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 bp join tickets t

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 least\_allocation\_seat as ( select

seat\_no,

rank() over (order by count(seat\_no) asc ) as least\_rank from boarding\_passes

group by 1

)

select seat\_no

from least\_allocation\_seat order by least\_rank =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 month\_wise\_passenger as ( select

to\_char(scheduled\_departure, 'mmm-yy') as Month\_name, passenger\_id,

passenger\_name, sum(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 group by 1,2,3

),

ranked\_data as ( select Month\_name, passenger\_id, passenger\_name, total\_amount,

rank () over (partition by Month\_name order by total\_amount desc) as rank from month\_wise\_passenger

)

select

Month\_name, passenger\_id, passenger\_name, total\_amount from ranked\_data where rank =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 least\_paying\_passenger as ( select

To\_char (scheduled\_departure, 'mmm-yy') as Month\_name, passenger\_id,

passenger\_name, sum(amount) as total\_amount from flights f

join ticket\_flights tf

on f.flight\_id = tf.flight\_id join tickets t

on tf.ticket\_no = t.ticket\_no group by 1,2,3

),

rank\_data as ( select

\*,

rank() over ( partition by Month\_name order by total\_amount asc) as rank from least\_paying\_passenger

)

select Month\_name, passenger\_id,

passenger\_name, total\_amount from rank\_data where rank = 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:

with travel\_details as ( select Passenger\_id, passenger\_name,

tf.ticket\_no as ticket\_number, count (f.flight\_id) as flight\_count from flights f

join ticket\_flights tf

on f.flight\_id= tf.flight\_id join tickets t

on tf.ticket\_no = t.ticket\_no group by 1,2,3

)

select

\*

from travel\_details where flight\_count > 1

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

Expected Output: just one number is required.

Answer:

select

count(t.ticket\_no) as ticket\_without\_boarding\_pass

from tickets t

left join boarding\_passes bp on t.ticket\_no = bp.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 flight\_details as (select

Flight\_no as Flight\_number, departure\_airport, arrival\_airport, aircraft\_code,

(scheduled\_arrival - scheduled\_departure ) as durations from flights),

rank\_data as ( select

\*,

rank() over (order by durations desc) as rank from flight\_details

)

select Flight\_number, departure\_airport, arrival\_airport, aircraft\_code, durations

from rank\_data where rank =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:

select

flight\_id,

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

cast(scheduled\_departure as time) as timings from flights f

where extract(hour from scheduled\_departure) >=2 and extract(hour from scheduled\_departure) <6 order by 3

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 f.Aircraft\_code, fare\_conditions,

count(seat\_no) as seat\_count from flights f

join seats s

on f.aircraft\_code = s.aircraft\_code 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(f.aircraft\_code) as count\_aircraft\_Code from flights f

join seats s

on f.aircraft\_code = s.aircraft\_code where fare\_Conditions = 'Business' having count(f.aircraft\_code) > 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 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 Airport\_name from flights f join airports a

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 f

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 as flight\_number, f.aircraft\_code,

range as ranges from flights f join aircrafts 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 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\_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

Flight\_no as flight\_number, f.aircraft\_code,

range, departure\_airport from flights f

join aircrafts a

on f.aircraft\_code = a.aircraft\_code where departure\_airport = 'DME' and

range between 3000 and 6000

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:

with flight\_details as (select Flight\_id,

model as aircraft\_model, status

from flights f join aircrafts a

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

Flight\_id, aircraft\_model from flight\_details

where aircraft\_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:

with flight\_details as( select

Flight\_id,

model as aircraft\_model, status

from flights f join aircrafts a

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

Flight\_id, aircraft\_model from flight\_details

where aircraft\_model like '%Boeing%' and status in ('Cancelled', 'Delayed')

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

Expected Output : Airport\_name

Answer:

with cte as (select Airport\_name,

count(flight\_id) as flight\_count from airports a

join flights f

on a.airport\_code = f.departure\_airport where status = 'Cancelled'

group by 1) select Airport\_name from cte

order by flight\_count desc limit 1

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

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

Answer:

select Flight\_id,

model as aircraft\_model from flights f

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?***

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

Answer:

with last\_flight as( select

distinct Flight\_id,

flight\_no as flight\_number, f.scheduled\_departure, departure\_airport,

rank() over (partition by departure\_airport order by scheduled\_departure desc) as rank from flights f)

select Flight\_id, flight\_number,

scheduled\_departure, departure\_airport from last\_flight where rank =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 passenger\_refund\_details as ( select

t.ticket\_no, t.passenger\_name, amount as total\_refund, f.flight\_id,

status

from tickets t

join ticket\_flights tf on t.ticket\_no = tf.ticket\_no join flights f on f.flight\_id=tf.flight\_id

where status='Cancelled') select

passenger\_name, total\_refund

from passenger\_refund\_details

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

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

Answer:

with first\_cancelled\_flight as( SELECT

flight\_id,

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

status,

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

where status ='Scheduled') select flight\_id, flight\_number, scheduled\_departure, departure\_airport

from first\_cancelled\_flight where rank=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 f.aircraft\_code = a.aircraft\_code WHERE model LIKE '%Airbus%' AND status = 'Cancelled'

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

*Expected Output : Flight\_no, range*

Answer:

select

distinct flight\_no, range

from flights f join aircrafts a

on f.aircraft\_code =a.aircraft\_code order by 2 desc