

# SQL Project- Airline Passenger Analysis

- Q1. Find Out Most Frequent Route for Flights ?
- Q2. Calculate the Average Seat Utilization for Each Flight ?
- Q3. Find Out Most Active City Across Airports ?
- Q4. Calculate the Total Distance Flown by Flights Originating From Each Airport ?
- Q5. Calculate Seasonal Trend of Flights Using Fly\_date ?
- Q6. Find Out Most Underutilized Routes ? Calculate the Passenger-to-Seats Ratio for Each Origin and Destination Route ?
- Q7. Determine the Origin Airports with the Highest Frequency of Flights ?
- Q8. Identify the Cities that Sends the Most Flights and Passengers ?
- Q9. Identify the Longest Flight Route in Terms of Distance Traveled, Including Both the Origin and Destination Airports ?
- Q10. Determine the Most and Least Busy Months by Flight Count Across Multiple Years ? the Most Busy & Least Busy Month at Once in result ?
- Q11. Calculate the Year-Over-Year Percentage Growth in the Total Number of Passengers for Each Origin and Destination Airport Pair ?
- Q12. Identify Routes (from Origin to Destination) That Have Demonstrated Consistent Year-Over-Year Growth in the Number of Flights ? Identify Routes With Consistent Growth and Their Growth Rate ?
- Q13. Determine the Top 5 Origin Airports with the Highest Weighted Passenger-to-Seats Utilization ratio ? Calculate the Weighted Utilization by Flights for Each Origin Airport ? Select the top 5 Airports by Weighted Utilization ?
- Q14. Identify the Peak Traffic Month for Each Origin City Based on the Highest Number of Passengers and Seasonal Travel Patterns Specific to Each City ?
- Q15. identify the routes (origin-destination pairs) that have experienced the largest decline in passenger numbers year-over-year ?
- Q16. Highlight Underperforming Routes ? list all origin and destination airports that had at least 10 flights but maintained an average seat utilization (passengers/seats) of less than 50% ?
- Q17. calculate the average flight distance for each unique city-to-city pair (origin and destination) and identify the routes with the longest average distance ?
- Q18. Calculate the total number of flights and passengers for each year along with the percentage growth in both flights and passengers compared to the previous year ? provide a comprehensive overview of annual trends in air travel ?
- Q19. identify the top 3 busiest routes (origin-destination pairs) based on the total distance flown weighted by the number of flights. highlight the most significant routes in terms of distance and operational activity ?