SELECT * FROM campusx.flights;

-- 1. Find the month with most number of flights SELECT MONTHNAME(date_of_journey),COUNT(*) FROM flightsGROUP BY MONTHNAME(date_of_journey) ORDER BY COUNT(*) DESC LIMIT 1;

-- 2. 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;

-- 3. Find number of indigo flights every monthSELECT MONTHNAME(date_of_journey),COUNT(*) FROM flights WHERE airline = 'Indigo'GROUP BY MONTHNAME(date_of_journey)ORDER BY MONTH(date_of_journey) ASC;

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

SELECT * FROM flightsWHERE source = 'Banglore' ANDdestination = 'Delhi' ANDdep_time > '10:00:00' AND dep_time < '14:00:00';

-- 5. Find the number of flights departing on weekends from Bangalore SELECT COUNT(*) FROM flightsWHERE source = 'banglore' ANDDAYNAME(date_of_journey) IN ('saturday','sunday');

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

SELECT * FROM flightsALTER TABLE flights ADD COLUMN departure DATETIME;

UPDATE flightsSET departure = STR_TO_DATE(CONCAT(date_of_journey,' ',dep_time),'%Y-%m-%d %H:%i');

ALTER TABLE flightsADD COLUMN Duration_mins INTEGER,

ADD COLUMN Arrival DATETIME;

```
SELECT Duration,

REPLACE(SUBSTRING_INDEX(duration,' ',1),'h','')*60 +

CASEWHEN SUBSTRING_INDEX(duration,' ',-1) =
SUBSTRING_INDEX(duration,' ',1) THEN 0ELSE
REPLACE(SUBSTRING_INDEX(duration,' ',-1),'m','')

END AS 'mins' FROM flights;


UPDATE flightsSET duration_mins =
REPLACE(SUBSTRING_INDEX(duration,' ',1),'h','')*60 + CASE

WHEN SUBSTRING_INDEX(duration,' ',-1) =
SUBSTRING_INDEX(duration,' ',1) THEN 0

ELSE REPLACE(SUBSTRING_INDEX(duration,' ',-1),'m','') END;

SELECT * FROM flights;


UPDATE flightsSET arrival = DATE_ADD(departure, INTERVAL
duration_mins MINUTE);

SELECT * FROM flights;

SELECT TIME(arrival) FROM flights;

SELECT * FROM flights;

-- 7. Calculate the arrival date for all the flights

SELECT DATE(arrival) FROM flights;

SELECT * FROM flights;

-- 8. Find the number of flights which travel on multiple dates.
SELECT COUNT(*) FROM flightsWHERE DATE(departure) !=
DATE(arrival);
```

-- 9. 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_mins)*60),'%kh %im') AS 'avg_duration' FROM flights

GROUP BY source,destination;

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

SELECT * FROM flightsWHERE total_stops = 'non-stop' AND DATE(departure) < DATE(arrival);

-- 11. Find quarter wise number of flights for each airline

SELECT airline,QUARTER(departure),COUNT(*) FROM flightsGROUP BY airline,QUARTER(departure);

-- 12 Find the longest flight distance(between cities in terms of time) in India

-- 13. 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_mins)*60),'%kh %im') AS 'avg_duration',

AVG(price) AS 'avg_price'FROM temp_tableGROUP BY temp;

-- 14. Find all Air India flights in a given date range originating from Delhi Date range is 1st Mar 2019 to 10th Mar 2019SELECT * FROM

flightsWHERE source = 'Delhi' ANDDATE(departure) BETWEEN '2019-03-01' AND '2019-03-10';

-- 15. Find the longest flight of each airlineSELECT airline, TIME_FORMAT(SEC_TO_TIME(MAX(duration_mins)*60),'%kh %im') AS 'max_duration' FROM flightsGROUP BY airlineORDER BY MAX(duration_mins) DESC;

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

SELECT source,destination, TIME_FORMAT(SEC_TO_TIME(AVG(duration_mins)*60),'%kh %im') AS 'avg_duration' FROM flightsGROUP BY source,destination

HAVING AVG(duration_mins) > 180;

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

SELECT DAYNAME(departure),SUM(CASE WHEN HOUR(departure) BETWEEN 0 AND 5 THEN 1 ELSE 0 END) AS '12AM - 6AM',SUM(CASE WHEN HOUR(departure) BETWEEN 6 AND 11 THEN 1 ELSE 0 END) AS '6AM - 12PM',SUM(CASE WHEN HOUR(departure) BETWEEN 12 AND 17 THEN 1 ELSE 0 END) AS '12PM - 6PM',SUM(CASE WHEN HOUR(departure) BETWEEN 18 AND 23 THEN 1 ELSE 0 END) AS '6PM - 12PM'FROM flightsWHERE source = 'Banglore' AND destination = 'Delhi'GROUP BY DAYNAME(departure)ORDER BY DAYOFWEEK(departure) ASC;

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

SELECT DAYNAME(departure),AVG(CASE WHEN HOUR(departure) BETWEEN 0 AND 5 THEN price ELSE NULL END) AS '12AM - 6AM', AVG(CASE WHEN HOUR(departure) BETWEEN 6 AND 11 THEN price ELSE NULL END) AS '6AM - 12PM',AVG(CASE WHEN HOUR(departure) BETWEEN 12 AND 17 THEN price ELSE NULL END) AS '12PM - 6PM', AVG(CASE WHEN HOUR(departure) BETWEEN 18 AND 23 THEN price ELSE NULL END) AS '6PM - 12PM'FROM flightsWHERE source = 'Banglore' AND destination = 'Delhi'GROUP BY DAYNAME(departure) ORDER BY DAYOFWEEK(departure) ASC;