**1.Represent the “book\_date” column in “yyyy-mmm-dd” format using Bookings table**

Select

Book\_ref,

to\_char(book\_date,'yyyy mon dd')as book\_date,

total\_amount

From bookings

2. **Get the following columns in the exact same sequence.**

Select

 t.ticket\_no,

 b.boarding\_no,

 s.seat\_no,

 t.passenger\_id,

 t.passenger\_name

 From Tickets as t

 Inner Join boarding\_passes as b

 On b.ticket\_no=t.ticket\_no

 Join seats as s

 On b.seat\_no=s.seat\_no

 Order by 1 ASC

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

Select

 seat\_no,

 Min(boarding\_no)

 From boarding\_passes

 Group by seat\_no

 Order by 1 DESC

1. **In the database, identify the month wise highest paying passenger name and passenger id.**

 WITH ranked\_passengers 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 DESC) AS rank

FROM

bookings b

RIGHT JOIN

tickets t ON b.book\_ref = t.book\_ref

)

SELECT

    month\_name,

    passenger\_id,

    passenger\_name,

    total\_amount

FROM

    ranked\_passengers

WHERE

    rank = 1

ORDER BY

    month\_name ASC

1. ***In the database, identify the month wise least paying passenger name and passenger id?***

WITH ranked\_passengers 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 rank

FROM

bookings b

RIGHT JOIN

tickets t ON b.book\_ref = t.book\_ref

)

SELECT

    month\_name,

    passenger\_id,

    passenger\_name,

    total\_amount

FROM

    ranked\_passengers

WHERE

    rank = 1

ORDER BY

    month\_name DESC

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

with T1 as (Select

passenger\_id,

passenger\_name,

ticket\_no

from tickets

),

t2 as (select

count(flight\_id)as flight\_count

From flights

)

Select \*

From T1,T2

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

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)?**

Select

flight\_no,

departure\_airport,

arrival\_airport,

aircraft\_code,

actual\_arrival - actual\_departure 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)?**

 Select

flight\_id,

flight\_no as flight\_number,

scheduled\_departure,

scheduled\_arrival,

Case

when Extract(hour from scheduled\_arrival)=0 Then '12 AM'

when Extract(hour from scheduled\_arrival)<12 Then Concat(Extract(hour from scheduled\_arrival),'AM')

WHen Extract(hour from scheduled\_arrival)=12 Then'12 PM'

Else Concat(Extract(hour from scheduled\_arrival)-12,'PM')

End as timings

From

flights

Where

Extract(hour from scheduled\_arrival)>=6 AND EXTRACT(hour from scheduled\_arrival)<12

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

 Select

flight\_id,

flight\_no as flight\_number,

scheduled\_departure,

scheduled\_arrival,

Case

when Extract(hour from scheduled\_arrival)=0 Then '7 AM'

when Extract(hour from scheduled\_arrival)<7 Then Concat(Extract(hour from scheduled\_arrival),'AM')

WHen Extract(hour from scheduled\_arrival)=7 Then' 7 AM'

Else Concat(Extract(hour from scheduled\_arrival)-7,'AM')

End as timings

From

flights

Where

Extract(hour from scheduled\_arrival)>=2 AND EXTRACT(hour from scheduled\_arrival)<7

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

Select

Airport\_code

From Airports

Where timezone  like 'Europe/Moscow%'

order by 1

1. **Write a query to get the count of seats in various fare condition for every aircraft code?**

 Select

 Aircraft\_code,

 fare\_conditions,

 count(seat\_no)as seat\_count

 From seats

 Group by Aircraft\_code,fare\_conditions

13. **How many aircrafts codes have at least one Business class seats?**

Select

count(Distinct (aircraft\_code))as aircraft\_codes

From seats

Where fare\_conditions='Business'

Order by 1 Asc

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

SELECT

departure\_airport AS airport\_name

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**

SELECT

departure\_airport AS airport\_name

FROM

flights

GROUP BY

departure\_airport

ORDER BY

COUNT(\*) ASC

LIMIT 1

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

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**

Select

Flight\_No as Flight\_number,

aircraft\_code,

case

when flight\_id Between 3000 and 6000 Then '3000-6000'

Else 'other'End as ranges

From flights

 where flight\_id Between 3000 and 6000

1. **Write a query to get the count of flights flying between URS and KUF?**

 Select

 Count(\*)as Flight\_count

 From flights

 Where departure\_airport between 'URS'and 'KUF'

1. **Write a query to get the count of flights flying from either from NOZ or KRR?**

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**

Select

departure\_airport,

Count(\*)as count\_of\_flights\_flying\_from\_these\_airports

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**

SELECT

Flight\_no,

aircraft\_code,

CASE

WHEN Flight\_id BETWEEN 3000 AND 6000 THEN 'range'

ELSE 'not in range'

END AS ranges,

departure\_airport

FROM flights

WHERE departure\_airport = 'DME'

1. **Find the list of flight ids which are using aircrafts from “Airbus” company and got cancelled or delayed**

SELECT f.flight\_id, a.model as aircraft\_model

FROM flights f

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

WHERE a.model ILIKE '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**

SELECT f.flight\_id, a.model as aircraft\_model

FROM flights f

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

WHERE a.model ILIKE 'Boeing%'

AND (f.status = 'cancelled' OR f.status = 'delayed');

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

 Select

 Arrival\_airport as Airport\_name

 From

 Flights

 where status = 'cancelled'

 order by Airport\_name

1. ***Identify flight ids which are using “Airbus aircrafts”***

 SELECT

 f.flight\_id,

 a.model as aircraft\_model

 From flights f

 Inner join aircrafts a

 On f.aircraft\_code = a.aircraft\_code

 WHERE model LIKE '%Airbus%'

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

SELECT flight\_id, flight\_number, scheduled\_departure, departure\_airport

FROM (

    SELECT

        flight\_id,

        flight\_no as flight\_number,

        scheduled\_departure,

        departure\_airport,

        ROW\_NUMBER() OVER (PARTITION BY departure\_airport ORDER BY scheduled\_departure DESC) AS row\_num

    FROM flights

) AS ranked\_flights

WHERE row\_num = 1;

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

 SELECT

    flight\_id,

    flight\_number,

    scheduled\_departure,

    departure\_airport

FROM (

    SELECT

        flight\_id,

        flight\_no AS flight\_number,

        scheduled\_departure,

        departure\_airport,

        ROW\_NUMBER() OVER (PARTITION BY departure\_airport ORDER BY scheduled\_departure ASC) AS row\_num,

        ROW\_NUMBER() OVER (PARTITION BY departure\_airport ORDER BY CASE WHEN status = 'cancelled' THEN 0 ELSE 1 END ASC) AS cancelled\_flights

    FROM

        flights

) AS ranked\_flights

WHERE

    row\_num = 1 AND

    cancelled\_flights = 1;

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

 SELECT

    f.flight\_id

FROM

    flights f

INNER JOIN

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

WHERE

    a.model LIKE '%Airbus%'

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

 SELECT

 Flight\_id,

 MAX(Flight\_id) as range

FROM Flights

Group by Flight\_id

Order by  range DESC

Limit 1