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

 bp.ticket\_no,

 bp.boarding\_no,

 bp.seat\_no as seat\_number,

 t.passenger\_id,

 t.passenger\_name

from tickets as t

join boarding\_passes as bp

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(ticket\_no) as count

 from boarding\_passes

 group by 1),

least\_allocation as (

    select \*,

rank() over (order by count asc) as least\_allocated\_seats

from cte)

select

seat\_no

from least\_allocation

where least\_allocated\_seats = 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 cte as (select

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

t.passenger\_id,

t.passenger\_name,

b.total\_amount

from bookings as b

left join tickets as t

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

Highest\_paying\_passenger as (

    select \*,

    rank() over(partition by Month\_name order by total\_amount desc) as rnk

    from cte

)

select

Month\_name,

passenger\_id,

passenger\_name,

total\_amount

from Highest\_paying\_passenger

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 cte as (select

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

t.passenger\_id,

t.passenger\_name,

b.total\_amount

from bookings as b

left join tickets as t

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

Highest\_paying\_passenger as (

    select \*,

    rank() over(partition by Month\_name order by total\_amount asc) as rnk

    from cte

)

select

Month\_name,

passenger\_id,

passenger\_name,

total\_amount

from Highest\_paying\_passenger

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

    t.passenger\_id,

    t.passenger\_name,

    t.ticket\_no,

    count(tf.flight\_id) as flight\_count

from tickets as t

join ticket\_flights as 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(t.ticket\_no) as tickets\_without\_boarding\_passes

from tickets t

left join boarding\_passes bp

on t.ticket\_no = bp.ticket\_no

where 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:**

select

flight\_no,

departure\_airport,

arrival\_airport,

aircraft\_code,

(actual\_arrival - actual\_departure) duration

from flights

where actual\_arrival is not null

and actual\_departure is not null

order by 5 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,

to\_char(scheduled\_departure, 'HH24:MI:SS') timings

from flights

where

    extract(hour from scheduled\_departure) >= 6

    and extract(hour from scheduled\_departure) < 11

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 cte as(

    select

    flight\_id,

    flight\_no,

    scheduled\_departure,

    scheduled\_arrival,

    departure\_airport,

    to\_char(scheduled\_departure, 'HH24:MI:SS') timings,

    rank() over(partition by departure\_airport order by scheduled\_departure asc ) rnk

    from flights)

select

    flight\_id,

    flight\_no,

    scheduled\_departure,

    scheduled\_arrival,

    departure\_airport,

    to\_char(scheduled\_departure, 'HH24:MI:SS') timings

from cte

where

    extract(hour from scheduled\_departure) >= 6

    and extract(hour from scheduled\_departure) < 11

    and rnk = 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) 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)

from seats

where fare\_conditions = 'Business'

having count(seat\_no) >= 1

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

Expected Output: Airport\_name

**Answer:**

 select

 airport\_name

 from flights as f

 join airports as a

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

 group by 1

 order by count(flight\_no) 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 flights as f

 join airports as a

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

 group by 1

 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

count(flight\_no) 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,

a.aircraft\_code,

a.range

from flights as f

join aircrafts as 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\_no) 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(Flight\_no) 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\_no) as Flight\_count

from flights

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

group by 1

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,

a.aircraft\_code,

a.range,

f.departure\_airport

from flights as f

join aircrafts as a

on f.aircraft\_code = a.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

f.flight\_id,

a.model as aircraft\_model

from flights as f

join aircrafts as a

on f.aircraft\_code = a.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

f.flight\_id,

a.model as aircraft\_model

from flights as f

join aircrafts as a

on f.aircraft\_code = a.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

 from flights as f

 join airports as a

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

 where status in ('Cancelled')

 group by 1

 order by count(flight\_no) 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 as f

join aircrafts as a

on f.aircraft\_code = a.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 cte as (

select

flight\_id,

flight\_no,

scheduled\_departure,

departure\_airport,

date (scheduled\_departure) as date

from flights ),

Final as (

    select

    \*,

    row\_number() over(partition by departure\_airport order by date desc) as rnk

    from cte

)

select

flight\_id,

flight\_no,

scheduled\_departure,

departure\_airport

from final

where rnk = 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(b.total\_amount) as total\_refund

from tickets as t

join bookings as b

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

join flights as f

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

where f.status = 'Cancelled'

group by t.passenger\_name

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

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

**Answer:**

with cte as (

select

flight\_id,

flight\_no,

scheduled\_departure,

departure\_airport,

status,

date (scheduled\_departure) as date

from flights

where status = 'Cancelled'),

Final as (

    select

    \*,

    row\_number() over(partition by departure\_airport order by date asc) as rnk

    from cte

)

select

flight\_id,

flight\_no,

scheduled\_departure,

departure\_airport

from final

where rnk = 1 and status = 'Cancelled'

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

*Expected Output : Flight\_id*

**Answer:**

select

f.flight\_id

from flights as f

join aircrafts as a

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

where f.status = 'Cancelled' and a.model like ('%Airbus%')

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

*Expected Output : Flight\_no, range*

**Answer:**

with max\_range as (

select

max(range) as maxrange

from aircrafts )

select

f.flight\_no,

a.range

from flights as f

join aircrafts as a

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

where range = (select maxrange from max\_range)

group by 1,2