```
SELECT * FROM campusx.flights;

--	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;

--	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;

-- 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 MONTH(date_of_journey) ASC;

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

SELECT * FROM flights
WHERE source = 'Banglore' AND
destination = 'Delhi' AND
dep_time > '10:00:00' AND dep_time < '14:00:00';

-- 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');

-- Calculate the arrival time for all flights by adding the duration to the departure time.
ALTER TABLE flights ADD COLUMN departure DATETIME;

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

ALTER TABLE flights
ADD COLUMN duration_mins INTEGER,
ADD COLUMN arrival DATETIME;

SELECT Duration,
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 AS 'mins'
FROM flights;

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

SELECT * FROM flights;

SELECT TIME(arrival) FROM flights;

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

SELECT DATE(arrival) FROM flights;


SELECT * FROM flights;

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

-- 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;

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

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

-- Find quarter wise number of flights for each airline
SELECT airline,QUARTER(departure),COUNT(*)
FROM flights
GROUP BY airline,QUARTER(departure);

-- 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_table
GROUP BY temp;

--        14. Find all Air India flights in a given date range originating from Delhi

-- 1st Mar 2019 to 10th Mar 2019
SELECT * FROM flights
WHERE source = 'Delhi' AND
DATE(departure) BETWEEN '2019-03-01' AND '2019-03-10';

-- Find the longest flight of each airline
SELECT airline,
TIME_FORMAT(SEC_TO_TIME(MAX(duration_mins)*60),'%kh %im') AS 'max_duration'
FROM flights
GROUP BY airline
ORDER 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
flights
GROUP 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 flights
WHERE 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 flights
WHERE source = 'Banglore' AND destination = 'Delhi'
GROUP BY DAYNAME(departure)
ORDER BY DAYOFWEEK(departure) ASC;
```