**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-mmm-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

b.ticket\_no,

b.boarding\_no,

b.seat\_no as seat\_number,

t.passenger\_id,

t.passenger\_name

from boarding\_passes as b

join tickets as t

on b.ticket\_no = t.ticket\_no

1. **Write a query to find the seat number which is least allocated among all the seats?**

**Answer:**

select

seat\_no

 from boarding\_passes

 group by seat\_no

 having count (seat\_no) =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 month\_Vise\_rank as

 ( select

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

passenger\_id,

passenger\_name,

sum(total\_amount) as total\_amount

from tickets t

left join bookings b

on b.book\_ref = t.book\_ref

group by 1,2,3),

table2 as (select\*,

dense\_rank ()over (partition by month\_name order by total\_amount desc) as rnk

from month\_Vise\_rank)

select

month\_name,

passenger\_id,

passenger\_name,

total\_amount

from table2

where rnk = 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 month\_Vise\_rank as

 ( select

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

passenger\_id,

passenger\_name,

sum(total\_amount) as total\_amount

from tickets t

left join bookings b

on b.book\_ref = t.book\_ref

group by 1,2,3),

table2 as (select\*,

dense\_rank ()over (partition by month\_name order by total\_amount asc) as rnk

from month\_Vise\_rank)

select

month\_name,

passenger\_id,

passenger\_name,

total\_amount

from table2

where rnk = 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 as ticket\_number,

 count(flight\_id) as flight\_count

 from tickets t

 inner join boarding\_passes b

 on t.ticket\_no = b.ticket\_no

 group by 1,2,3

 having count(flight\_id)>1

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

Expected Output: just one number is required.

**Answer:**

SELECT COUNT(\*) AS ticket\_without\_boarding\_pass

FROM tickets t

LEFT JOIN boarding\_passes b ON t.ticket\_no = b.ticket\_no

WHERE b.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 duration\_of\_flight as

(select

distinct flight\_no, departure\_airport, arrival\_airport, aircraft\_code,

cast(scheduled\_arrival as TIME)-cast(scheduled\_departure as TIME) as duration

from flights),

duration\_rank as (select \*,

dense\_rank()over (order by duration desc) as rnk

from duration\_of\_flight)

select flight\_no as flight\_number,

departure\_airport, arrival\_airport,aircraft\_code,duration

from duration\_rank

where rnk = 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 as flight\_number,scheduled\_departure,scheduled\_arrival,

CASE

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '02:00:00' AND '06:00:00' THEN 'EARLY\_MORNING\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '06:00:00' AND '11:00:00' THEN 'MORNING\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '11:00:00' AND '16:00:00' THEN 'NOON\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '16:00:00' AND '20:00:00' THEN 'EVENING\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '20:00:00' AND '23:00:00' THEN 'NIGHT\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '23:00:00' AND '02:00:00' THEN 'LATE\_NIGHT\_FLIGHT'

END as timings

from flights

where to\_char(scheduled\_departure,'HH24:MI:SS AM') between '06:00:00 AM' and '11:00:00 AM'

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:**

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

CASE

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '02:00:00' AND '06:00:00' THEN 'EARLY\_MORNING\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '06:00:00' AND '11:00:00' THEN 'MORNING\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '11:00:00' AND '16:00:00' THEN 'NOON\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '16:00:00' AND '20:00:00' THEN 'EVENING\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '20:00:00' AND '23:00:00' THEN 'NIGHT\_FLIGHT'

WHEN to\_char(scheduled\_departure,'HH24:MI:SS AM') BETWEEN '23:00:00' AND '02:00:00' THEN 'LATE\_NIGHT\_FLIGHT'

END as timings

from flights

where to\_char(scheduled\_departure,'HH24:MI:SS AM') between '02:00:00 AM' and '06:00:00 AM'

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 seat\_count

from seats

group by 1,2

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\_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:**

with cte as (select

airport\_name,

count (departure\_airport)

from airports a

left join flights f

on a.airport\_code = f.departure\_airport

group by 1

order by 2 desc)

select airport\_name

from cte

limit 1

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

Expected Output : Airport\_name

**Answer:**

with cte as (select

airport\_name,

count (departure\_airport)

from airports a

left join flights f

on a.airport\_code = f.departure\_airport

group by 1

order by 2 asc)

select airport\_name

from cte

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 as flight\_number,

    f.aircraft\_code,

    a.range as ranges

FROM

    flights f

JOIN

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

WHERE a.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 (\*)AS FLIGHT\_COUNT

FROM

    flights

WHERE

    (departure\_airport = 'URS' AND arrival\_airport = 'KUF')

    OR (departure\_airport = 'KUF' AND arrival\_airport = 'URS');

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 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(\*) AS flight\_count

FROM

    flights

WHERE

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

GROUP BY

    departure\_airport

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 f

join aircrafts a

on f.aircraft\_code = a.aircraft\_code

where departure\_airport = 'DME' AND RANGE BETWEEN 3000 AND 6000

GROUP BY 1,2,3,4

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 as aircraft\_model

FROM

    flights f

JOIN

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

WHERE 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

SELECT

    f.flight\_id,

    a.model as aircraft\_model

FROM

    flights f

JOIN

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

WHERE 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:**

with cte as (select

airport\_name,

count (departure\_airport)

from airports a

left join flights f

on a.airport\_code = f.departure\_airport

where status = 'Cancelled'

group by 1

order by 2 desc)

select airport\_name

from cte

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 aircrafts a

 join flights f

 on a.aircraft\_code = f.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 rankedfirst as

 (select

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

 DENSE\_RANK() over (partition by departure\_airport order by scheduled\_departure DESC) as flight\_rank

 from flights)

 select

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

 from rankedfirst

 where flight\_rank = 1

 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

t.passenger\_name,

f.status,

sum (tf.amount) as total\_amount

from tickets t

join ticket\_flights tf

on tf.ticket\_no = t.ticket\_no

join flights f

on f.flight\_id = tf.flight\_id

where f.status = 'Cancelled'

group by t.passenger\_name,f.status

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

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

**Answer:**

 with rankedfirst as

 (select

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

 DENSE\_RANK() over (partition by departure\_airport, DATE(scheduled\_departure) order by scheduled\_departure) as flight\_rank

 from flights

 where status = 'Cancelled')

 select

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

 from rankedfirst

 where flight\_rank = 1

order by scheduled\_departure desc

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 highest\_flight as

(select

flight\_id,

range,

dense\_rank ()over (order by range desc) highest\_rank

from flights f

join aircrafts a

on f.aircraft\_code = a.aircraft\_code

group by 1,2)

select

flight\_id,

range

from highest\_flight

where highest\_rank = 1