**Please answer the following questions using DB database.**

**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 t.ticket\_no, boarding\_no, seat\_no as seat\_number, passenger\_id, passenger\_name

 from boarding\_passes b

 join tickets t

 on t.ticket\_no=b.ticket\_no

 order by 1

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

**Answer:**

with t1 as

(select seat\_no, rank() over (order by count (1) asc) as rnk

from boarding\_passes

group by 1)

select seat\_no from t1

where rnk=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:**

select to\_char (book\_date, 'mmm-yy')  as month,

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

 from

tickets t

join bookings b

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

group by 1,2,3

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:**

select to\_char (book\_date, 'mmm-yy')  as month,

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

 from

tickets t

join bookings b

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

group by 1,2,3

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

Passenger\_id, passenger\_name, t.ticket\_no ,count (Flight\_no) as count

from tickets t

join ticket\_flights tf

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

join flights f

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

group by 1,2,3

having count(Flight\_no)>1

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

Expected Output: just one number is required.

**Answer:** select  count( distinct t.ticket\_no)

from tickets t

left join boarding\_passes bp

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

where bp.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 t1 as (

select distinct Flight\_no, departure\_airport, arrival\_airport, aircraft\_code,

(scheduled\_arrival-scheduled\_departure) as duration,

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

from flights)

select Flight\_no, departure\_airport, arrival\_airport, aircraft\_code,duration

from t1 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, scheduled\_departure, scheduled\_arrival,

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

 from flights

 where to\_char (scheduled\_departure, 'hh24:mi:ss') between '06:00:00' and '11:00:00'

 order by 5

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 distinct Flight\_id, Flight\_no, scheduled\_departure, scheduled\_arrival,departure\_airport,

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

from (

select  \*,

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

rank () over (partition by departure\_airport order by to\_char (scheduled\_departure, 'hh24:mi:ss') asc) as rnk

 from flights) a

 where rnk=1

 order by departure\_airport

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

Expected Output: Airport\_code.

**Answer:** select distinct 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

order by 1

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 1=1

and 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 flights f

join airports a

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

where 1=1

group by 1

order by count (departure\_airport ) 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 f

join airports a

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

where 1=1

group by 1

order by count (departure\_airport ) asc

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\_No, a.aircraft\_code, a.range

from flights f

join aircrafts a

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

where range between 3000 and 6000

order by 1

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

Expected Output : Flight\_count

**Answer:** select count(1)

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(1)

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(1) as flight\_count

from flights

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

group by 1

order 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 Flight\_No, a.aircraft\_code, a.range,departure\_airport

from flights f

join aircrafts a

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

where range between 3000 and 6000

and departure\_airport='DME'

order by 1

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, a.model

from flights f

join aircrafts a

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

where 1=1

and model like '%Airbus%'

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

order by 1

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, a.model

from flights f

join aircrafts a

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

where 1=1

and model like '%Boeing%'

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

order by 1

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

Expected Output : Airport\_name

select Airport\_name

from

(

select Airport\_name, rank () over ( order by count (f.\*) desc ) as rnk

from flights f

join airports a

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

where 1=1

and status ='Cancelled'

group by 1) a

where rnk =1

order by 1

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

*Expected Output : Flight\_id,aircraft\_model*

**Answer:** select Flight\_id, a.model

from flights f

join aircrafts a

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

where 1=1

and 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,date(scheduled\_departure) order by  scheduled\_departure desc) as rnk

from flights )

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

from t1

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 Passenger\_name, sum (total\_amount)

from tickets t

join bookings b

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

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 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 t1 as (

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

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

from flights

where status ='Cancelled' )

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

from t1

where rnk=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 1=1

and model like '%Airbus%'

and f.status ='Cancelled'

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

*Expected Output : Flight\_no, range*

**Answer:** select Flight\_no, range from (

select distinct Flight\_no, range, rank () over (order by range desc) as rnk

from flights f

join aircrafts a

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

where rnk=1