**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**

**t.ticket\_no,**

**boarding\_no,**

**seat\_no,**

**passenger\_id,**

**passenger\_name**

**from boarding\_passes bp**

**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:  select**

**seat\_no**

**from(**

**select**

**seat\_no,**

**count(\*) as seat\_count**

**from boarding\_passes**

**group by 1**

**order by 1 asc**

**) sub**

**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 tb1 as (**

**select**

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

**passenger\_id,**

**passenger\_name,**

**total\_amount,**

**row\_number() over (partition by to\_char(book\_date,'Mon-yy') order by total\_amount desc) as rnk**

**from bookings b**

**join tickets t**

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

**)**

**select**

**month\_name,**

**passenger\_id,**

**passenger\_name,**

**total\_amount**

**from tb1**

**where rnk = 1**

**order by 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 tb1 as (**

**select**

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

**passenger\_id,**

**passenger\_name,**

**total\_amount,**

**row\_number() over (partition by to\_char(book\_date,'Mon-yy') order by total\_amount asc) as rnk**

**from bookings b**

**join tickets t**

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

**)**

**select**

**month\_name,**

**passenger\_id,**

**passenger\_name,**

**total\_amount**

**from tb1**

**where rnk = 1**

**order by 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,**

**count(flight\_id) as flight\_count**

**from tickets t**

**join ticket\_flights tf**

**on t.ticket\_no = tf.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(\*) as Tickets\_without\_boarding\_passes**

**from tickets t**

**left join boarding\_passes bp**

**on t.ticket\_no = bp.ticket\_no**

**where bp.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 Durations**

**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 timing**

**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: with tb1 as**

**(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 cast(scheduled\_departure as time) asc) rnk**

**from flights**

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

**)**

**select**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**departure\_airport,**

**timings**

**from tb1**

**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(\*) 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**

**where airport\_code =  (select**

**departure\_airport**

**from flights**

**group by 1**

**order by 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 airports**

**where airport\_code =  (select**

**departure\_airport**

**from flights**

**group by 1**

**order by count(\*) asc**

**limit 1)**

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

Expected Output : Flight Count

**Answer:** **select**

**count(\*) as flight\_count**

**from flights**

**where actual\_departure is null and departure\_airport = 'DME'**

1. **Identify flight ids having range between 3000 to 6000**

Expected Output : Flight\_Number , aircraft\_code, ranges

**Answer:** **select**

**flight\_no,**

**f.aircraft\_code,**

**range**

**from flights f**

**join aircrafts a on**

**f.aircraft\_code = a.aircraft\_code**

**where range between 3000 and 6000**

**group by 1,2,3**

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

Expected Output : Flight\_count

**Answer:** **select**

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

**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**

**flight\_no,**

**f.aircraft\_code,**

**range,**

**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'**

**group by 1,2,3,4**

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**

**from flights f**

**join aircrafts a**

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

**where model like '%Airbus%' and 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**

**flight\_id,**

**model**

**from flights f**

**join aircrafts a**

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

**where model like '%Boeing%' and 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 f.arrival\_airport = a.airport\_code**

**where status = 'Cancelled'**

**group by 1**

**order by count(\*) desc**

**limit 1**

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

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

**Answer:** **select**

**flight\_id,**

**model**

**from flights f**

**join aircrafts a**

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

**where 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 tb1 as (**

**select**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport,**

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

**from flights)**

**select**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport**

**from tb1**

**where rnk = 1**

**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(total\_amount) as total\_refund**

**from ticket\_flights tf**

**join tickets t**

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

**join flights f**

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

**join bookings b**

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

**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:** **with tb1 as (**

**select**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport,**

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

**from flights**

**where status = 'Cancelled')**

**select**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport**

**from tb1**

**where rnk = 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 a.aircraft\_code = f.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 range**

**from flights f**

**join aircrafts a**

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

**group by 1**

**order by 2 desc**