UBER CASE STUDY

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Business Objectives:

- The aim of analysis is to identify the root cause of the problem (i.e. cancellation and non-availability of cars)
- Recommend ways to improve the situation.

Tools Used:

- R studio for
  1. Data Gathering
  2. Data Cleaning
  3. Data Manipulation
  4. Data Analysis
  5. Data Visualization using ggplot

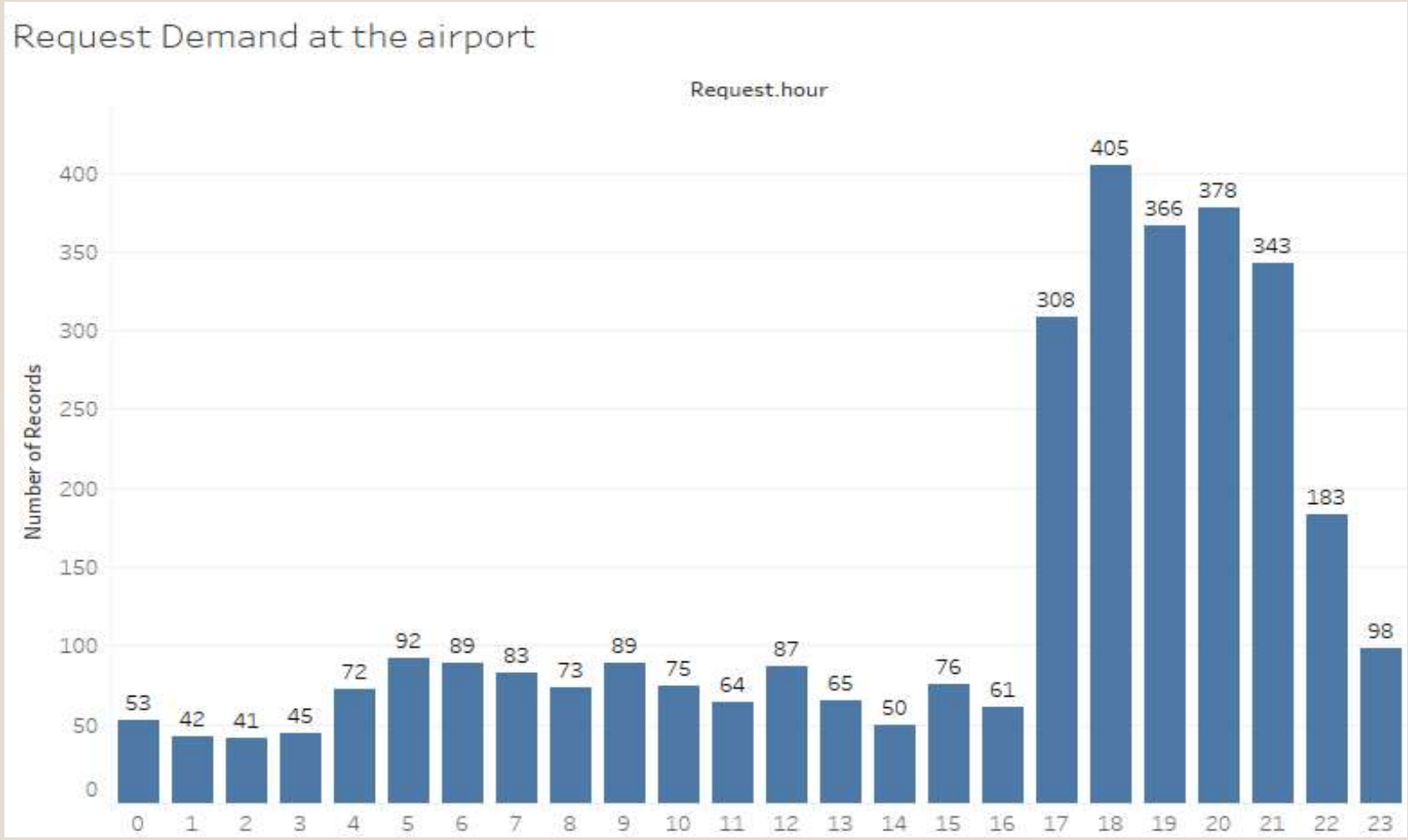
- Tableau for visualization

Data Understanding :

- Time Request id: A unique identifier of the request
- of request: The date and time at which the customer made the trip request
- Drop-off time: The drop-off date and time, in case the trip was completed
- Pick-up point: The point from which the request was made
- Driver id: The unique identification number of the driver
- Status of the request: The final status of the trip, that can be either completed, cancelled by the driver or no cars available

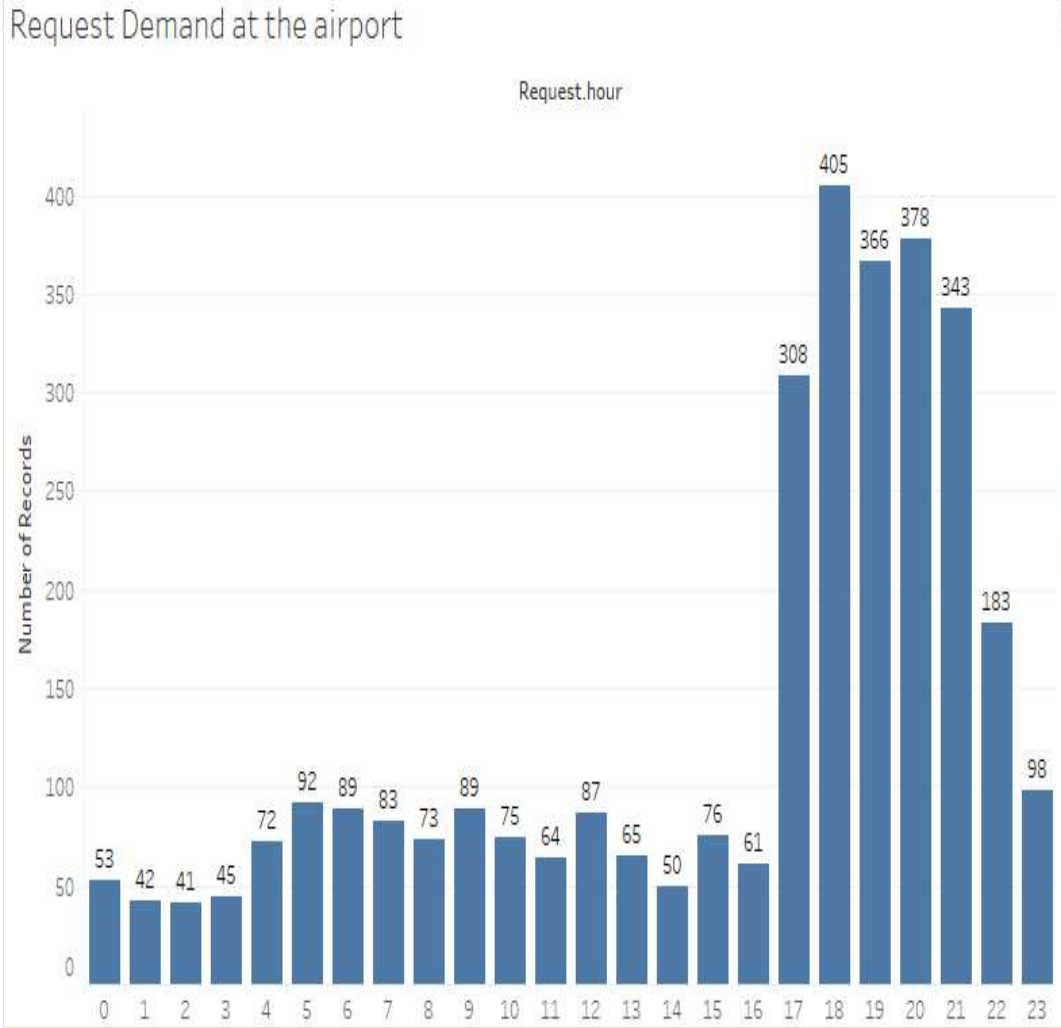
➢NOTE : Only the trips **to and from the airport** are being considered

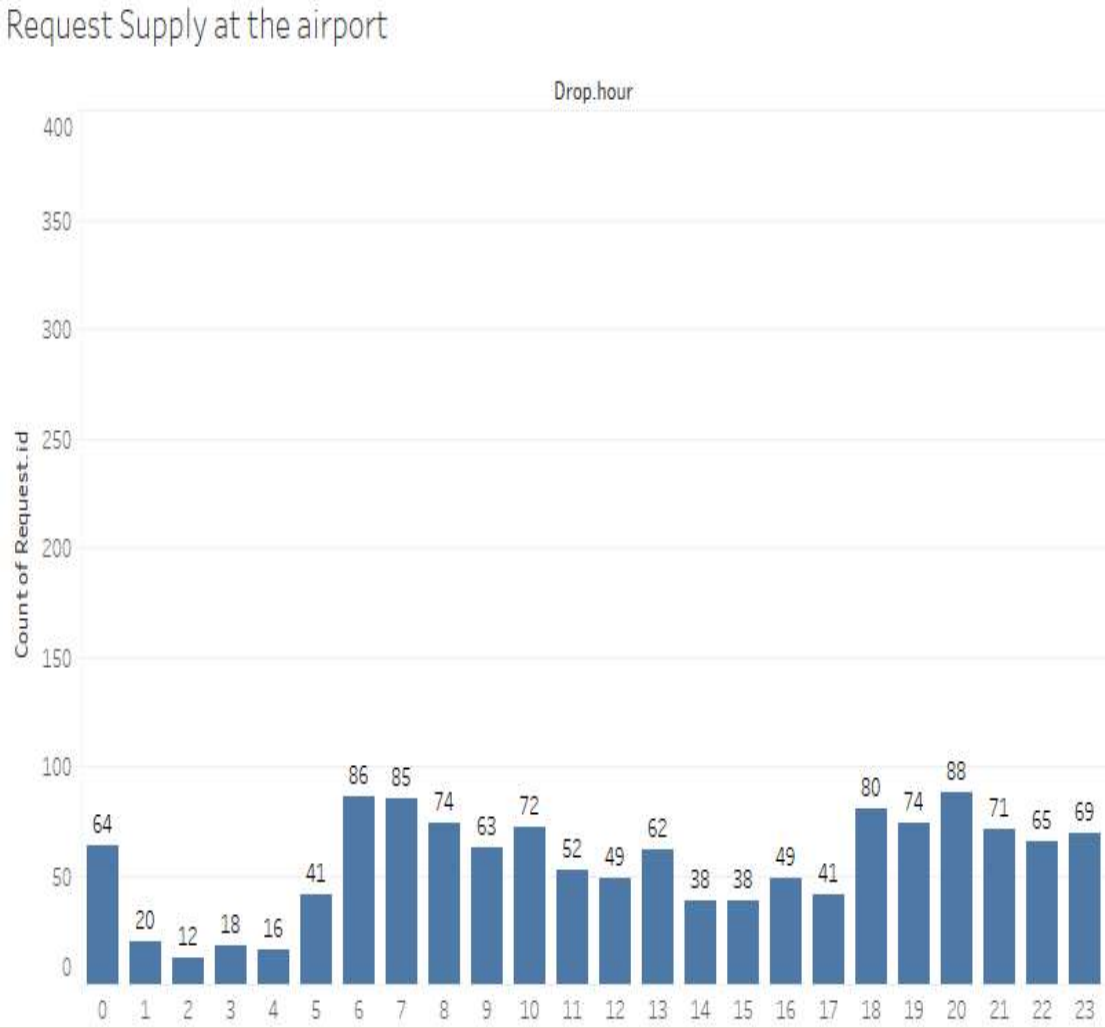
THE REQUEST DEMAND AT AIRPORT



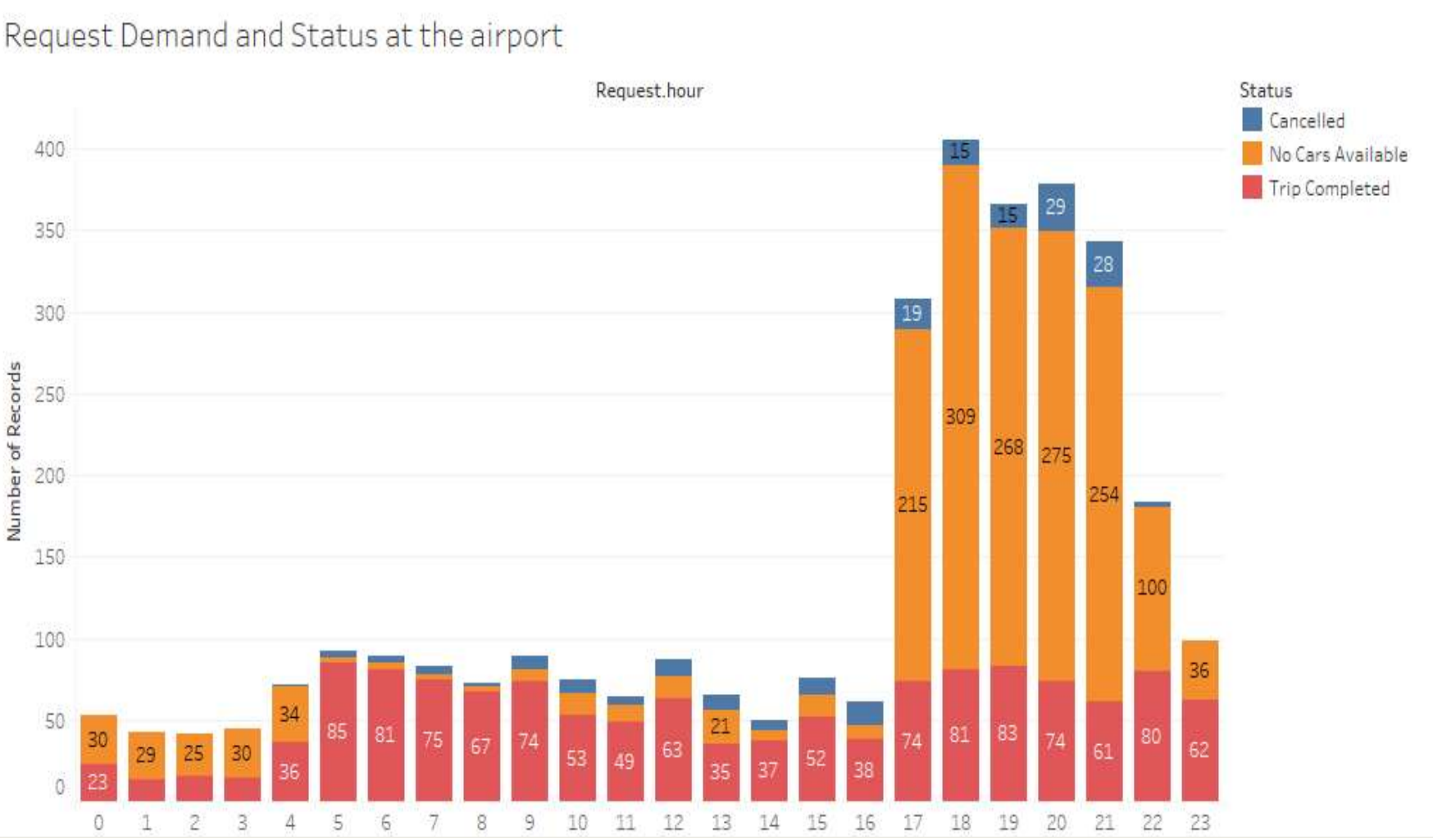
- This plot clearly shows the Demand of requests from airport at different hours
- From this plot, we can clearly understand that the demand is peak in the **evening** slot ie., after 4 PM

Comparison between Request Demand and the Supply at the airport



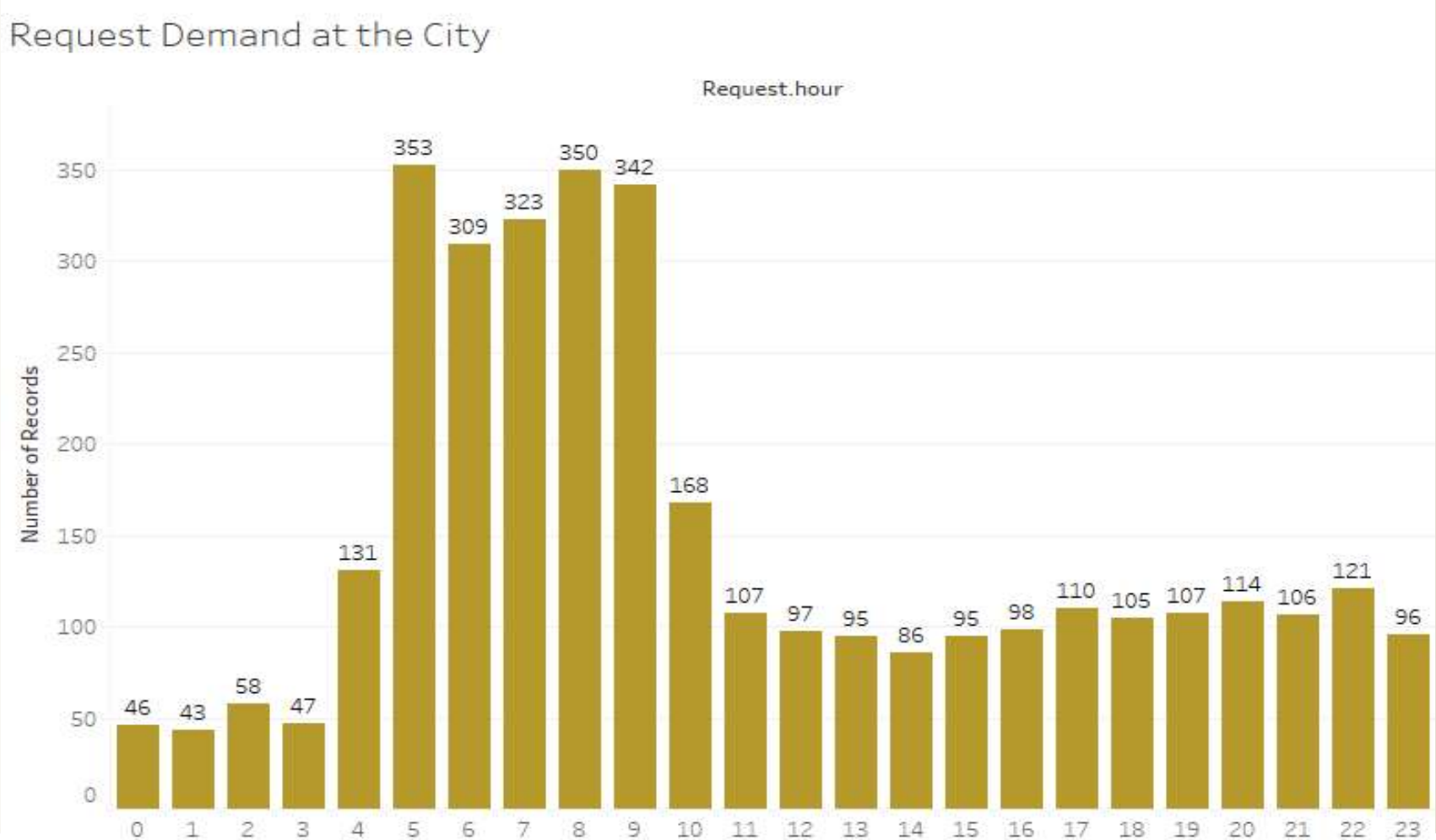


Comparison and Analysis at the airport



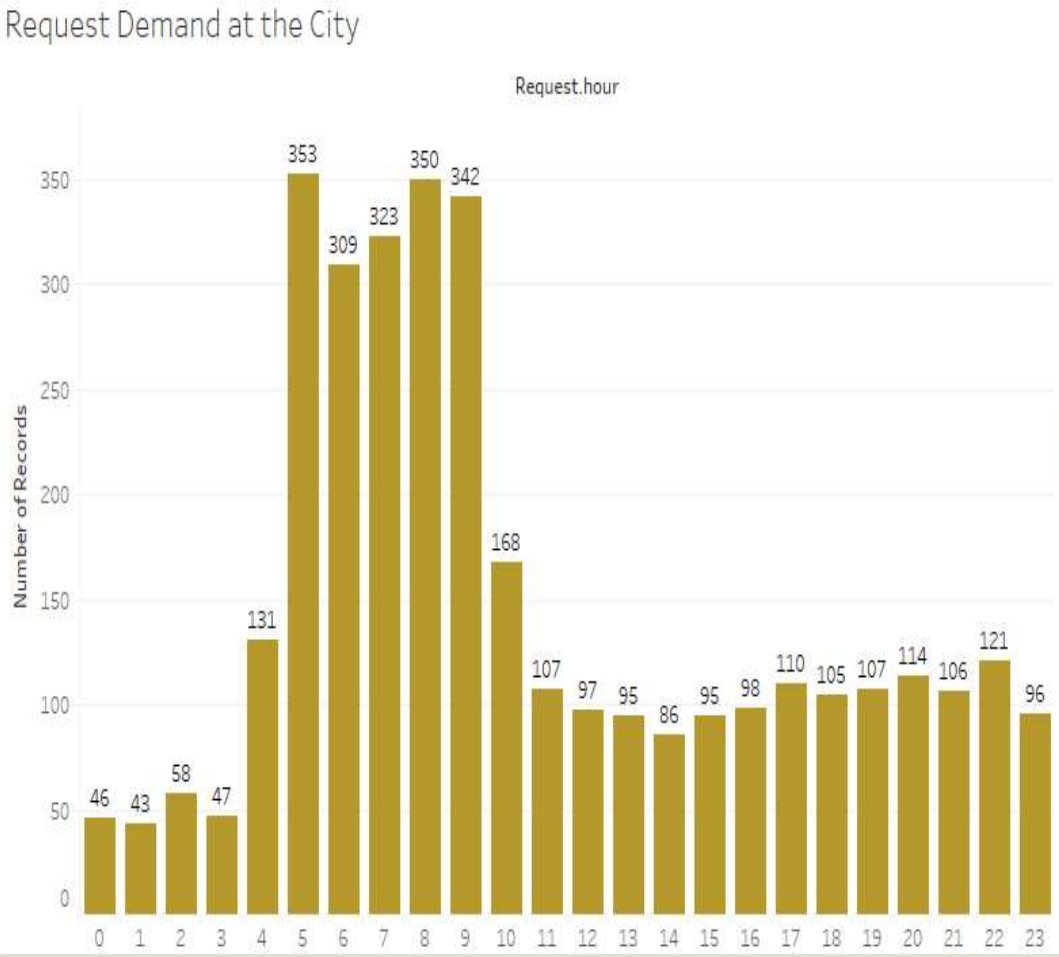
- From the two plots we can conclude that, at the peak hours when demand is high the supply is very low
- At the peak hours when the demand is high, the number of cars not available or cancelled is also high

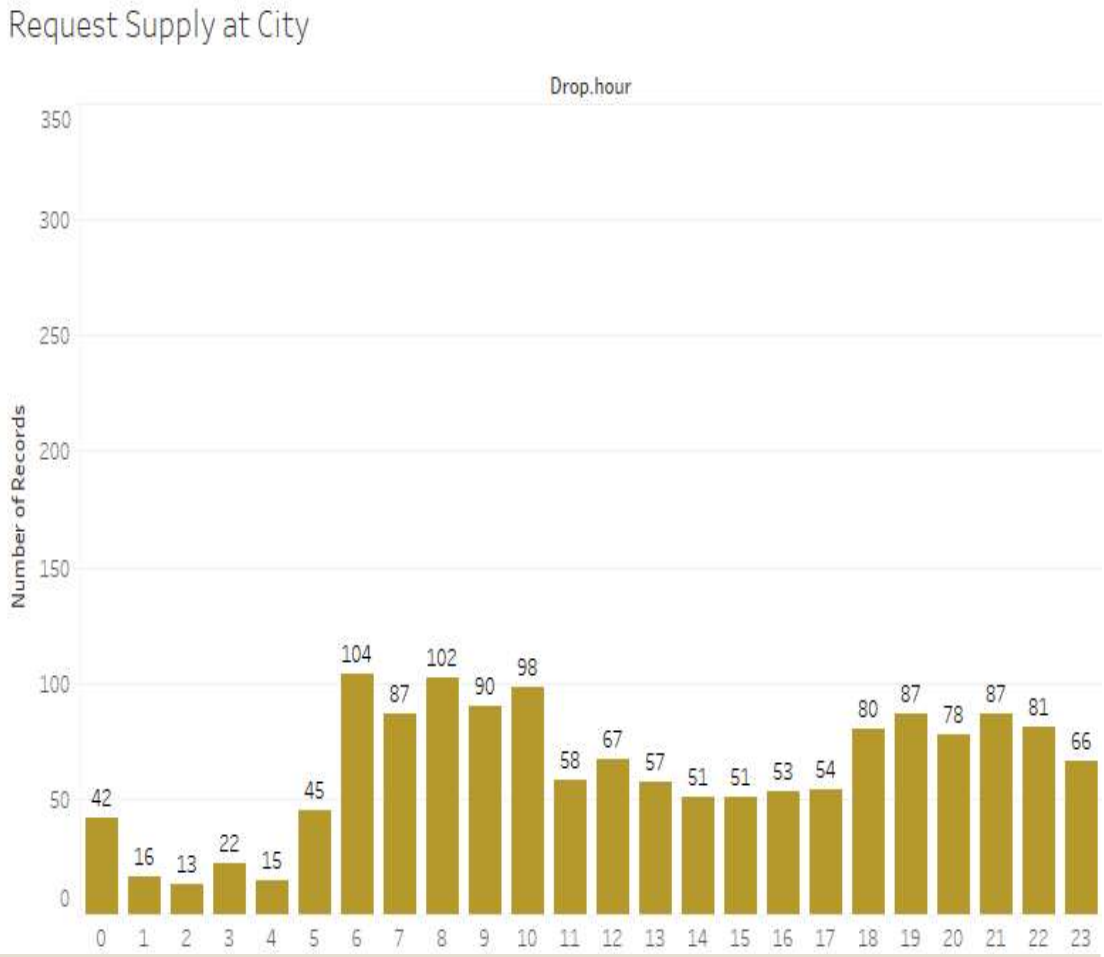
THE REQUEST DEMAND AT CITY



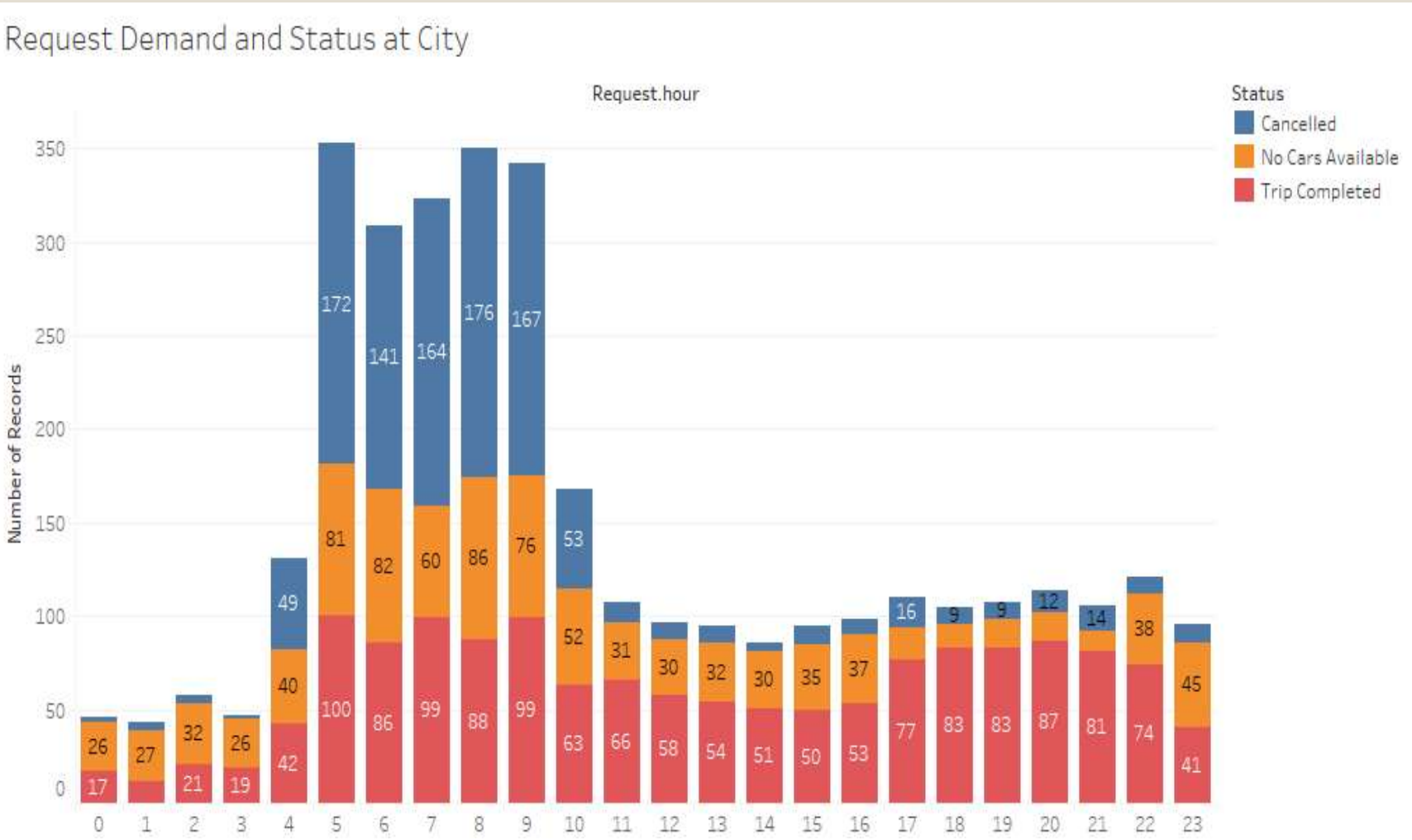
- This plot clearly shows the demand of requests from city at different hours
- From this plot we can clearly understand the demand is very high in the **morning slot** ie., from **4 AM** to **10 AM**

Comparison between Request Demand and supply at City



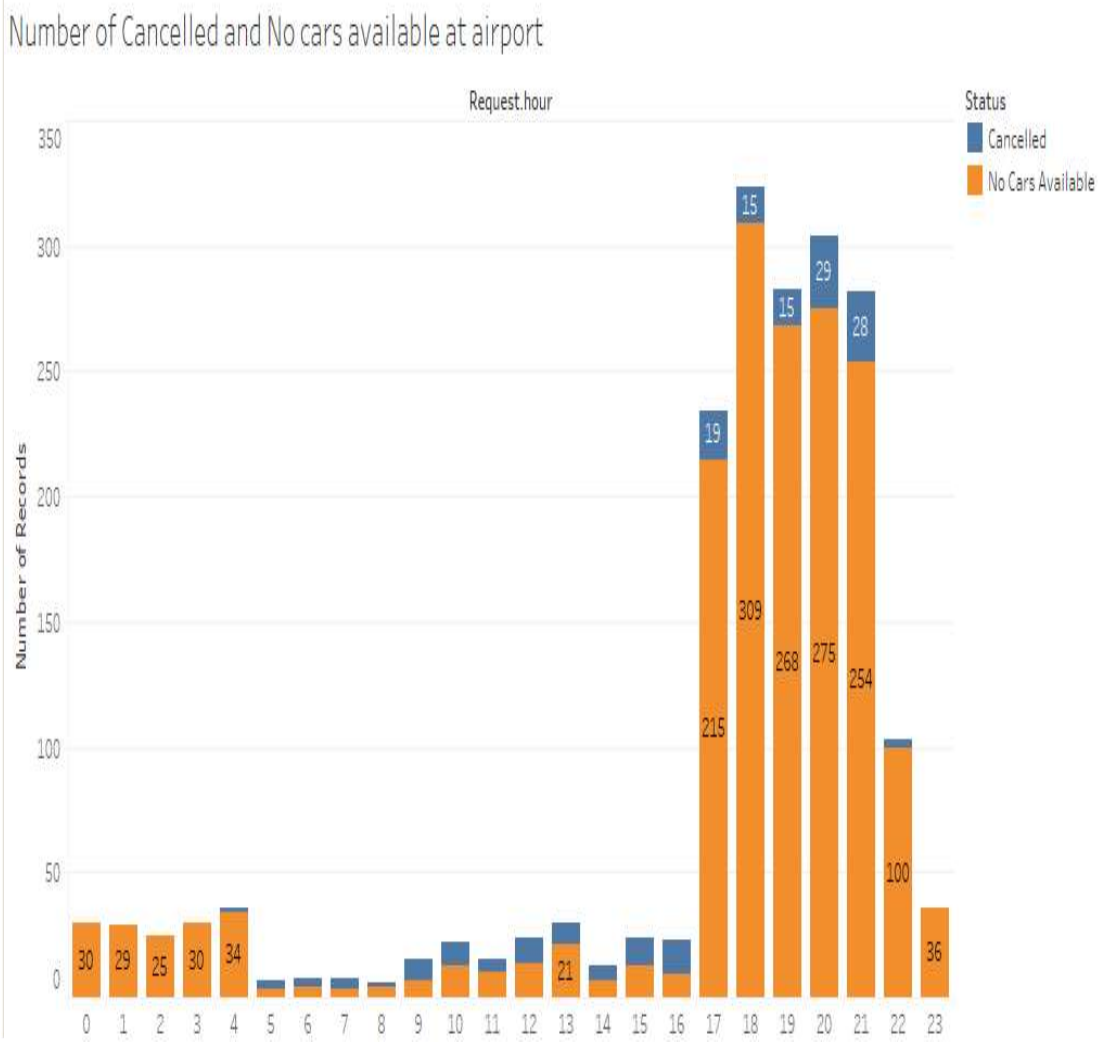


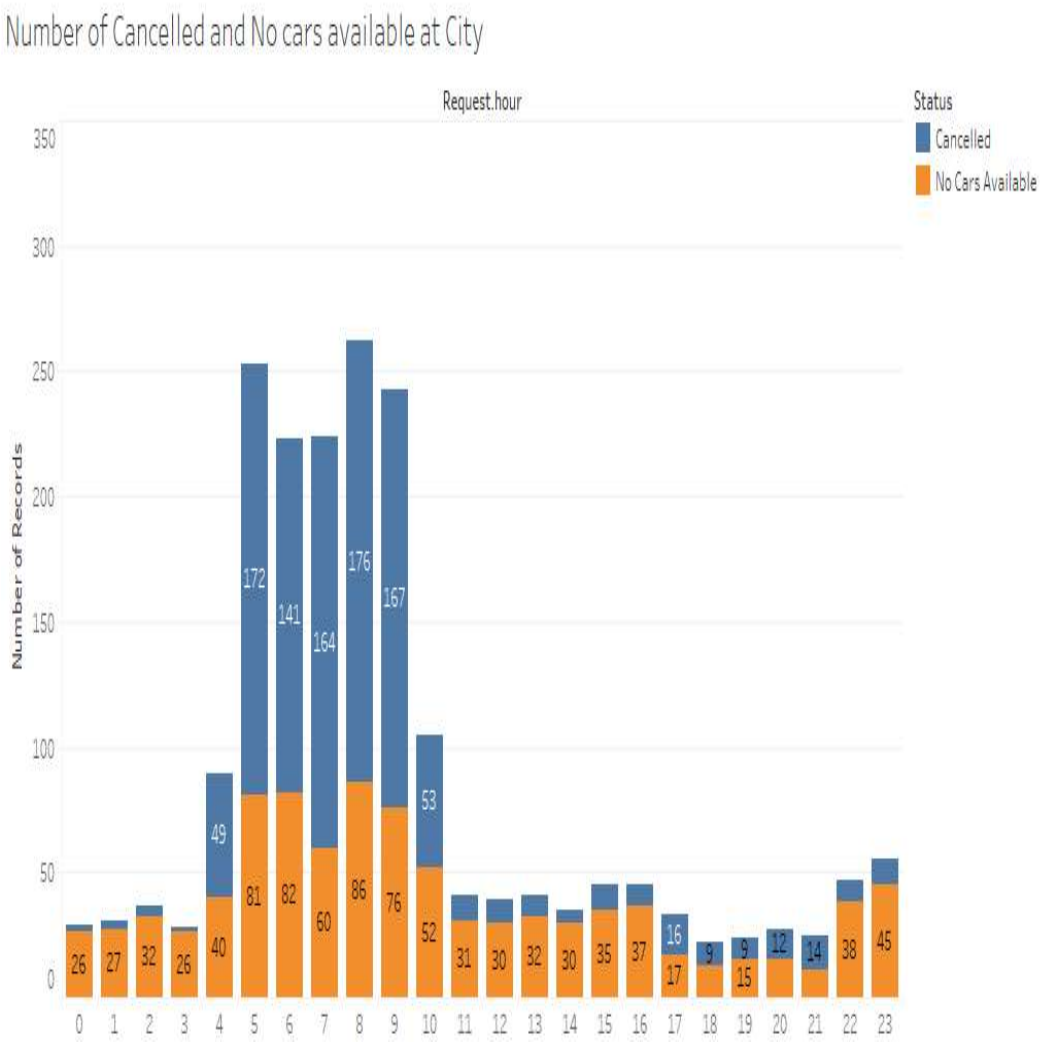
Comparison and Analysis at city



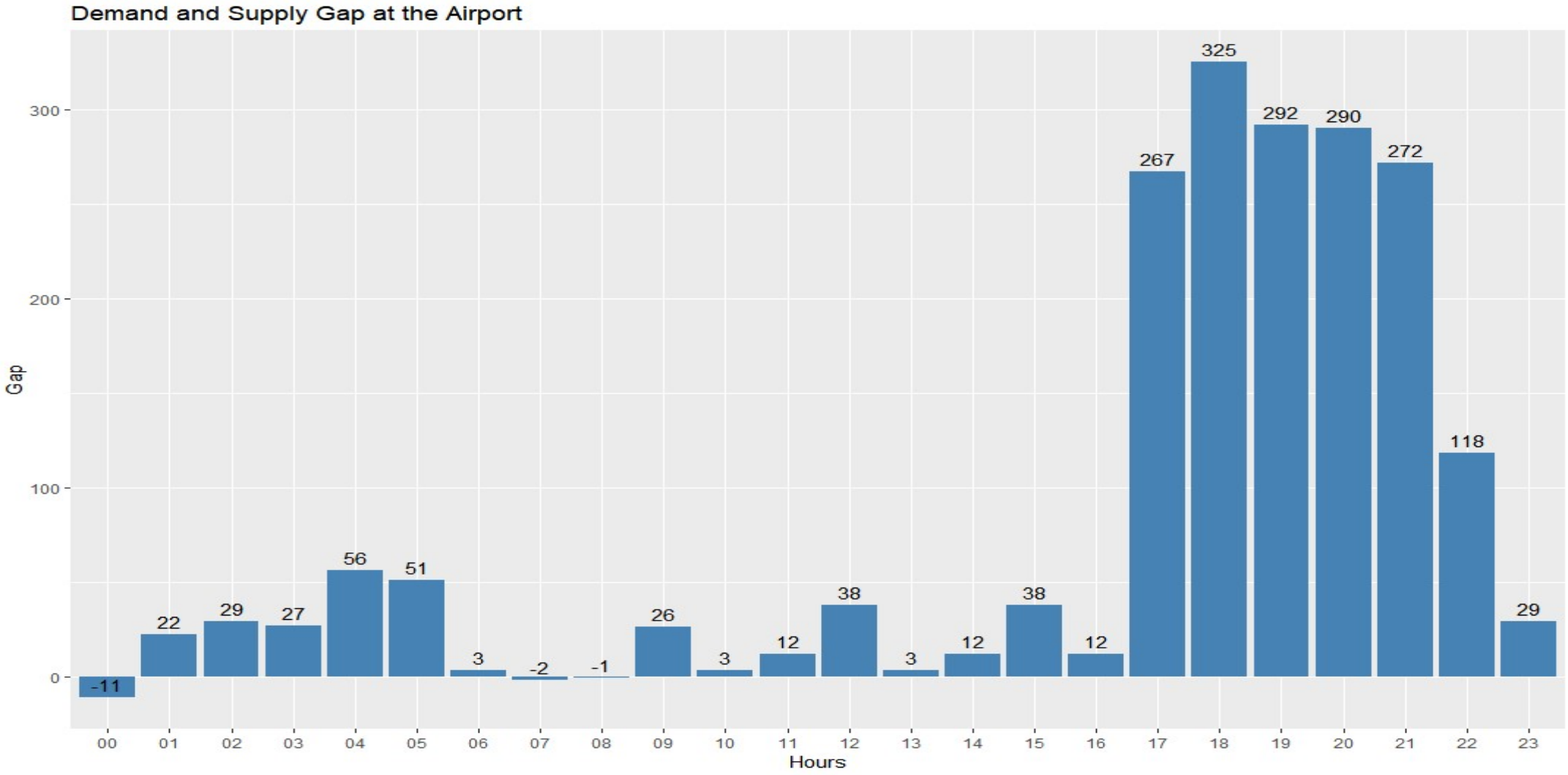
- From the above plots we can observe that there is low supply when there is high demand
- The number of cancellations are very high in the peak time slot.

Number of cancelled and no cars available at airport and city

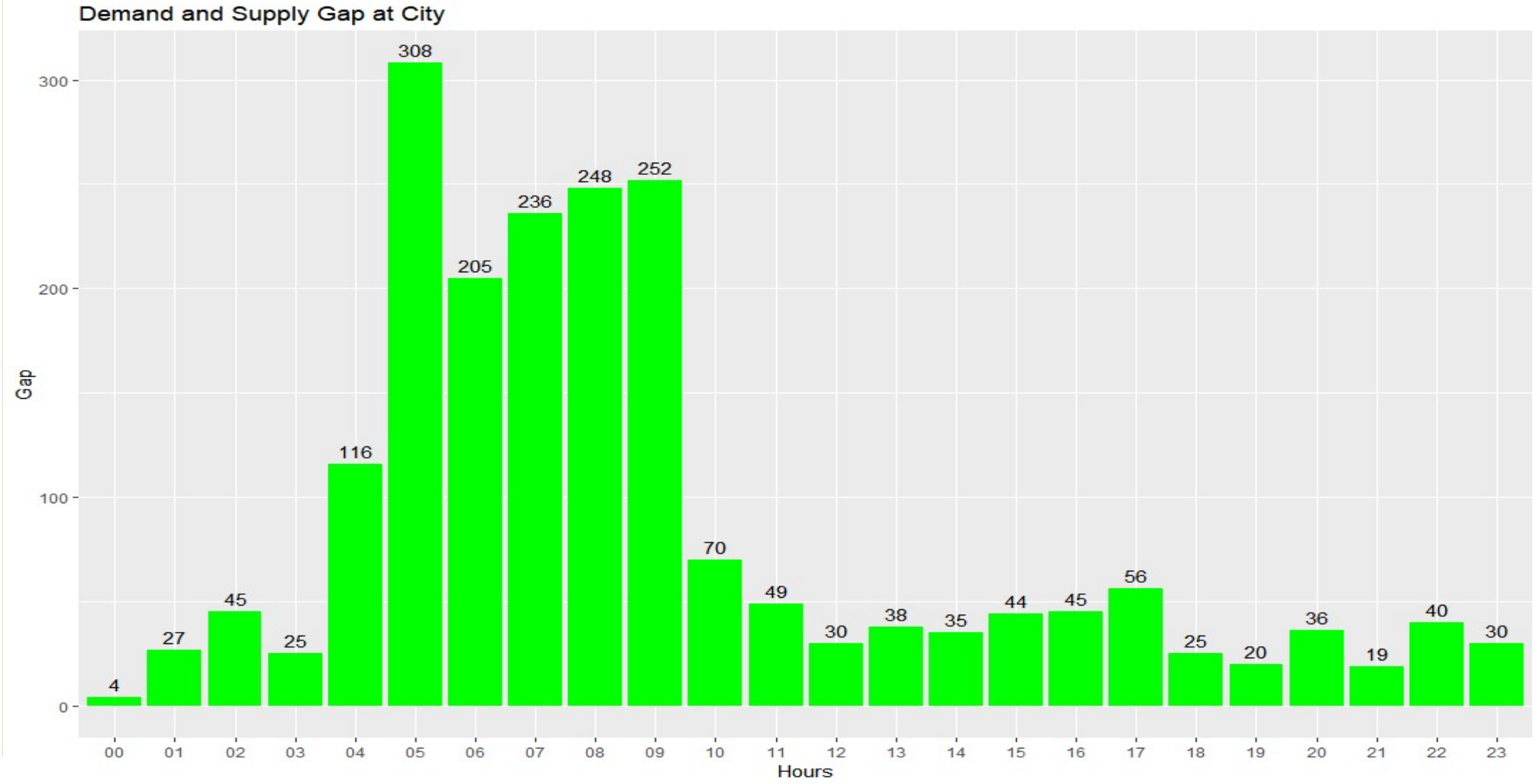




DEMAND AND SUPPLY GAP AT THE AIRPORT



DEMAND AND SUPPLY GAP AT CITY



Recommendations based on analysis

- The two major problems are ***trip cancellations from city*** and ***cars not being available at the airport.***
- No. of cars not available were high at airport in the evenings and no. of cancellations from city are high in the mornings.
- To tackle this problem, if the drivers who are cancelling in the mornings from city were asked to complete trips from airport in the evenings.
- This would resolve the problem of no cars available at the airport in the evenings as this is the peak time at the airport. This may reduce the demand supply gap at the airport.
- To tackle the problem of cancellations in the mornings from city, if the drivers who have taken trips from airport in the evenings and late nights were asked to take trips in the mornings the next day may solve this problem. This may reduce the demand supply gap at the city.
- Also, it is advisable to increase the number of cabs and also compensate the drivers in their waiting time, so the number of cancellations decreases.

THANK YOU