**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 BP.ticket\_no, boarding\_no, seat\_no as seat\_number, passenger\_id,   passenger\_name from BOARDING\_PASSES BP inner 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, count(ticket\_no) as total\_count from boarding\_passes group by seat\_no order by 2)

select seat\_no from table1 order by total\_count  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: Using Dense\_rank()**

with table1 as (

select to\_char(book\_date, 'Mon-yy') as Month\_name,

passenger\_id,passenger\_name, sum(total\_amount) as total\_amount

from Tickets T

Left Join Bookings B

On T.Book\_ref = B.book\_ref

group by 1,2 ,3),

table2 as (

select \*, dense\_rank()over(partition by Month\_name order by total\_amount desc) as ranking

from table1)

select month\_name, passenger\_id, passenger\_name, total\_amount from table2

where ranking =1

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Or\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Using row\_number**

with table1 as (

select to\_char(book\_date, 'Mon-yy') as Month\_name,

passenger\_id,passenger\_name, sum(total\_amount) as total\_amount

from Tickets T

Left Join Bookings B

On T.Book\_ref = B.book\_ref

group by 1,2 ,3),

table2 as (

select \*,

row\_number()over(partition by Month\_name order by total\_amount desc) as ranking

from table1)

select month\_name, passenger\_id, passenger\_name, total\_amount from table2

where ranking =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: Using dense\_rank()**

with table1 as (

select to\_char(book\_date, 'Mon-yy') as Month\_name,

passenger\_id,passenger\_name, sum(total\_amount) as total\_amount

from Tickets T

Left Join Bookings B

On T.Book\_ref = B.book\_ref

group by 1,2 ,3),

table2 as (

select \*, **dense\_rank()**over(partition by Month\_name order by total\_amount asc) as ranking

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from Tickets T

Left Join Bookings B

On T.Book\_ref = B.book\_ref

group by 1,2 ,3),

table2 as (

select \*, **row\_number()**over(partition by Month\_name order by total\_amount asc) as ranking

from table1)

select month\_name, passenger\_id, passenger\_name, total\_amount from table2

where ranking =1

1. ***Identify the travel details of the flights having return journey (more than 1 flight).***

Expected Output: Passenger\_id, passenger\_name, ticket\_number and flight count.

**Answer:**

SELECT T.passenger\_id,T.passenger\_name, TF.ticket\_no as ticket\_number, COUNT(TF.flight\_id) AS flight\_count

FROM  TICKETS T  Inner JOIN  TICKET\_FLIGHTS TF

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

GROUP BY T.passenger\_id,T.passenger\_name , TF.ticket\_no

HAVING COUNT(TF.flight\_id) > 1 order by 4 desc ;

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

Expected Output: just one number is required.

**Answer: 251;**

SELECT count(\*)

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:**

with table1 as

(SELECT distinct(flight\_no), departure\_airport,

arrival\_airport, aircraft\_code,

scheduled\_arrival -scheduled\_departure as durations,

rank()over(order  by scheduled\_arrival -scheduled\_departure desc) as ranking

FROM  Flights)

select distinct(flight\_no), departure\_airport,

arrival\_airport, aircraft\_code, durations

from table1 where ranking =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 table1 as (SELECT

    flight\_id,

    flight\_no AS flight\_number,

    scheduled\_departure,

    to\_char(scheduled\_departure,'HH24:MI:SS') as departure\_time,

    scheduled\_arrival,

    TO\_CHAR(scheduled\_departure, 'HH24:MI') || ' - ' || TO\_CHAR(scheduled\_arrival, 'HH24:MI') AS timings

FROM

    FLIGHTS)

select flight\_id, flight\_number, scheduled\_departure, scheduled\_arrival, timings from table1

where  departure\_time between '06:00:00' and '11:00:00'

1. ***Identify the earliest morning flight available from every airport.Early morning: 2:00 am to 6:00 am.***

Expected output: flight\_id, flight\_number, scheduled\_departure, scheduled\_arrival, departure airport and timings.

**Answer:**

with table1 as (SELECT

    flight\_id,

    flight\_no AS flight\_number,

    scheduled\_departure,

    to\_char(scheduled\_departure,'HH24:MI:SS') as departure\_time,

    scheduled\_arrival,departure\_airport,

    TO\_CHAR(scheduled\_departure, 'HH24:MI') || ' - ' || TO\_CHAR(scheduled\_arrival, 'HH24:MI') AS timings

FROM FLIGHTS order by 4),

table2 as(

select \*,

dense\_rank()over(partition by departure\_airport order by departure\_time ) as ranking

from table1

where departure\_time between '02:00:00' and '06:00:00')

select flight\_id, flight\_number, scheduled\_departure,departure\_time, scheduled\_arrival,

departure\_airport, timings from table2

where ranking = 1

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

Expected Output:  Airport\_code.

**Answer:**

select airport\_code

 from Airports

 where timezone like '%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 seat\_count

  from seats

  group by 2,1

  order by 1

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'**;**

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

Expected Output : Airport\_name

**Answer:**

select airport\_name from (

select departure\_airport,A.airport\_name, count(flight\_no)

from flights F join airports A

On F.departure\_airport = A.airport\_code

group by departure\_airport,airport\_name

order by 3 desc) as table1

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 (

select departure\_airport,A.airport\_name, count(flight\_no)

from flights F join airports A

On F.departure\_airport = A.airport\_code

group by departure\_airport,airport\_name

order by 3 asc) as table1

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 flight\_id, Flight\_no, F.aircraft\_code, 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\_id) as Flight\_count

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) as Flight\_count

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\_id) as Flight\_count

from flights

group by 1

having 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 F.Flight\_no,F.aircraft\_code,A.range,F.departure\_airport

from Aircrafts A

Join Flights F

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

where range between 3000 and 6000 and departure\_airport = 'DME'

order by 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 Flight\_id, status, model as aircraft\_model

From Flights F

Join aircrafts A

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

where status in ('Cancelled', 'Delayed') and

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 in ('Cancelled', 'Delayed') and

model like '%Boeing%';

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

Expected Output : Airport\_name.

**Answer:**

with table1 as (select Airport\_name,count(status) as total\_count

from flights F

join airports A on F.arrival\_airport = A.airport\_code

where status ='Cancelled'

group by Airport\_name

order by 2 desc),

table2 as (

select \*, dense\_rank()over(order by total\_count desc) as ranking

 from table1)

select Airport\_name from table2

where ranking = 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%'

order by 1

1. ***Identify date-wise last flight id flying from every airport?***

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

**Answer:**

with table1 as(

select flight\_id, flight\_no, scheduled\_departure, departure\_airport,

dense\_rank() over(partition by departure\_airport order by scheduled\_departure desc)as ranking

from flights)

select flight\_id, flight\_no, scheduled\_departure, departure\_airport

from table1 where ranking = 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 ticket\_flights tf inner join tickets t on

tf.ticket\_no = t.ticket\_no inner join flights f on

f.flight\_id = tf.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:**

with table1 as(

select Flight\_id, flight\_no as flight\_number, scheduled\_departure, departure\_airport, status,

dense\_rank() over(partition by departure\_airport order by scheduled\_departure asc)as ranking

from flights

where status = 'Cancelled')

select Flight\_id, flight\_number, scheduled\_departure, departure\_airport

from table1 where ranking = 1

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 status = 'Cancelled'

and A.model like '%Airbus%'

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

*Expected Output : Flight\_id, range*

**Answer:**

select flight\_id, range from(

select f.flight\_id, range,

rank()over(order by range desc) as ranking

from flights f inner join aircrafts a on

f.aircraft\_code = a.aircraft\_code

)as table1 where ranking =1