**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-mon-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, t.passenger\_id, t.passenger\_name

       from boarding\_passes b

       join tickets 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:** with CTE as (select distinct seat\_no,

       count(\*) as total\_seat\_no

       from boarding\_passes

       group by 1

       order by 2 asc

       limit 1)

select seat\_no

from CTE

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, 'mon-yy') as Month\_name, t.passenger\_id, t.passenger\_name, b.total\_amount,

            row\_number() over(partition by to\_char(book\_date, 'mon-yy') order by b.total\_amount desc) as rn

from bookings b

join tickets t

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

)

select Month\_name, passenger\_id,passenger\_name, total\_amount

from CTE

where rn = 1

order by Month\_name asc

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, 'mon-yy') as Month\_name, t.passenger\_id, t.passenger\_name, b.total\_amount,

            row\_number() over(partition by to\_char(book\_date, 'mon-yy') order by total\_amount asc) as rn

from bookings b

join tickets t

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

)

select Month\_name, passenger\_id,passenger\_name,total\_amount

from CTE

where rn = 1

order by Month\_name 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 t.Passenger\_id, t.passenger\_name, t.ticket\_no as ticket\_number,

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

       from tickets t

       join ticket\_flights tf

       on t.ticket\_no = tf.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(a.ticket\_no) as ticket\_without\_boarding\_pass

       from boarding\_passes a

       left join boarding\_passes b

       on a.ticket\_no = b.ticket\_no

       where b.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:** select flight\_no as flight\_number, departure\_airport, arrival\_airport, aircraft\_code,

       (scheduled\_arrival - scheduled\_departure) as duration

       from flights

       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 as flight\_number, scheduled\_departure, scheduled\_arrival,

       cast (scheduled\_departure as time) as timings

       from flights

       where extract(hour from scheduled\_departure) >= 6

       and extract(hour from scheduled\_departure) <11

       order by scheduled\_departure

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 CTE1 as (select flight\_id, flight\_no as flight\_number, scheduled\_departure, scheduled\_arrival,

       departure\_airport , cast(scheduled\_departure as time) as timings

       from flights

       where extract(hour from scheduled\_departure) >= 6

       and extract(hour from scheduled\_departure) <11

),

CTE2 as (select flight\_id,flight\_number, scheduled\_departure, scheduled\_arrival,departure\_airport,

         timings, row\_number() over (partition by departure\_airport order by timings) as rn

         from CTE1

        )

select flight\_id,flight\_number, scheduled\_departure, scheduled\_arrival,departure\_airport,timings

from CTE2

where rn = 1

order by timings

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

Expected Output: Airport\_code.

**Answer:** select distinct airport\_code

from airports

where timezone in ('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 1,2

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\_codes

       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:** select a.airport\_name

       from airports a

       join flights f

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

       group by 1

       order by count(scheduled\_departure)desc

       limit 1

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

Expected Output : Airport\_name

**Answer:** select a.airport\_name

       from airports a

       join flights f

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

       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 as ranges

       from flights f

       join aircrafts a

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

       where range between 3000 and 6000

       group by 1,2,3

       order by 1,2,3

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

       order by 2 desc

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 f

       join aircrafts a

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

       where departure\_airport in ('DME')

       and (range between 3000 and 6000)

       group by 1,2,4

       order by 3 asc

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 a.model like '%Airbus%' and f.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 f

join aircrafts a

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

where a.model like '%Boeing%' and f.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 a.airport\_code = f.departure\_airport

where status = 'Cancelled'

group by 1

order by count(flight\_id) 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 f

join aircrafts a

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

       rank() over (partition by departure\_airport order by date(scheduled\_departure)desc) as rn

       from flights

       order by 2

)

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

from CTE

where rn = 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(tf.amount) as total\_amount

      from tickets t

      join ticket\_flights tf

      on t.ticket\_no = tf.ticket\_no

      join flights f

      on tf.flight\_id = f.flight\_id

      where status = 'Cancelled'

      group by 1

      order by 2 desc

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 as flight\_number, scheduled\_departure, departure\_airport,

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

            from flights

            where status = 'Cancelled'

)

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

from CTE

where rn = 1

order by scheduled\_departure

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:** select distinct f.flight\_no, a.range

       from flights f

       join aircrafts a

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

       order by 2 desc