**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, 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 as seat\_number ,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:**

with cte as

(select seat\_no, count(ticket\_no) as total\_count

from boarding\_passes

 group by 1

 order by 2)

 select seat\_no from cte

 order by total\_count

 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:**

with cte as (select to\_char(book\_date,'Mon-yy') as Month\_name,passenger\_id,passenger\_name,sum(total\_amount) as total\_amount

from bookings B inner join tickets T

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

group by 1,2,3),

table2 as

(select \*,

 dense\_rank()over(partition by  Month\_name order by total\_amount desc) as ranking from cte)

 select month\_name, passenger\_id, passenger\_name, total\_amount from table2 where ranking =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 cte as (select to\_char(book\_date,'Mon-yy') as Month\_name,passenger\_id,passenger\_name,sum(total\_amount) as total\_amount

from bookings B inner join tickets T

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

group by 1,2,3),

table2 as

(select \*,

 row\_number()over(partition by Month\_name order by total\_amount asc) as ranking from cte)

 select month\_name, passenger\_id, passenger\_name, total\_amount from table2 where ranking =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 Tickets T inner join Ticket\_flights TF

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

group by 1,2,3

having count(flight\_id) > 1

order by 4

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

Expected Output: just one number is required.

**Answer: 251**

with cte as(select T.ticket\_no,bp.boarding\_no

from tickets T left join boarding\_passes BP

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

where boarding\_no is null )

select count(\*) from cte

1. **Identify details of the longest flight (using flights table)?**

Expected Output: Flight number, departure airport, arrival airport, aircraft code and durations.

**Answer:**

with cte as(select distinct flight\_no as Flight\_Number, Departure\_airport,arrival\_airport,aircraft\_code ,

scheduled\_arrival - scheduled\_departure as durations

from flights

),

time as (select \*,rank() over (order by durations desc) from cte)

select \* from time where rank = 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:**

with cte as (select flight\_id,flight\_no as flight\_number,scheduled\_departure,scheduled\_arrival,

to\_char(scheduled\_departure,'HH24:MI:SS') as Departure\_time,

 to\_char(scheduled\_departure,'HH24:MI') || ' - '|| to\_char(scheduled\_arrival,'HH24:MI') as timings from flights)

select flight\_id,flight\_number,scheduled\_arrival,scheduled\_departure,timings from cte where departure\_time between '06:00:00' and '11:00:00'

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 cte as (select flight\_id,flight\_no as flight\_number,scheduled\_departure,scheduled\_arrival, departure\_airport,

to\_char(scheduled\_departure,'HH24:MI:SS') as Departure\_time,

 to\_char(scheduled\_departure,'HH24:MI') || ' - '|| to\_char(scheduled\_arrival,'HH24:MI') as timings from flights),

 table1 as (select \*, row\_number() over (partition by departure\_airport order by departure\_time asc) as rankings from cte)

select flight\_id,flight\_number,scheduled\_arrival,scheduled\_departure,departure\_airport,timings from table1

where departure\_time between '06:00:00' and '11:59:59' And rankings = 1

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

Expected Output: Airport\_code.

**Answer:**

select airport\_code from Airports where timezone like '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 (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:**

with cte as(select departure\_airport, Airport\_name,count(flight\_no) as count\_no

from Flights F inner join airports A

on F.departure\_airport = a.Airport\_code

group by 1,2

order by 3 desc)

select Airport\_name from cte

limit 1

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

Expected Output : Airport\_name

**Answer:**

with cte as(select departure\_airport, Airport\_name,count(flight\_no) as count\_no

from Flights F inner join airports A

on F.departure\_airport = a.Airport\_code

group by 1,2

order by 3 asc)

select Airport\_name,count\_no from cte

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 flight\_no as Flight\_number , F.aircraft\_code, range

from flights F inner join Aircrafts A

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

where range between 3000 and 5000

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

Expected Output : Flight\_count

**Answer:**

select count(flight\_no) 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\_no) 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\_no) as Flight\_count

from flights

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

group by 1

order 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 flight\_no, F.aircraft\_code,range, departure\_airport

from flights F inner join aircrafts A

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

where range between 3000 and 6000 And departure\_airport = 'DME'

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 flight\_id, model as aircraft\_model

from Flights F inner join aircrafts A

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

where status in ('Cancelled','Delayed') And model like '%Airbus%'

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 flight\_id, model as aircraft\_model

from Flights F inner join aircrafts A

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

where status in ('Cancelled','Delayed') And model like '%Boeing%'

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

Expected Output : Airport\_name

**Answer:**

with table1 as (select Airport\_name,

count(status) as total\_count

from flights F join airports A

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

where status ='Cancelled'

group by Airport\_name

order by 2 desc),

table2 as (select \*, row\_number() over (order by total\_count desc) as ranking

from table1)

select Airport\_name from table2 where ranking = 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 inner join aircrafts A

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

where model like '%Airbus%'

order by 1

1. ***Identify date-wise last flight id flying from every airport?***

*Expected Output: Flight\_id,flight\_number,schedule\_departure,departure\_airport*

**Answer:**

with cte as(select Flight\_id,flight\_no as flight\_number,scheduled\_departure,departure\_airport ,

to\_char(scheduled\_departure,'yyyy-mm-dd') as departure\_time

from flights ),

table1 as (select \*,row\_number() over (partition by departure\_airport order by departure\_time desc) as ranking from cte)

select Flight\_id,flight\_number,scheduled\_departure,departure\_airport

from table1 where ranking = 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 Passenger\_name, sum(amount) as total\_refund

from ticket\_flights TF inner join Tickets T

on Tf.ticket\_no = T.ticket\_no

inner join flights F

on F.flight\_id = TF.flight\_id

where 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 cte as(select Flight\_id,flight\_no as flight\_number,scheduled\_departure,departure\_airport ,

to\_char(scheduled\_departure,'yyyy-mm-dd') as departure\_time

from flights where STatus = 'Cancelled'),

table1 as (select \*,row\_number() over (partition by departure\_airport order by departure\_time asc) as ranking from cte )

select Flight\_id,flight\_number,scheduled\_departure,departure\_airport

from table1 where ranking = 1

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

*Expected Output : Flight\_id*

**Answer:**

select flight\_id

from Flights F inner 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:**

with cte as (select f.flight\_id, range,rank()over(order by range desc) as ranking

from flights f inner join aircrafts a on f.aircraft\_code = a.aircraft\_code)

select flight\_id, range from cte where ranking =1