**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 formatted\_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, t.passenger\_id,**

**t.passenger\_name from boarding\_passes as bp join tickets as t on bp.ticket\_no = t.ticket\_no**

**order by boarding\_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 seat\_no order by seat\_count limit 1) as seat\_no;**

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 MonthlyMaxAmounts as (select to\_char(b.book\_date, 'Mon-YY') as Month\_Name, 1.passenger\_id, 1.passenger\_name, b.total\_amount, row\_number() over(partition by to\_char(b.book\_date, 'Mon-YY') order by b.total\_amount desc) as Row\_Num from bookings b**

**join tickets t on b.book\_ref = t.book\_ref) select Month\_Name,passenger\_id,passenger\_name,total\_amount from MonthlyMaxAmounts**

**where Row\_Num = 1 order by Month\_Name;**

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 MonthlyMinAmounts AS**

**(select to\_char(b.book\_date, 'Mon-YY') AS Month\_Name, t.passenger\_id, t.passenger\_name, b.total\_amount, ROW\_NUMBER() over(partition by to\_char(b.book\_date, 'Mon-YY') order by b.total\_amount asc) as RowNum from bookings b join tickets t on b.book\_ref = t.book\_ref)**

**select Month\_Name,passenger\_id, passenger\_name, total\_amount from MonthlyMinAmounts**

**where RowNum = 1 order by Month\_Name;**

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, COUNT(f.flight\_id) as flight\_count from tickets t join ticket\_flights f on t.ticket\_no = f.ticket\_no group by t.passenger\_id,**

**t.passenger\_name, t.ticket\_no having count(f.flight\_id) = 1 OR count(f.flight\_id) > 1;**

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

Expected Output: just one number is required.

**Answer: select count(\*) as ticket\_count\_without\_boarding\_pass from tickets t**

**LEFT JOIN boarding\_passes b on t.ticket\_no = b.ticket\_no where b.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)/60.0 as duration from flights**

**order by duration desc;**

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';**

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 EarlyMorningFlights AS**

**(select flight\_id, flight\_no, scheduled\_departure, scheduled\_arrival, departure\_airport,**

**CAST(scheduled\_departure AS time) as timing, ROW\_NUMBER() over(partition by departure\_airport order by scheduled\_departure) as row\_num 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, timing from EarlyMorningFlights where row\_num = 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 no\_of\_seats**

**from seats group by aircraft\_code, fare\_conditions order by aircraft\_code asc;**

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

Expected Output : Count of aircraft codes

**Answer: select fare\_conditions, count(aircraft\_code) from seats**

**where fare\_conditions = 'Business'**

**group by fare\_conditions;**

1. **Find out the name of the airport having maximum number of departure flight**

Expected Output : Airport\_name

**Answer: select airport\_name, count(departure\_airport) from flights**

**join airports on flights.departure\_airport = airports.airport\_code**

**group by departure\_airport, airport\_name**

**order by count(departure\_airport) 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, count(scheduled\_departure) from flights**

**join airports on flights.departure\_airport = airports.airport\_code**

**group by departure\_airport, airport\_name**

**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 departure\_airport, count(departure\_airport) from flights**

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

**group by departure\_airport;**

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

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

**Answer: select flight\_id from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.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) 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\_id) 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 count(flight\_id)**

**from flights**

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

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 flights.flight\_id, flights.flight\_no, flights.departure\_airport, flights.arrival\_airport**

**from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.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: select  flight\_id, status from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.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, status from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.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, count(status) from flights**

**join airports on flights.departure\_airport = airports.airport\_code**

**where status = 'Cancelled'**

**group by airport\_name**

**order by count(status) desc**

**limit 1;**

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

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

**Answer: select flight\_id from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.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: select max(scheduled\_departure), scheduled\_departure, flight\_id**

**from flights**

**group by flight\_id**

**order by scheduled\_departure desc;**

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  tickets.passenger\_name, ticket\_flights.amount, flights.status**

**from tickets**

**join ticket\_flights on tickets.ticket\_no = ticket\_flights.ticket\_no**

**join flights on  flights.flight\_id = ticket\_flights.flight\_id**

**where flights.status = 'Cancelled'**

**group by tickets.passenger\_name, ticket\_flights.amount, flights.status**

**order by flights.status desc;**

1. ***Identify date wise first cancelled flight id flying for every airport?***

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

**Answer: select   min(scheduled\_departure) , scheduled\_departure, flight\_id**

**from flights**

**group by flight\_id;**

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

*Expected Output : Flight\_id*

**Answer: select flight\_id from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.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\_id, range from flights**

**join aircrafts on flights.aircraft\_code = aircrafts.aircraft\_code**

**group by flight\_id, range**

**order by range desc**

**limit 1;**