ticket\_no

group by 1, 2, 3

having count(flight\_id) > 1

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

Expected Output: just one number is required.

**Answer:**

select

count(TF.ticket\_no)

from TICKET\_FLIGHTS TF

left join BOARDING\_PASSES BP

on TF.ticket\_no = BP.ticket\_no

where BP.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 as Flight\_number,

departure\_airport,

arrival\_airport,

aircraft\_code,

scheduled\_arrival - scheduled\_departure as durations

from FLIGHTS

group by 1, 2, 3, 4, 5

order by 5 desc

limit 1

1. **Identify details of all the morning flights (morning means between 6 AM to 11 AM, using flights table)?**

Expected output: flight\_id, flight\_number, scheduled\_departure, scheduled\_arrival and timings.

**Answer:**select

flight\_id,

flight\_no as flight\_number,

scheduled\_departure,

scheduled\_arrival,

TO\_CHAR(scheduled\_departure, 'HH12:MI AM') as timings

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 table1 as(

select

flight\_id,

flight\_no as flight\_number,

scheduled\_departure,

scheduled\_arrival,

departure\_airport,

TO\_CHAR(scheduled\_departure, 'HH12:MI AM') as timings,

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

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,

timings

from table1

where Rank\_col = 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

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\_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 AIRPORTS

join FLIGHTS

on departure\_airport = airport\_code

group by 1

order by count(scheduled\_departure) 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

join FLIGHTS

on departure\_airport = airport\_code

group by 1

order by count(scheduled\_departure) 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

distinct F.flight\_no as Flight\_Number,

F.aircraft\_code,

A.range as ranges

from FLIGHTS F

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(flight\_id) 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(flight\_id) as Flight\_count

from FLIGHTS

where departure\_airport in ('NOZ', '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

distinct F.flight\_no,

F.aircraft\_code,

A.range,

F.departure\_airport

from FLIGHTS F

join AIRCRAFTS A

on F.aircraft\_code = A.aircraft\_code and range between 3000 and 6000

where 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 as aircraft\_model

from FLIGHTS F

join AIRCRAFTS A

on F.aircraft\_code = A.aircraft\_code and model like '%Airbus%'

where status in ('Cancelled', '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 and model like '%Boeing%'

where status in ('Cancelled', 'Delayed')

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

Expected Output : Airport\_name   
  
**Answer:**

select

airport\_name

from FLIGHTS F

join AIRPORTS A on A.airport\_code = F.arrival\_airport

where status = 'Cancelled'

group by 1

order by COUNT(flight\_id) DESC

limit 1

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

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

**Answer:**select

flight\_id,

model as aircraft\_model

from FLIGHTS F

join AIRCRAFTS A on A.aircraft\_code = F.aircraft\_code

and 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:**

with table1 as (

select

flight\_id,

flight\_no as flight\_number,

scheduled\_departure,

departure\_airport,

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

from FLIGHTS)

select

flight\_id,

flight\_number,

scheduled\_departure,

departure\_airport

from table1

where rank\_col = 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,

sum(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 and F.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:**

with table1 as (

select

flight\_id,

flight\_no as flight\_number,

scheduled\_departure,

departure\_airport,

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

from FLIGHTS

where status = 'Cancelled')

select

flight\_id,

flight\_number,

scheduled\_departure,

departure\_airport

from table1

where rank\_col = 1

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

distinct F.flight\_no,

A.range

from FLIGHTS F

JOIN AIRCRAFTS A ON F.aircraft\_code = A.aircraft\_code

where A.range =(select max(range) from AIRCRAFTS)