**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 = 1ORDER 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

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'

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

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 aircraft\_code,

fare\_conditions ORDER BY aircraft\_code, fare\_conditions

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 f.flight\_no, f.aircraft\_code, a.range 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 AS departure\_airport,

COUNT(\*) AS Flight\_count FROM flights

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

GROUP BY departure\_airport ORDER BY Flight\_count

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,f.aircraft\_code, a.range, f.departure\_airport FROM flights AS f

JOIN aircrafts AS a ON f.aircraft\_code = a.aircraft\_code

WHERE a.range BETWEEN 3000 AND 6000 AND departure\_airport = 'DME'

GROUP BY f.flight\_no, f.aircraft\_code, a.range,

f.departure\_airport ORDER BY a.range

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

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 FROM flights AS f

JOIN aircrafts AS 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

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 LastFlights AS (

SELECT f.flight\_id, f.flight\_no,

f.scheduled\_departure, f.departure\_airport,

MAX(scheduled\_departure) OVER(PARTITION BY departure\_airport,

DATE(scheduled\_departure)) AS max\_scheduled\_departure FROM flights AS f)

SELECT flight\_id, flight\_no,

scheduled\_departure, departure\_airport FROM LastFlights

WHERE scheduled\_departure=max\_scheduled\_departure ORDER BY 2

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 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:** SELECT f.flight\_no,max(a.range) as range

FROM flights f JOIN aircrafts a ON f.aircraft\_code=a.aircraft\_code GROUP BY flight\_no