**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**

**b.ticket\_no,**

**b.boarding\_no,**

**b.seat\_no as seat\_number,**

**t.passenger\_id,**

**t.passenger\_name**

**from BOARDING\_PASSES as b**

**join TICKETS as t**

**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,**

**count(\*) as allocated**

**from BOARDING\_PASSES**

**group by 1**

**order by 2**

**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:**

**select**

**to\_char(b.book\_date,'mmm-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 1,2,3**

**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:**

**select**

**TO\_CHAR(b.book\_date,'mmm-yy') as Month\_name,**

**t.passenger\_id,**

**t.passenger\_name,**

**min(b.total\_amount) as total\_amount**

**from tickets as t**

**join bookings as b**

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

**group by 1,2,3**

**order by 1,4**

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 as ticket\_number,**

**count(distinct tf.flight\_id) as flight\_count**

**from tickets as t**

**join TICKET\_FLIGHTS tf on t.ticket\_no=tf.ticket\_no**

**group by 1,2,3**

**having count(distinct tf.flight\_id) > 1**

**order by 1**

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

Expected Output: just one number is required.

**Answer:**

**select**

**count(distinct t.ticket\_no) as tickets\_without\_boarding\_passes**

**from TICKETS t**

**left join BOARDING\_PASSES as 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 as flight\_number,**

**scheduled\_departure,**

**scheduled\_arrival,**

**to\_char(scheduled\_departure, 'HH:MI AM') || ' to ' || to\_char (scheduled\_arrival, 'HH: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 early\_morning\_flights as**

**(select**

**departure\_airport,**

**min(scheduled\_departure) as earliest\_departure**

**from**

**FLIGHTS**

**where**

**extract(hour from scheduled\_departure) >= 6**

**and extract(hour from scheduled\_departure) < 11**

**group by**

**departure\_airport)**

**select**

**f.flight\_id,**

**f.flight\_no as flight\_number,**

**f.scheduled\_departure,**

**f.scheduled\_arrival,**

**f.departure\_airport,**

**to\_char(f.scheduled\_departure, 'HH:MI AM') || ' - ' || to\_char(f.scheduled\_arrival, 'HH:MI AM') as timings**

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(seats) 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\_aircraft\_with\_business\_class**

**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**

**a.airport\_name**

**from airports as a**

**join**

**(select**

**departure\_airport,**

**count(departure\_airport)**

**from flights**

**group by 1**

**order by 2 desc**

**limit 1)**

**maxcount on a.airport\_code=maxcount.departure\_airport**

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

Expected Output : Airport\_name

**Answer:**

**select**

**a.airport\_name**

**from airports a**

**join (select**

**departure\_airport,**

**count(departure\_airport)**

**from flights**

**group by 1**

**order by 2 asc**

**limit 1) maxcount on**

**a.airport\_code = maxcount.departure\_airport**

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

Expected Output : Flight Count

**Answer:**

**select**

**count(departure\_airport) 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**

**f.flight\_no as Flight\_Number,**

**f.aircraft\_code,**

**a.range**

**from flights as f**

**join AIRCRAFTS as a**

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

**where a.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(\*) 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 = 'NOZ'**

**or arrival\_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(\*) as flight\_count**

**from**

**FLIGHTS**

**where**

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

**group by**

**departure\_airport**

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 as Flight\_no,**

**f.aircraft\_code,**

**a.range,**

**f.departure\_airport**

**from**

**FLIGHTS as f**

**join**

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

**where**

**a.range between 3000 and 6000**

**and f.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 as f**

**join**

**aircrafts as 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 as 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**

**a.airport\_name**

**from**

**AIRPORTS as a**

**join**

**FLIGHTS as f**

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

**where**

**f.status = 'Cancelled'**

**group by**

**a.airport\_name**

**order by**

**count(\*) DESC**

**limit 1**

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 as f**

**join**

**aircrafts as 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:**

**with last\_flights as**

**(select**

**f.departure\_airport,**

**max(f.scheduled\_departure) as last\_departure**

**from**

**FLIGHTS as f**

**group by f.departure\_airport)**

**select**

**f.flight\_id,**

**f.flight\_no as flight\_number,**

**f.scheduled\_departure,**

**f.departure\_airport**

**from**

**FLIGHTS as f**

**join**

**last\_flights lf ON f.departure\_airport = lf.departure\_airport and f.scheduled\_departure = lf.last\_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) as total\_refund**

**from**

**tickets as t**

**join**

**ticket\_flights as tf**

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

**join**

**flights as f**

**on t.ticket\_no = f.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:**

**select**

**f.flight\_id,**

**f.flight\_no,**

**f.scheduled\_departure,**

**f.departure\_airport**

**from flights as f**

**join**

**(select**

**departure\_airport,**

**min (scheduled\_departure) as min\_departure**

**from flights**

**where status = 'Cancelled'**

**group by departure\_airport)**

**min\_cancelled on f.departure\_airport = min\_cancelled.departure\_airport**

**where f.status = 'Cancelled'**

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

*Expected Output : Flight\_id*

**Answer:**

**select**

**f.flight\_id**

**from FLIGHTS as f**

**join AIRCRAFTS as ac**

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

**where f.status like '%Cancelled%' and ac.model like '%Airbus%'**

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

*Expected Output : Flight\_no, range*

**Answer:**

**select**

**f.flight\_id as Flight\_no,**

**ac.range**

**from flights as f**

**join AIRCRAFTS as ac on f.aircraft\_code = ac.aircraft\_code**

**order by 2 desc**