**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

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;

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;

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(\*) AS seat\_count

FROM BOARDING\_PASSES

GROUP BY 1

ORDER BY 2

LIMIT 1

)

SELECT seat\_no

FROM CTE;

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 MonthlyMaxAmount 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 DESC) AS amount\_rank

FROM TICKETS T

JOIN BOOKINGS B

ON T.book\_ref = B.book\_ref)

SELECT

month\_name, passenger\_id, passenger\_name, total\_amount

FROM MonthlyMaxAmount

WHERE amount\_rank = 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 MonthlyMinAmount 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 amount\_rank

FROM TICKETS T

JOIN BOOKINGS B

ON T.book\_ref = B.book\_ref)

SELECT

month\_name, passenger\_id, passenger\_name, total\_amount

FROM MonthlyMinAmount

WHERE amount\_rank = 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

T.passenger\_id, T.passenger\_name,

T.ticket\_no, COUNT(TF.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(TF.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 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 duration

FROM FLIGHTS

ORDER BY duration 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 timings

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 timings,

ROW\_NUMBER() OVER(PARTITION BY departure\_airport

ORDER BY scheduled\_departure) departure\_rank

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 EarlyMorningFlights

WHERE departure\_rank = 1;

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

Expected Output: Airport\_code.

**Answer:** SELECT

DISTINCT 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;

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\_aircrafts

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 departure\_airport

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 departure\_airport

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 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, 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

GROUP BY 1, 2, 3

ORDER BY A.range;

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 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(\*) AS flight\_count

FROM FLIGHTS

WHERE departure\_airport IN ('KZN', 'DME', 'NBC', 'NJC', 'GDX', 'SGC', 'VKO', 'ROV')

GROUP BY 1

ORDER BY 2;

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(F.Flight\_no), F.aircraft\_code,

A.range, F.departure\_airport

FROM FLIGHTS F

JOIN AIRCRAFTS A

ON F.aircraft\_code = A.aircraft\_code

WHERE F.departure\_airport = 'DME'

AND A.range BETWEEN '3000' and '6000'

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

A.model, F.status

FROM AIRCRAFTS A

JOIN FLIGHTS F

ON A.aircraft\_code = F.aircraft\_code

WHERE A.model LIKE '%Airbus%' AND

F.status IN ('Delayed', 'Cancelled');

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

A.model, F.status

FROM AIRCRAFTS A

JOIN FLIGHTS F

ON A.aircraft\_code = F.aircraft\_code

WHERE A.model LIKE '%Boeing%' AND

F.status IN ('Delayed', 'Cancelled');

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'

ORDER BY 1 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 F

JOIN AIRCRAFTS 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:** SELECT

flight\_id, flight\_no, scheduled\_departure,

scheduled\_arrival, departure\_airport

FROM

(SELECT \*,

RANK()OVER(PARTITION BY departure\_airport ORDER BY scheduled\_departure DESC) AS flight\_rank

FROM FLIGHTS) AS time

WHERE flight\_rank = 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

T.passenger\_name, SUM(TF.amount) AS total\_refund

FROM TICKETS T

JOIN TICKET\_FLIGHTS TF

ON T.ticket\_no = TF.ticket\_no

JOIN FLIGHTS F

ON TF.flight\_id = 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

flight\_id, flight\_no,

scheduled\_departure, departure\_airport

FROM (

SELECT

flight\_id, flight\_no, scheduled\_departure,

departure\_airport,

ROW\_NUMBER() OVER(PARTITION BY departure\_airport ORDER BY scheduled\_departure ASC) AS m

FROM FLIGHTS

WHERE status = 'Cancelled') AS t

WHERE m = 1

ORDER BY departure\_airport, scheduled\_departure;

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

*Expected Output : Flight\_id*

**Answer:** SELECT

F.flight\_id

FROM FLIGHTS F

JOIN AIRCRAFTS A

ON F.aircraft\_code = A.aircraft\_code

WHERE a.model LIKE '%Airbus%'

AND F.status = 'Cancelled';

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

*Expected Output : Flight\_no, range*

**Answer:** WITH airline AS (

SELECT

DISTINCT F.Flight\_no, A.range

FROM AIRCRAFTS A

JOIN FLIGHTS F

ON A.aircraft\_code = F.aircraft\_code

order by 2 desc)

SELECT

flight\_no, range

FROM airline

WHERE range=(SELECT MAX(range) FROM airline);