**Capstone Project - Airline db**

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 your\_table\_name;

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

Answer: SELECT bp.ticket\_no, bp.boarding\_no, bp.seat\_number, t.passenger\_id, t.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: SELECT seat\_no

FROM boarding\_passes

GROUP BY seat\_no

ORDER BY COUNT(\*) ASC

LIMIT 1;

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

Answer: SELECT

TO\_CHAR(b.book\_date, 'Mon-YY') AS month\_name,

t.passenger\_id,

t.passenger\_name,

MAX(b.total\_amount) AS total\_amount

FROM

BOOKINGS b

INNER JOIN

TICKETS t ON b.book\_ref = t.book\_ref

GROUP BY

TO\_CHAR(b.book\_date, 'Mon-YY'), t.passenger\_id, t.passenger\_name

ORDER BY

month\_name;

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

Answer: . with RankedPassengers as (

select TO\_CHAR(b.book\_date, 'Mon-YY') AS month\_name,t.passenger\_id,t.passenger\_name,b.total\_amount,

RANK() OVER (PARTITION BY TO\_CHAR(b.book\_date, 'Mon-YY') ORDER BY b.total\_amount ASC) AS amount\_rank

FROM

BOOKINGS b

INNER JOIN

TICKETS t ON b.book\_ref = t.book\_ref

)

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

FROM

RankedPassengers

WHERE

amount\_rank = 1

ORDER BY

month\_name;

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

FLIGHTS f

INNER JOIN

BOARDING\_PASSES b ON f.flight\_id = b.flight\_id

INNER JOIN

TICKETS t ON b.ticket\_no = t.ticket\_no

GROUP BY

t.ticket\_no, t.passenger\_id, t.passenger\_name

HAVING

COUNT(f.flight\_id) > 1;

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

Answer**:** SELECT t.ticket\_no

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)?**

**Answer**: SELECT f.flight\_no,

f.departure\_airport,

f.arrival\_airport,

f.aircraft\_code,

ABS(EXTRACT(EPOCH FROM f.scheduled\_arrival) - EXTRACT(EPOCH FROM f.scheduled\_departure)) AS flight\_duration\_in\_seconds

FROM FLIGHTS f

ORDER BY flight\_duration\_in\_seconds DESC

LIMIT 1;

1. **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 AT TIME ZONE 'UTC', 'HH24:MI') AS timings

FROM

FLIGHTS

WHERE

EXTRACT(HOUR FROM scheduled\_departure AT TIME ZONE 'UTC') BETWEEN 6 AND 11;

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

Answer: SELECT

flight\_id,

flight\_no,

scheduled\_departure,

scheduled\_arrival,

departure\_airport,

TO\_CHAR(scheduled\_departure AT TIME ZONE 'UTC', 'HH24:MI') AS timings

FROM

FLIGHTS

WHERE

EXTRACT(HOUR FROM scheduled\_departure AT TIME ZONE 'UTC') BETWEEN 2 AND 6;

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

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?**

Answer**:** SELECT

s.aircraft\_code,

s.fare\_conditions,

COUNT(\*) AS seat\_count

FROM SEATS s

GROUP BY s.aircraft\_code, s.fare\_conditions;

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

Answer: SELECT COUNT(DISTINCT aircraft\_code) AS business\_class\_aircraft\_count

FROM SEATS

WHERE fare\_conditions = 'Business';

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

Answer: .SELECT departure\_airport AS airport\_name

from FLIGHTS

group by departure\_airport

ORDER BY

COUNT(\*) DESC

LIMIT 1;

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

Answer: select departure\_airport AS airport\_name

from FLIGHTS

group by

departure\_airport

order by

count(\*) asc

limit 1;

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

Answer: SELECT

count(flight\_no) as FLIGHTCOUNT

from

FLIGHTS

WHERE

departure\_airport != 'DME';

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

Answer:SELECT f.flight\_no AS Flight\_Number,f.aircraft\_code,a.range AS ranges

FROM FLIGHTS f

INNER JOIN

AIRCRAFTS a ON f.aircraft\_code = a.aircraft\_code

WHERE

a.range BETWEEN 3000 AND 6000;

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

Answer: SELECT COUNT(\*) AS flight\_count

FROM FLIGHTS f

WHERE f.departure\_airport = 'URS'

AND f.arrival\_airport = 'KUF';

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

Answer: SELECT COUNT(\*) AS flight\_count

FROM FLIGHTS f

WHERE f.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**

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;

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

Answer: SELECT

f.flight\_no AS Flight\_no,

f.aircraft\_code,

a.range,

f.departure\_airport

FROM

FLIGHTS f

INNER JOIN

AIRCRAFTS a ON f.aircraft\_code = a.aircraft\_code

WHERE

a.range BETWEEN 3000 AND 6000

AND f.departure\_airport = 'DME';

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

Answer: select f.flight\_id,a.model from FLIGHTS f

inner join AIRCRAFTS a on

f.aircraft\_code=a.aircraft\_code

where a.model like '%Airbus %'

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

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

Answer: select f.flight\_id,a.model from FLIGHTS f

inner join AIRCRAFTS a on

f.aircraft\_code=a.aircraft\_code

where a.model like '%Boeing%'

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

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

Answer:SELECT a.airport\_name, COUNT(\*) AS cancelled\_flight\_count

FROM FLIGHTS f

INNER JOIN AIRPORTS a ON f.arrival\_airport = a.airport\_code

WHERE f.status = 'Cancelled'

GROUP BY a.airport\_name

ORDER BY cancelled\_flight\_count DESC

LIMIT 1;

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

Answer: SELECT

f.flight\_id,

a.model AS aircraft\_model

FROM

FLIGHTS f

INNER 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?***

Answer: WITH LastFlights AS (

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

ROW\_NUMBER() OVER (PARTITION BY departure\_airport ORDER BY scheduled\_departure DESC) AS row\_num

FROM

FLIGHTS

)

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

FROM

LastFlights

WHERE

row\_num = 1;

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

Answer:

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

Answer: WITH FirstCancelledFlights AS (

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

ROW\_NUMBER() OVER (PARTITION BY departure\_airport ORDER BY scheduled\_departure) AS row\_num

FROM

FLIGHTS

WHERE

status = 'Cancelled'

)

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

FROM

FirstCancelledFlights

WHERE

row\_num = 1;

1. ***Identify list of Airbus flight ids which got cancelled.***

Answer: SELECT f.flight\_id

FROM FLIGHTS f

WHERE f.model IN 'Airbus%'

AND f.status = 'Cancelled';

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

Answer: select f.flight\_id,max(a.range) from FLIGHTS f

inner join AIRCRAFTS a on

f.aircraft\_code=a.aircraft\_code

group by 1

limit 1