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') 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**

**inner join TICKETS as t**

**ON t.ticket\_no=b.ticket\_no**

**;**

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

**Answer:** select seat\_no,

count(seat\_no)

from boarding\_passes

group by 1 having count(seat\_no)=1

order by 2 asc

;

***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 t1 as (

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

b.total\_amount,

t.passenger\_id,

t.passenger\_name

FROM TICKETS t

join BOOKINGS b

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

),

t2 as (

Select \*,

rank() over(partition by Month\_name order by total\_amount DESC) as ranked

FROM t1

)

Select month\_name,

passenger\_id,

passenger\_name,

total\_amount

from t2

where ranked = 1

order by 4 DESC

;

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 t1 as (**

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

**b.total\_amount,**

**t.passenger\_id,**

**t.passenger\_name**

**FROM TICKETS t**

**join BOOKINGS b**

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

**),**

**t2 as (**

**Select \*,**

**rank() over(partition by Month\_name order by total\_amount ASC) as ranked**

**FROM t1**

**)**

**Select month\_name,**

**passenger\_id,**

**passenger\_name,**

**total\_amount**

**from t2**

**where ranked = 1**

**order by 4 ASC**

**;**

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**

**b.passenger\_id,**

**b.passenger\_name,**

**b.ticket\_no,**

**COUNT(f.flight\_id) AS flight\_count**

**FROM**

**FLIGHTS f**

**JOIN**

**TICKET\_FLIGHTS tf**

**ON tf.flight\_id = f.flight\_id**

**JOIN**

**TICKETS b**

**ON b.ticket\_no = tf.ticket\_no**

**GROUP BY 1,2,3**

**HAVING**

**COUNT(f.flight\_id) > 1**

**;**

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

Expected Output: just one number is required.

**Answer:** **with t1 as (**

**SELECT ticket\_no as boardingpasses**

**From BOARDING\_PASSES)**

**SELECT count(t.ticket\_no)**

**from TICKETS t**

**left join t1**

**on t.ticket\_no=t1.boardingpasses**

**where boardingpasses 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,**

**max(actual\_arrival-actual\_departure) as durations**

**From FLIGHTS**

**group by 1,2,3,4**

**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: with t1 as (Select**

**to\_char(scheduled\_departure,'hh24:mi AM') as timings,flight\_id**

**FROM FLIGHTS)**

**Select f.flight\_id,**

**f.flight\_no,**

**f.scheduled\_departure,**

**f.scheduled\_arrival,**

**t.timings**

**FROM FLIGHTS f**

**join t1 t**

**on t.flight\_id=f.flight\_id**

**where timings between '06:00 AM' and '11:00 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:** **with t1 as (Select flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**departure\_airport,**

**to\_char(scheduled\_departure,'hh24:mi') as timings**

**FROM FLIGHTS),**

**t2 as (**

**Select \*,**

**rank() over(partition by departure\_airport order by timings ASC) as ranked**

**from t1 )**

**Select flight\_id,**

**flight\_no,**

**scheduled\_departure,**

**scheduled\_arrival,**

**departure\_airport,**

**timings**

**from t2**

**where ranked = 1**

**order by timings**

**;**

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(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**

**AIRPORTS a**

**Join FLIGHTS f**

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

**GROUP BY 1**

**ORDER BY**

**COUNT(flight\_id) 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 a**

**Join FLIGHTS f**

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

**GROUP BY 1**

**ORDER BY**

**COUNT(flight\_id) ASC**

**LIMIT 1**

**;**

1. **How many flights from ‘DME’ airport don’t have actual departure?**

Expected Output : Flight Count

**Answer:** Select count(flight\_id) 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,a.aircraft\_code,a.range as ranges

FROM FLIGHTS f

Join AIRCRAFTS a

on a.aircraft\_code=f.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(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 count\_of\_flights

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,f.aircraft\_code,a.range,f.departure\_airport

From AIRCRAFTS a

Join FLIGHTS f

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

where a.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 AIRCRAFTS a

join FLIGHTS f

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

Where a.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 AIRCRAFTS a

join FLIGHTS f

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

Where a.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 AIRPORTS a

Join FLIGHTS f

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

where status ='Cancelled'

group by 1

order by count(status) 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 AIRCRAFTS a

Join FLIGHTS f

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 T1 as(**

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

**Rank() Over(partition by departure\_airport order by scheduled\_departure DESC) as ranked**

**From FLIGHTS)**

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

**From T1**

**Where Ranked = 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:** **with cte as (Select status,t.passenger\_name,Sum(tf.amount) as total\_refund**

**From FLIGHTS f**

**join TICKET\_FLIGHTs tf**

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

**join TICKETS t**

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

**Where status = 'Cancelled'**

**group by 1,2)**

**Select passenger\_name,total\_refund**

**from cte**

**;**

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

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

**Answer:** **With T1 as(**

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

**Rank() Over(partition by departure\_airport order by scheduled\_departure ASC) as ranked**

**From FLIGHTS**

**Where Status = 'Cancelled')**

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

**From T1**

**Where Ranked = 1**

**;**

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

*Expected Output : Flight\_id*

**Answer:** **Select flight\_id**

**FROM FLIGHTS f**

**Join AIRCRAFTS a**

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

**Where model like '%Airbus%'**

**And Status = 'Cancelled'**

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

*Expected Output : Flight\_no, range*

**Answer:** With cte as (Select f.flight\_no,a.range,f.aircraft\_code,a.aircraft\_code,

Row\_number() over(partition by flight\_no order by Range DESC) as rnk

From FLIGHTS f

join AIRCRAFTS a

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

Select flight\_no,range

From cte

where rnk = 1

order by range DESC

;