**Airline DB into (SQL)**

**Question 1 : Represent the “book\_date” column in “yyyy-mmm-dd” format using Bookings table**  
**Answer :** select   
book\_ref,  
TO\_CHAR(book\_date, 'yyyy-mmm-dd')  as book\_date,  
total\_amount  
from bookings;

**Question 2 : Get the following columns in the exact same sequence.**  
**Answer :** select   
t.ticket\_no,   
boarding\_no,   
seat\_no,   
passenger\_id,   
passenger\_name  
from tickets t   
join  boarding\_passes b   
on t.ticket\_no = b.ticket\_no;

**Question 3 : Write a query to find the seat number which is least allocated among all the seats?  
Answer :** select   
seat\_no  
from seats  
group by seat\_no  
order by count (seat\_no) asc  
limit 1;

**Question 4 :** In the database, identify the month wise highest paying passenger name and passenger id.  
**Answer :** with MonthlyPayments as (  
select   
TO\_CHAR(book\_date,'mmm-yy') as Month\_name,   
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),

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

Select  
month\_name,  
passenger\_id,  
passenger\_name,  
total\_amount  
from MaxPayments  
where rank = 1  
order by 1 asc;

**Question 5 : In the database, identify the month wise least paying passenger name and passenger id?  
Answer :** with MonthlyPayments as (  
select   
TO\_CHAR(book\_date,'mmm-yy') as Month\_name,   
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),

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

select   
month\_name,  
passenger\_id,  
passenger\_name,  
total\_amount  
from MaxPayments  
where rank = 1  
order by 1 asc;

**Question 6 : Identify the travel details of the flights having return journey (more than 1 flight).  
Answer :** select  
passenger\_id,  
passenger\_name,  
t.ticket\_no,  
count(flight\_id) as flight\_count  
from tickets t   
join boarding\_passes b   
on t.ticket\_no = b.ticket\_no  
group by 1,2,3  
having count(flight\_id) > 1;

**Question 7 : How many tickets are there without boarding passes?  
Answer :** select   
count (ticket\_no)  
from boarding\_passes  
where boarding\_no IS NULL;

**Question 8 : Identify details of the longest flight (using flights table)?  
Answer :** select  
flight\_no,  
departure\_airport,  
arrival\_airport,  
aircraft\_code,  
scheduled\_arrival-scheduled\_departure as duration  
from flights  
Order by 5 desc  
limit 1  
  
**Question 9 : Identify details of all the morning flights (morning means between 6AM to 11 AM, using flights table)?  
Answer :** select  
flight\_id,   
flight\_no,   
scheduled\_departure,   
scheduled\_arrival,  
TO\_CHAR (scheduled\_departure,'hh:mm') as timings  
from flights  
where TO\_CHAR (scheduled\_departure,'hh:mm') between '06:00' and '11:00'

**Question 10 : Identify details of all the morning flights (morning means between 6AM to 11 AM, using flights table)?  
Answer :** with EarlyMorningFlights as (  
select  
flight\_id,   
flight\_no,   
scheduled\_departure,   
scheduled\_arrival,  
departure\_airport,  
TO\_CHAR (scheduled\_departure,'hh:mm') as timings  
from flights  
where TO\_CHAR (scheduled\_departure,'hh:mm') between '02:00' and '06:00'),

EarliestFlights as (  
select  
flight\_id,   
flight\_no,   
scheduled\_departure,   
scheduled\_arrival,  
departure\_airport,  
TO\_CHAR (scheduled\_departure,'hh:mm') as timings,  
rank() over (partition by departure\_airport order by timings asc) as rn  
from EarlyMorningFlights)

select  
flight\_id,  
flight\_no,  
scheduled\_departure,  
scheduled\_arrival,  
departure\_airport,  
timings  
from EarliestFlights  
where rn = 1  
order by departure\_airport, timings;

**Question 11 : Questions: Find list of airport codes in Europe/Moscow timezone  
Answer :** select   
airport\_code  
from airports   
where timezone = 'Europe/Moscow'

**Question 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

**Question 13 : How many aircrafts codes have at least one Business class seats?  
Answer :** select   
count(distinct aircraft\_code)  
from seats   
where fare\_conditions = 'Business'   
Having count (seat\_no)>0

**Question 14 : Find out the name of the airport having maximum number of departure flight   
Answer :** with flightcount as (select   
departure\_airport,  
count (scheduled\_departure) as flight\_count  
from flights   
group by 1)  
select   
airport\_name   
from flightcount f   
join airports a   
on a.airport\_code = f.departure\_airport  
order by flight\_count desc  
limit 1

**Question 15 : Find out the name of the airport having least number of scheduled departure flights  
Answer :** with flightcount as (  
select  
departure\_airport,  
count (scheduled\_departure) as flight\_count  
from flights   
group by 1)

select   
airport\_name,  
from flightcount f   
join airports a   
on a.airport\_code = f.departure\_airport  
order by flight\_count asc   
limit 1

**Question 16 : How many flights from ‘DME’ airport don’t have actual departure?  
Answer :** with flightcount as (  
select   
departure\_airport,  
count (scheduled\_departure) as flight\_count  
from flights   
group by 1)

select   
count (flight\_id) as flight\_count  
from flights   
where departure\_airport = 'DME' and actual\_arrival is Null

**Question 17 : Identify flight ids having range between 3000 to 6000  
Answer :** select   
f.flight\_no,   
f.aircraft\_code,   
a.range  
from flights f   
join aircrafts a   
on f.aircraft\_code = a.aircraft\_code  
where range between 3000 and 6000

**Question 18 : Write a query to get the count of flights flying between URS and KUF?  
Answer :** select   
count (flight\_id) as flight\_count  
from flights   
where (departure\_airport = 'URS' and arrival\_airport = 'KUF')   
OR (departure\_airport = 'KUF' and arrival\_airport = 'URS');

**Question 19 : Write a query to get the count of flights flying from either from NOZ or KRR?  
Answer :** select   
count (flight\_id) as flight\_count  
from flights   
where (departure\_airport = 'NOZ')   
or (departure\_airport = 'KRR');

**Question 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 (flight\_id) as flight\_count  
from flights   
where departure\_airport in('KZN','DME','NBC','NJC','GDX','SGC','VKO','ROV')  
group by 1

**Question 21 : Write a query to extract flight details having range between 3000 and 6000 and flying from DME  
Answer :** select   
f.Flight\_no,  
f.aircraft\_code,  
a.range,  
departure\_airport  
from flights f   
join aircrafts a   
on f.aircraft\_code = f.aircraft\_code  
where departure\_airport = 'DME'  
and range between 3000 and 6000

**Question 22 : Find the list of flight ids which are using aircrafts from “Airbus” company and got cancelled or delayed  
Answer :** select   
flight\_id,   
model as aircraft\_model  
from aircrafts a   
join flights f   
on a.aircraft\_code = f.aircraft\_code   
where model like '%Airbus%'  
and status = 'Cancelled' or status = 'Delayed'

**Question 23 : Find the list of flight ids which are using aircrafts from “Boeing” company and got cancelled or delayed  
Answer :** select   
flight\_id,   
model as aircraft\_model  
from aircrafts a   
join flights f   
on a.aircraft\_code = f.aircraft\_code   
where model like '%Boeing%'  
and status = 'Cancelled' or status = 'Delayed'

**Question 24 : Which airport(name) has most cancelled flights (arriving)?  
Answer :** with cancelledflights as (  
select   
airport\_name,  
count (flight\_id) as flight\_count   
from airports a   
join flights f   
on a.airport\_code = f.arrival\_airport   
where status = 'Cancelled'  
group by 1)

select   
airport\_name  
from cancelledflights  
order by flight\_count desc  
limit 1;

**Question 25 : Identify flight ids which are using “Airbus aircrafts”  
Answer :** select   
flight\_id,   
model as aircraft\_model  
from aircrafts a   
join flights f   
on a.aircraft\_code = f.aircraft\_code   
where model like '%Airbus%';

**Question 26 : Identify date-wise last flight id flying from every airport?  
Answer :** with cancelledflights as(  
select   
flight\_id,  
flight\_no,  
scheduled\_departure,  
departure\_airport      
from flights  
where status = 'Cancelled'  
group by 4,1),

daterank as (  
select   
flight\_id,  
flight\_no,  
scheduled\_departure,  
departure\_airport,  
rank () over (partition by departure\_airport order by flight\_id asc) rnk   
from cancelledflights)

select   
flight\_id,  
flight\_no,  
scheduled\_departure,  
departure\_airport  
from daterank  
where rnk = 1

**Question 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 (f.amount) as total\_refund  
from tickets t   
join ticket\_flights f on t.ticket\_no = f.ticket\_no  
join flights s on f.flight\_id = s.flight\_id  
where s.status = 'Cancelled'  
group by 1

**Question 28 : Identify date wise first cancelled flight id flying for every airport?   
Answer :** with cancelledflights as(  
select   
flight\_id,  
flight\_no,  
scheduled\_departure,  
departure\_airport      
from flights  
where status = 'Cancelled'  
group by 4,1),  
daterank as (  
select   
flight\_id,  
flight\_no,  
scheduled\_departure,  
departure\_airport,  
rank () over (partition by departure\_airport order by scheduled\_departure desc) rnk   
from cancelledflights)

select   
flight\_id,  
flight\_no,  
scheduled\_departure,  
departure\_airport  
from daterank  
where rnk = 1

**Question 29 : Identify list of Airbus flight ids which got cancelled.  
Answer :** select   
flight\_id,   
model as aircraft\_model  
from aircrafts a   
join flights f   
on a.aircraft\_code = f.aircraft\_code   
where model like '%Airbus%'  
and status = 'Cancelled'

**Question 30 :  Identify list of flight ids having highest range.  
Answer :** with FlightRanges as (  
select    
flight\_id,  
range    
from flights f  
join aircrafts a    
on f.aircraft\_code = a.aircraft\_code),

 MaxRange as (  
select  
max(range) AS max\_range  
from FlightRanges)

select    
f.flight\_id,  
f.range  
from  FlightRanges f  
join  MaxRange m   
on f.range = m.max\_range;