**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](file:///C:\Users\hagarwal\Downloads\•%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'),**

**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,**

**T.passenger\_id,**

**T.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:  With Table1 as (SELECT**

**seat\_no,**

**rank () Over (order by count (seat\_no) asc) as allocated\_count**

**FROM BOARDING\_PASSES**

**GROUP BY seat\_no**

**ORDER BY 2 asc)**

**SELECT seat\_no**

**FROM Table1**

**WHERE allocated\_count = 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 Table1 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**

**GROUP BY 1, 2, 3, 4),**

**Table2 as (SELECT**

**Month\_name,**

**passenger\_id,**

**passenger\_name,**

**rank () over (partition by month\_name order by sum (total\_amount) desc) as T\_S**

**FROM Table1**

**GROUP BY 1,2,3)**

**SELECT Month\_name,**

**passenger\_id,**

**passenger\_name**

**FROM Table2**

**WHERE T\_S = 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 (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**

**GROUP BY 1, 2, 3, 4),**

**Table2 as (SELECT**

**Month\_name,**

**passenger\_id,**

**passenger\_name,**

**rank () over (partition by month\_name order by sum (total\_amount) asc) as T\_S**

**FROM Table1**

**GROUP BY 1,2,3)**

**SELECT Month\_name,**

**passenger\_id,**

**passenger\_name,**

**T\_S**

**FROM Table2**

**WHERE T\_S = 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\_no)**

**FROM TICKETS T**

**JOIN TICKET\_FLIGHTS TF**

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

**JOIN FLIGHTS F**

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

**WHERE actual\_arrival is not null**

**GROUP BY 1,2,3**

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

Expected Output: just one number is required.

**Answer: SELECT**

**count (ticket\_no)**

**FROM BOARDING\_PASSES**

**WHERE 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: with T1 as (SELECT**

**flight\_no,**

**departure\_airport,**

**arrival\_airport,**

**aircraft\_code,**

**actual\_arrival - actual\_departure as Duration**

**FROM FLIGHTS),**

**T2 as (SELECT \*,**

**rank () over (order by duration desc) as rank**

**FROM T1**

**WHERE duration is not null)**

**SELECT flight\_no,**

**departure\_airport,**

**arrival\_airport,**

**aircraft\_code, duration**

**FROM T2 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 T1 as (SELECT**

**flight\_id,**

**flight\_no,**

**to\_char (scheduled\_departure, 'HH24') as sched\_dep,**

**to\_char (scheduled\_arrival, 'HH24') as sched\_arr**

**FROM FLIGHTS)**

**SELECT flight\_id,**

**flight\_no,**

**sched\_dep,**

**sched\_arr**

**FROM T1**

**WHERE sched\_dep > '06' and sched\_dep < '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 T1 as (SELECT**

**flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**departure\_airport,**

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

**FROM FLIGHTS)**

**SELECT \* FROM T1**

**WHERE timing = 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 (seats)**

**FROM seats**

**Group by 2, 1**

1. **How many aircrafts codes have at least one Business class seats?**

Expected Output : Count of aircraft codes

**Answer: SELECT**

**count (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**

**departure\_airport as Airport\_name,**

**count (flight\_no)**

**FROM FLIGHTS**

**WHERE actual\_departure is not null**

**GROUP BY 1**

**ORDER BY 2 desc**

**LIMIT 1**

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

Expected Output : Airport\_name

**Answer: SELECT**

**departure\_airport as Airport\_name,**

**count(flight\_no) flights**

**FROM FLIGHTS**

**WHERE status = 'Scheduled'**

**GROUP BY 1**

**ORDER BY 2 asc**

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

Expected Output : Flight Count

**Answer: SELECT**

**count(flight\_no) 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**

**FLIGHT\_id,**

**range**

**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\_no)**

**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 (flight\_no)**

**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\_no)**

**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 A.aircraft\_code = F.aircraft\_code**

**WHERE range between 3000 and 6000 and 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:    WITH Table1 as (SELECT**

**flight\_id,**

**model as aircraft\_model**

**FROM FLIGHTS F**

**JOIN AIRCRAFTS A**

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

**WHERE status = 'Cancelled')**

**SELECT flight\_id,**

**aircraft\_model**

**FROM Table1**

**WHERE aircraft\_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**

**JOIN AIRCRAFTS A**

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

**WHERE status = 'Cancelled' and model like '%Boeing%'**

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

Expected Output : Airport\_name

**WITH Table1 as (SELECT**

**arrival\_airport as Airport\_name,**

**rank () over (order by count (status) desc) as rank\_cancelled\_flights**

**FROM FLIGHTS**

**WHERE status = 'Cancelled'**

**GROUP BY 1)**

**SELECT Airport\_name**

**FROM Table1**

**WHERE rank\_Cancelled\_flights = 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 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 T1 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**

**WHERE Status = 'Cancelled')**

**SELECT flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**departure\_airport**

**FROM T1**

**WHERE rnk = 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 TICKETS T**

**JOIN TICKET\_FLIGHTS TF**

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

**JOIN FLIGHTS F**

**on F.flight\_id = TF.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: with T1 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 T1**

**WHERE rnk = 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:**

**with Table1 as (SELECT**

**flight\_no,**

**rank () over (order by range desc) as Range**

**FROM AIRCRAFTS A**

**JOIN FLIGHTS F**

**On A.aircraft\_code = F.aircraft\_code)**

**SELECT**

**flight\_no,**

**Range**

**FROM Table1**

**WHERE Range = 1**