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

**Answer:-**

select book\_ref,to\_char(book\_date,'YYYY-Mon-DD') as book\_date,total\_amount

 from bookings

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

**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

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

**Answer:-**

select seat\_no,count(\*) as allocation\_count

from seats

group by 1

order by 2 asc

limit 1

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

**Answer:-**

select t.passenger\_id,t.passenger\_name,t.ticket\_no,count(f.flight\_id) as flight\_count

from tickets t

join ticket\_flights f

on t.ticket\_no=f.ticket\_no

group by 1,2,3

having count(flight\_id)>1

order by 4 desc

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

**Answer:-**

select count(\*) as ticket\_without\_boarding\_pass

from boarding\_passes

 where flight\_id is null

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

**Answer:-**

with monthly\_passenger\_spending as (

 select to\_char(b.book\_date,'Mon-YY') as month\_name,t.passenger\_id,t.passenger\_name,sum(b.total\_amount) as total\_amount

 from bookings b

 join tickets t

 on b.book\_ref=t.book\_ref

 group by 1,2,3

 ),

ranked\_passenger as (

    select month\_name, passenger\_id, passenger\_name, total\_amount, rank()over(partition by month\_name order by total\_amount desc) as ranks

    from monthly\_passenger\_spending

)

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

from ranked\_passenger

where ranks=1

order by

month\_name asc, total\_amount desc

**8. Identify details of the longest flight (using flight table)?**

**Answer:-**

select \*,(scheduled\_arrival-scheduled\_departure) as flight\_duration

from flights

where (scheduled\_arrival-scheduled\_departure)=(

    select max(scheduled\_arrival-scheduled\_departure)

    from flights)

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

**Answer:-**

with monthly\_passenger\_spending as (

 select to\_char(b.book\_date,'Mon-YY') as month\_name,t.passenger\_id,t.passenger\_name,sum(b.total\_amount) as total\_amount

 from bookings b

 join tickets t

 on b.book\_ref=t.book\_ref

 group by 1,2,3

 ),

ranked\_passenger as (

    select month\_name,passenger\_id,passenger\_name,total\_amount,rank()over(partition by month\_name order by total\_amount asc) as ranks

    from monthly\_passenger\_spending

)

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

from ranked\_passenger

where ranks=1

order by

month\_name asc

**9. Identify details of all the morning flights(morning means between 6AM to 11AM,using flights table)?**

**Answer:-**

select flight\_id,flight\_no,scheduled\_departure,scheduled\_arrival,

case when scheduled\_departure::time between time '06:00:00' and time '11:00:00' then 'Morning'

end as timings

from flights

where scheduled\_departure::time between time '06:00:00' and time '11:00:00'

order by scheduled\_departure

**11. Find list of airport codes in Europe/Moscow timezone**

**Answer:-**

select airport\_code

from airports

where timezone='Europe/Moscow'

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

**Answer:-**

with early\_morning\_flight as (

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

case when scheduled\_departure::time between time '02:00:00' and time '06:00:00' then 'Early Morning'

end as timings

from flights

where scheduled\_departure::time between time '02:00:00' and time '06:00:00'

),

earliest\_flight as (

    select departure\_airport,min(scheduled\_departure) as earliest\_departure

    from early\_morning\_flight

    group by departure\_airport

)

select f.flight\_id,f.flight\_no,f.scheduled\_departure,f.scheduled\_arrival,f.departure\_airport,f.timings

from early\_morning\_flight f

join earliest\_flight e

on f.departure\_airport=e.departure\_airport and f.scheduled\_departure=e.earliest\_departure

order by f.departure\_airport,f.scheduled\_departure

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

**Answer:-**

select aircraft\_code,fare\_conditions,count(seat\_no) as seat\_count

from seats

group by 1,2

order by 1,2

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

**Answer:-**

select count(distinct aircraft\_code) as count\_of\_aircraft\_code

from seats

where fare\_conditions='Business'

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

**Answer:-**

select airport\_name

from airports a

join flights f

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

group by 1

order by count(f.flight\_id) desc

limit 1

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

**Answer:-**

select airport\_name

from airports a

join flights f

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

group by 1

order by count(f.flight\_id) asc

limit 1

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

**Answer:-**

select count(\*) as flight\_count

from flights

where departure\_airport in ('NOZ','KRR')

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

**Answer:-**

select count(\*) as flight\_count

from flights

where departure\_airport='DME' and actual\_departure is null

**17. Identify flight ids having range between 3000 to 6000.**

**Answer:-**

select f.flight\_no,a.aircraft\_code,a.range

from flights f

join aircrafts a

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

where range between 3000 and 6000

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

**Answer:-**

select count(\*) as flight\_count

from flights

where (departure\_airport='URS' and arrival\_airport='KUF') or

(departure\_airport='KUF' and arrival\_airport='URS')

**20. Write a query to get the count of flights flying from KZN, DME, NBC, NJC, GDX, SGC, VKO, ROV.**

**Answer:-**

select departure\_airport,count(\*) as flight\_count

from flights

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

group by departure\_airport

order by flight\_count desc

**21. Write a query to extract flight details having range between 3000 and 6000 and flying from DME.**

**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='DME' and range between 3000 and 6000

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

**Answer:-**

select f.flight\_id,a.model

from flights f

join aircrafts a

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

where a.model like '%Airbus%' and (

    (f.actual\_departure is null and f.actual\_arrival is null) or

    f.status='Delayed')

**23. Find the list of flight ids which are using aircraft from “Boeing” company and got cancelled or delayed.**

**Answer:-**

select f.flight\_id,a.model

from flights f

join aircrafts a

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

where a.model like '%Boeing%' and (f.status='Cancelled' or f.status='Delayed')

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

**Answer:-**

select a.airport\_name

from airports a

join flights f

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

where f.status='Cancelled'

group by a.airport\_name

order by count(f.flight\_id) desc

limit 1

**25. Identify flight ids which are using “Airbus aircraft”.**

**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%'

**26. Identify date-wise last flight\_id flying from every airport?**

**Answer:-**

with datewise\_last\_flights as (

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

    row\_number() over(partition by departure\_airport,DATE(scheduled\_departure) order by scheduled\_departure desc) as rn

    from flights

)

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

from datewise\_last\_flights

where rn=1

order by departure\_airport,scheduled\_departure

**27. Identify list of customers who will get the refund due to cancellation of the flights and how much amount they will get?**

**Answer:-**

select t.passenger\_name,sum(b.total\_amount) as total\_refund

from bookings b

join tickets t

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

join ticket\_flights tf

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

join flights f

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

where f.status='Cancelled'

group by 1

order by 2 desc

**29. Identify list of airbus flight ids which got cancelled.**

**Answer:-**

select flight\_id

from flights f

join aircrafts a

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

where a.model like '%Airbus%' and f.actual\_departure is null and f.actual\_arrival is null

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

**Answer:-**

select flight\_id, range

from flights f

join aircrafts a

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

where range= (select max(range) from aircrafts)

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

**Answer:-**

with cancelled\_flights as (

    select flight\_id,flight\_no,scheduled\_departure,departure\_airport,DATE(scheduled\_departure) as flight\_date

    from flights

    where actual\_departure is null and

    actual\_arrival is null

),

ranked\_flights as (

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

    row\_number() over(partition by departure\_airport,flight\_date order by scheduled\_departure asc) as rnk

    from cancelled\_flights

)

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

from ranked\_flights

where rnk=1

order by departure\_airport,flight\_date