**DATE TIME STUDY on Flights.csv**

1. Find the month with most number of flights

SELECT MONTHNAME(Date\_of\_Journey),COUNT(\*) from flights

GROUP BY MONTHNAME(Date\_of\_Journey)

ORDER BY COUNT(\*) DESC LIMIT 1;

1. Which week day has most costly flights

SELECT DAYNAME(Date\_of\_Journey),AVG(price) from flights

GROUP BY DAYNAME(Date\_of\_Journey)

ORDER BY AVG(price) DESC

LIMIT 1;

1. Find number of indigo flights every month

SELECT MONTHNAME(Date\_of\_Journey),COUNT(\*) FROM flights

WHERE Airline= 'Indigo'

GROUP BY MONTHNAME(Date\_of\_Journey)

ORDER BY MONTHNAME(Date\_of\_Journey) ASC;

1. Find list of all flights that depart between 10AM and 2PM from Banglore to

New Delhi

SELECT \* FROM flights

WHERE Source = 'Banglore' AND Destination = 'New Delhi'

AND Dep\_time >'10:00:00' AND Dep\_time < '14:00:00';

1. Find the number of flights departing on weekends from Bangalore

SELECT COUNT(\*) FROM flights

WHERE Source = 'Banglore' AND DAYNAME(Date\_of\_Journey) IN ('saturday','sunday');

1. Calculate the arrival time for all flights by adding the duration to the departure

time.

ALTER TABLE flights

ADD COLUMN depature DATETIME;

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SELECT STR\_TO\_DATE(CONCAT(Date\_of\_Journey, ' ', Dep\_time ),'%Y-%m-%d %H:%i') FROM flights;

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UPDATE flights

SET depature = STR\_TO\_DATE(CONCAT(Date\_of\_Journey, ' ', Dep\_time ),'%Y-%m-%d %H:%i');

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ALTER TABLE flights

ADD COLUMN duration\_min INTEGER,

ADD COLUMN arival\_time DATETIME;

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SELECT Duration,

CASE

WHEN duration LIKE '%h %m' THEN

SUBSTRING\_INDEX(Duration,'h', 1)\*60 + SUBSTRING\_INDEX(SUBSTRING\_INDEX(Duration,'',-1),'m',1)

WHEN duration LIKE '%h' THEN

SUBSTRING\_INDEX(duration,'h',1)\*60

WHEN duration LIKE '%m' THEN

SUBSTRING\_INDEX(Duration,'m',1)

END AS 'mins'

FROM flights;

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UPDATE flights

SET duration\_min =

CASE

WHEN duration LIKE '%h %m' THEN

SUBSTRING\_INDEX(Duration,'h', 1)\*60 + SUBSTRING\_INDEX(SUBSTRING\_INDEX(Duration,'',-1),'m',1)

WHEN duration LIKE '%h' THEN

SUBSTRING\_INDEX(duration,'h',1)\*60

ELSE SUBSTRING\_INDEX(Duration,'m',1)

END;

SELECT DATE\_ADD(depature,INTERVAL duration\_min MINUTE) from flights;

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UPDATE flights

SET arival\_time = DATE\_ADD(depature,INTERVAL duration\_min MINUTE);

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SELECT TIME(arival\_time) from flights;

1. Calculate the arrival date for all the flights

SELECT DATE(arival\_time)

FROM flights;

1. Find the number of flights which travel on multiple dates.

SELECT COUNT(\*)

FROM flights

WHERE DATE(depature) != DATE(arival\_time);

1. Calculate the average duration of flights between all city pairs. The answer

should In xh ym format

SELECT source,Destination,TIME\_FORMAT(SEC\_TO\_TIME(AVG(duration\_min)\*60),'%kh %im')

FROM flights

GROUP BY source,Destination;

1. Find all flights which departed before midnight but arrived at their destination after midnight having only 0 stops.

SELECT \*

FROM flights

WHERE DATE(arival\_time) > DATE(depature) AND Total\_Stops = 'non-stop';

1. Find quarter wise number of flights for each airline

SELECT Airline,QUARTER(Date\_of\_Journey), COUNT(\*)

FROM flights

GROUP BY Airline,QUARTER(Date\_of\_Journey)

ORDER BY COUNT(\*) DESC;

1. Find the longest flight distance(between cities in terms of time) in India

SELECT Source,Destination,TIME\_FORMAT(SEC\_TO\_TIME(AVG(duration\_min)\*60),'%kh %mm')

FROM flights

GROUP BY Source,Destination

ORDER BY AVG(duration\_min) DESC

LIMIT 5;

1. Average time duration for flights that have 1 stop vs more than 1 stops

WITH temp\_table AS (SELECT \*,

CASE

WHEN Total\_Stops = 'non-stop' THEN 'non-stop'

ELSE 'with stop'

END AS 'temp'

FROM flights)

SELECT temp,

TIME\_FORMAT(SEC\_TO\_TIME(AVG(duration\_min)\*60),'%kh %im') AS 'avg\_duration',

AVG(price) AS 'avg\_price'

FROM temp\_table

GROUP BY temp;

1. Find all Air India flights in a given date range(1st MAR – 10th MAR) originating from Delhi

SELECT \*

FROM flights

WHERE Source = 'Delhi' AND

DATE(depature) BETWEEN '2019-03-01' AND '2019-03-10';

1. Find the longest flight of each airline

SELECT Airline,MAX(duration\_min) FROM flights

GROUP BY Airline

ORDER BY MAX(duration\_min) DESC ;

1. Find all the pair of cities having average time duration > 3 hours

SELECT Source,Destination,

AVG(duration\_min) AS 'avg\_duration' FROM flights

GROUP BY source,destination

HAVING AVG(duration\_min) > 180;

1. Make a weekday vs time grid showing frequency of flights from Banglore and Delhi

SELECT DAYNAME(depature),

SUM(CASE WHEN HOUR(depature) BETWEEN 0 AND 5 THEN 1 ELSE 0 END) AS '12AM - 6AM',

SUM(CASE WHEN HOUR(depature) BETWEEN 6 AND 11 THEN 1 ELSE 0 END) AS '06AM - 12PM',

SUM(CASE WHEN HOUR(depature) BETWEEN 12 AND 17 THEN 1 ELSE 0 END) AS '12PM - 18MM',

SUM(CASE WHEN HOUR(depature) BETWEEN 18 AND 23 THEN 1 ELSE 0 END) AS '18PM - 24PM'

FROM flights

WHERE source = 'Banglore' AND destination = 'Delhi'

GROUP BY DAYNAME(depature);

1. Make a weekday vs time grid showing avg flight price from Banglore and Delhi

SELECT DAYNAME(depature),

AVG(CASE WHEN HOUR(depature) BETWEEN 0 AND 5 THEN price END) AS '12AM - 6AM',

AVG(CASE WHEN HOUR(depature) BETWEEN 6 AND 11 THEN price END) AS '06AM - 12PM',

AVG(CASE WHEN HOUR(depature) BETWEEN 12 AND 17 THEN price END) AS '12PM - 18MM',

AVG(CASE WHEN HOUR(depature) BETWEEN 18 AND 23 THEN price END) AS '18PM - 24PM'

FROM flights

WHERE source = 'Banglore' AND destination = 'Delhi' OR destination = 'New Delhi'

GROUP BY DAYNAME(depature);