

Flight Analysis

# READY TO FLY? GATHER INSIGHTS

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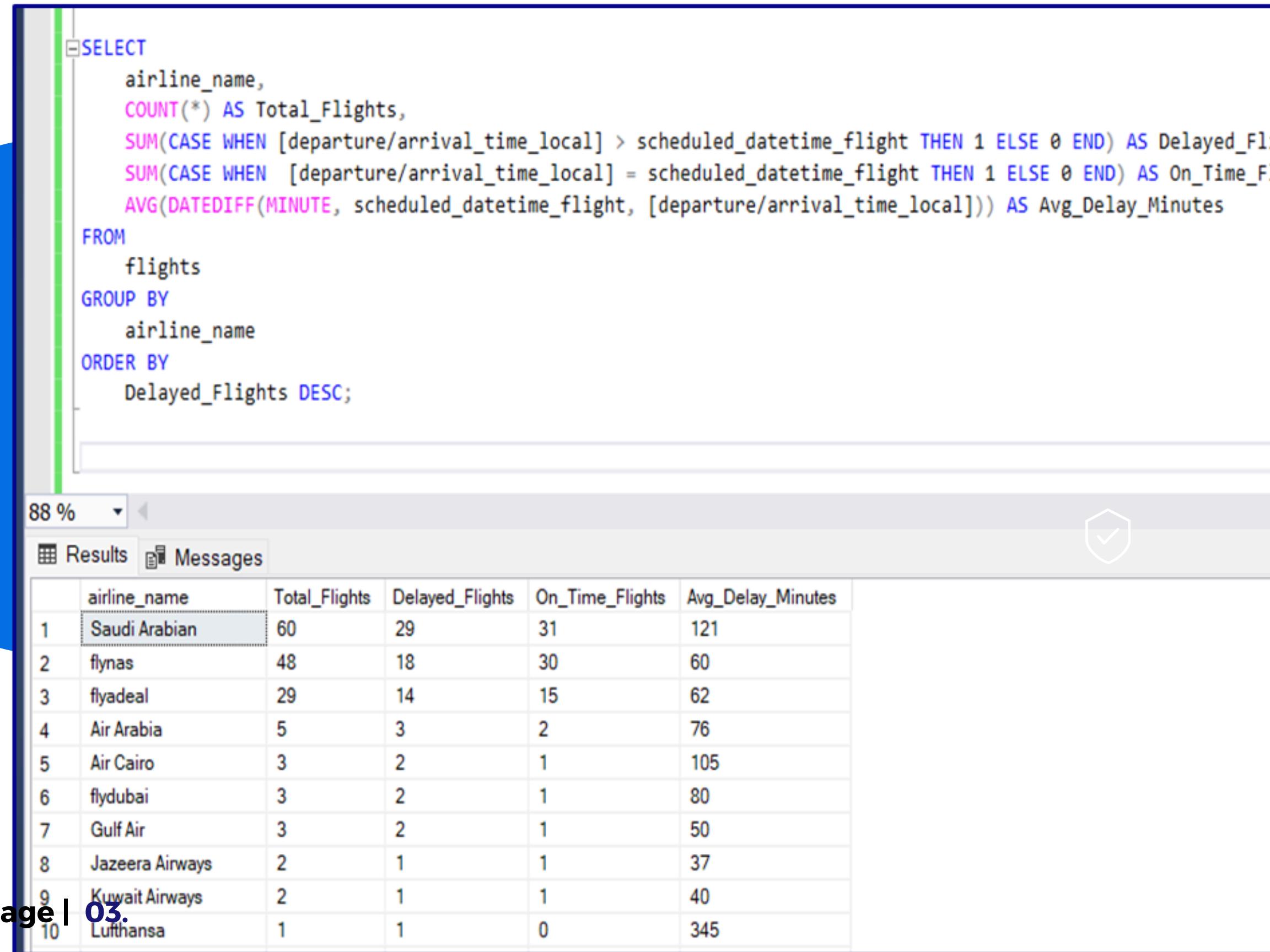
# NUMBER OF FLIGHTS IN EACH AIRPORT

The airport with the highest number of flights is Saudi Arabian with 60 flights



```
SELECT airline_name, COUNT(flight_number) AS Number_of_flights  
FROM flights  
GROUP BY airline_name ORDER BY Number_of_flights DESC
```

# THE AIRLINE THE MOST DELAYED



A screenshot of a SQL query results window. The query retrieves flight data from a 'flights' table, calculating the total number of flights, the count of delayed flights (where actual arrival/departure time is later than the scheduled time), the count of on-time flights (where actual arrival/departure time is equal to the scheduled time), and the average delay in minutes. The results are grouped by airline name and ordered by the number of delayed flights in descending order.

```
SELECT
    airline_name,
    COUNT(*) AS Total_Flights,
    SUM(CASE WHEN [departure/arrival_time_local] > scheduled_datetime_flight THEN 1 ELSE 0 END) AS Delayed_Flights,
    SUM(CASE WHEN [departure/arrival_time_local] = scheduled_datetime_flight THEN 1 ELSE 0 END) AS On_Time_Flights,
    AVG(DATEDIFF(MINUTE, scheduled_datetime_flight, [departure/arrival_time_local])) AS Avg_Delay_Minutes
FROM
    flights
GROUP BY
    airline_name
ORDER BY
    Delayed_Flights DESC;
```

|    | airline_name    | Total_Flights | Delayed_Flights | On_Time_Flights | Avg_Delay_Minutes |
|----|-----------------|---------------|-----------------|-----------------|-------------------|
| 1  | Saudi Arabian   | 60            | 29              | 31              | 121               |
| 2  | flynas          | 48            | 18              | 30              | 60                |
| 3  | flyadeal        | 29            | 14              | 15              | 62                |
| 4  | Air Arabia      | 5             | 3               | 2               | 76                |
| 5  | Air Cairo       | 3             | 2               | 1               | 105               |
| 6  | flydubai        | 3             | 2               | 1               | 80                |
| 7  | Gulf Air        | 3             | 2               | 1               | 50                |
| 8  | Jazeera Airways | 2             | 1               | 1               | 37                |
| 9  | Kuwait Airways  | 2             | 1               | 1               | 40                |
| 10 | Lufthansa       | 1             | 1               | 0               | 345               |

**The airline with the most delays is Saudi Arabian Airlines with a total of: 21 delayed flights  
31 on-time flights  
Average delay time: 121 minutes**

# MOST FREQUENT CITIES WITH FLIGHTS

The city with the most flights is Jeddah,  
with a total of 23 flights.

## TOP 5 CITIES WITH THE MOST FLIGHTS



SELECT city\_name, COUNT(flight\_number) AS Number\_of\_flights  
FROM flights  
GROUP BY city\_name ORDER BY Number\_of\_flights DESC

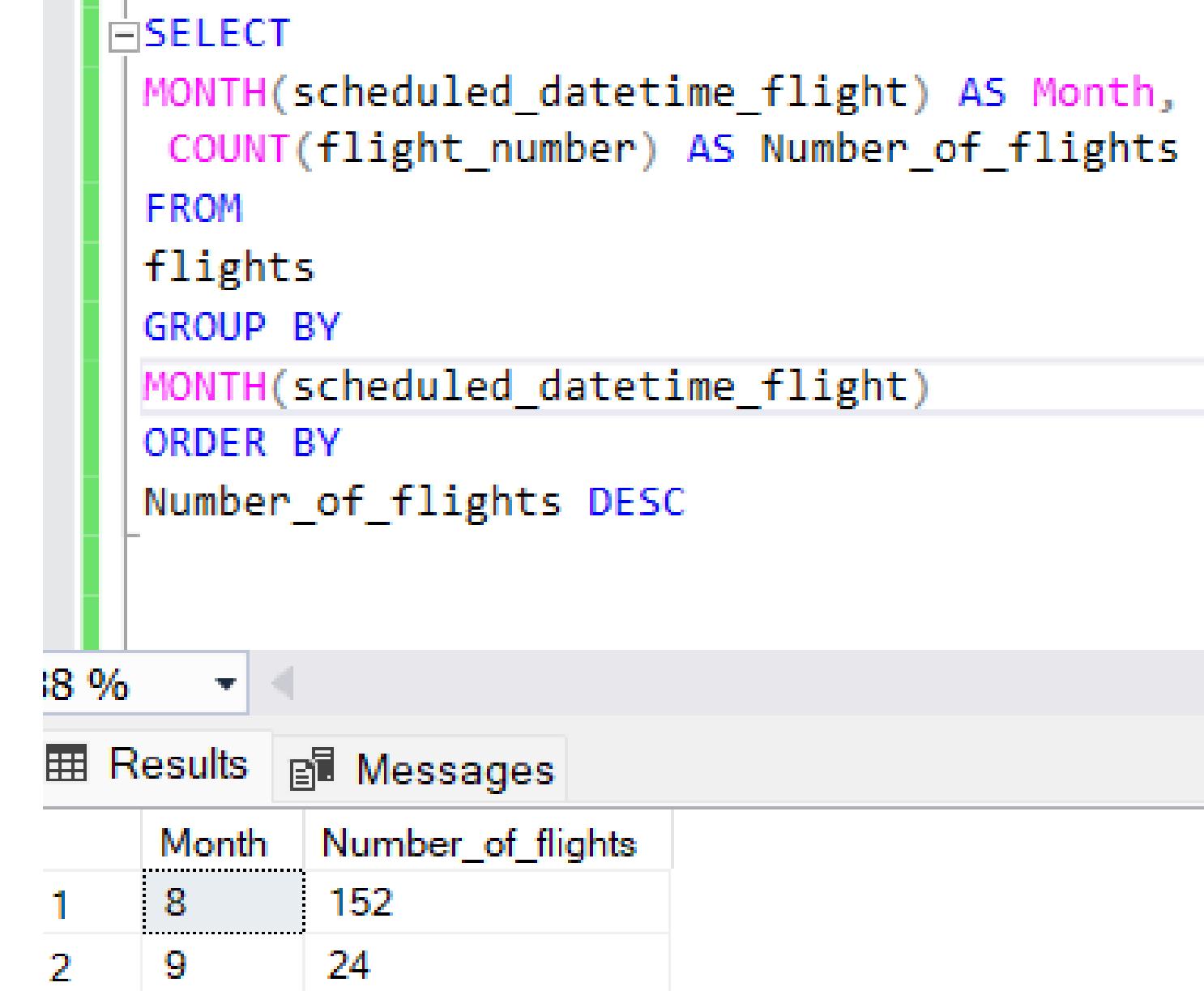
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Results Messages

|   | city_name | Number_of_flights |
|---|-----------|-------------------|
| 1 | Jeddah    | 23                |
| 2 | Cairo     | 13                |
| 3 | Dubai     | 11                |
| 4 | Medina    | 10                |
| 5 | Ad Dammam | 9                 |
|   | ...       | -                 |

# THE MONTH WITH THE MOST FLIGHTS

The month with the most flights is August, with a total of 152 flights



A screenshot of a MySQL query editor window. The query is:

```
SELECT
    MONTH(scheduled_datetime_flight) AS Month,
    COUNT(flight_number) AS Number_of_flights
FROM
    flights
GROUP BY
    MONTH(scheduled_datetime_flight)
ORDER BY
    Number_of_flights DESC
```

The results table shows two rows:

|   | Month | Number_of_flights |
|---|-------|-------------------|
| 1 | 8     | 152               |
| 2 | 9     | 24                |

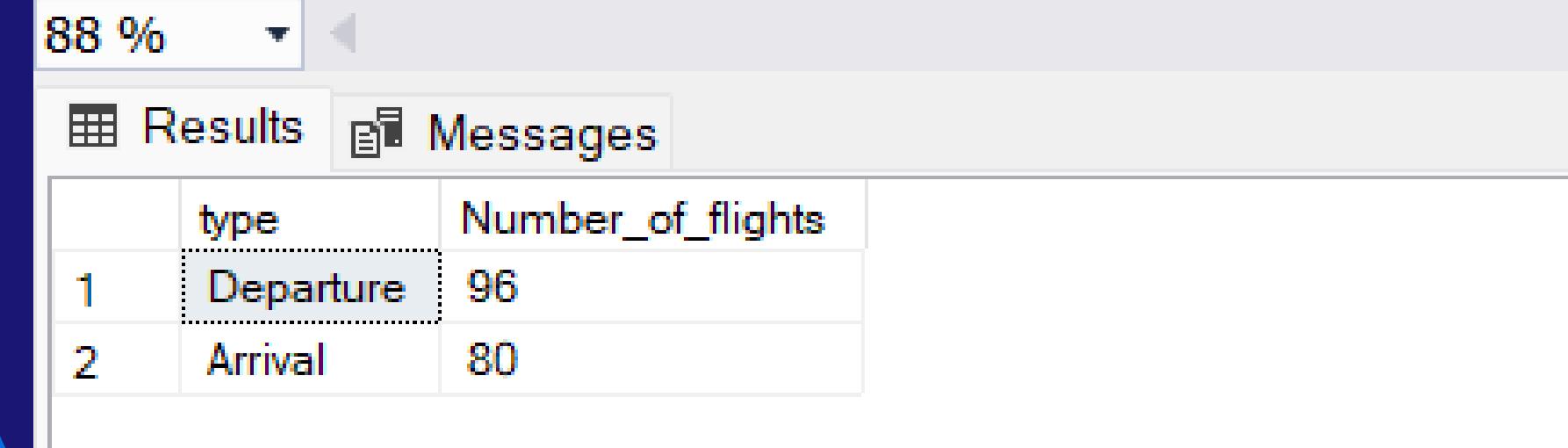
# NUMBER OF ARRIVAL AND DEPARTURE FLIGHTS

The total number of flights is as follows:

Departure Flights: 96

Arrival Flights: 80

```
--Number of arrival and departure flights
SELECT
    type,COUNT(flight_number) AS Number_of_flights
FROM flights
GROUP BY type ORDER BY Number_of_flights DESC
```



A screenshot of a MySQL query editor interface. The top part shows a SQL query to count the number of flights by type (Departure and Arrival). The bottom part displays the results of the query in a table.

|   | type      | Number_of_flights |
|---|-----------|-------------------|
| 1 | Departure | 96                |
| 2 | Arrival   | 80                |

# FLIGHT SCHEDULE DEVIATIONS

```
SELECT
    COUNT(*) AS Total_Flights,
    SUM(CASE WHEN [departure/arrival_time_local] > scheduled_datetime_flight THEN 1 ELSE 0 END) AS Delayed_Arrivals,
    SUM(CASE WHEN [departure/arrival_time_local] < scheduled_datetime_flight THEN 1 ELSE 0 END) AS Early_Arrivals,
    SUM(CASE WHEN [departure/arrival_time_local] = scheduled_datetime_flight THEN 1 ELSE 0 END) AS Exactly_On_Time_Arrivals,
    AVG(DATEDIFF(MINUTE, scheduled_datetime_flight, [departure/arrival_time_local])) AS Avg_Arrival_Deviation
FROM
    flights;
```

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Results Messages

| Total_Flights | Delayed_Arrivals | Early_Arrivals | Exactly_On_Time_Arrivals | Avg_Arrival_Deviation |
|---------------|------------------|----------------|--------------------------|-----------------------|
| 176           | 82               | 0              | 94                       | 93                    |

**Out of a total of 176 flights:**  
**Early Departures: 0**  
**Delayed Flights: 82**  
**On-Time Flights: 94**  
**Average Delay: 94 minutes**

# FLIGHT DELAYS BY TIME OF DAY

```
SELECT
    CASE
        WHEN DATEPART(HOUR, scheduled_datetime_flight) < 12 THEN 'Morning'
        WHEN DATEPART(HOUR, scheduled_datetime_flight) < 18 THEN 'Afternoon'
        ELSE 'Evening'
    END AS Time_of_Day,
    COUNT(*) AS Total_Flights,
    SUM(CASE WHEN [departure/arrival_time_local] > scheduled_datetime_flight THEN 1 ELSE 0 END) AS Delayed_Arrivals
FROM
    flights
GROUP BY
    CASE
        WHEN DATEPART(HOUR, scheduled_datetime_flight) < 12 THEN 'Morning'
        WHEN DATEPART(HOUR, scheduled_datetime_flight) < 18 THEN 'Afternoon'
        ELSE 'Evening'
    END
ORDER BY
    Time_of_Day ;
```

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Results Messages

|   | Time_of_Day | Total_Flights | Delayed_Arrivals |
|---|-------------|---------------|------------------|
| 1 | Afternoon   | 85            | 43               |
| 2 | Evening     | 23            | 6                |
| 3 | Morning     | 68            | 33               |



**Morning Flights:**  
**Total Flights: 68**  
**Delayed Flights: 33**



**Afternoon Flights:**  
**Total Flights: 85**  
**Delayed Flights: 43**



**Evening Flights:**  
**Total Flights: 23**  
**Delayed Flights: 6**



Done

**THANKS FOR  
WATCHING.**