PRIMARY AND SECONDARY ANALYSIS QUESTIONS

Primary and secondary analysis questions sent by Bruce

Questions from the available data (Primary)

1. Top and Bottom Performing Cities
   - Identify the top 3 and bottom 3 cities by total trips over the entire analysis period.

2. Average Fare per Trip by City
   - Calculate the average fare per trip for each city and compare it with the city's average trip distance. Identify the cities with the highest and lowest average fare per trip to assess pricing efficiency across locations.

3. Average Ratings by City and Passenger Type
   - Calculate the average passenger and driver ratings for each city, segmented by passenger type (new vs. repeat). Identify cities with the highest and lowest average ratings.

4. Peak and Low Demand Months by City
   - For each city, identify the month with the highest total trips (peak demand) and the month with the lowest total trips (low demand). This analysis will help Goodcabs understand seasonal patterns and adjust resources accordingly.

5. Weekend vs. Weekday Trip Demand by City
   - Compare the total trips taken on weekdays versus weekends for each city over the six-month period. Identify cities with a strong preference for either weekend or weekday trips to understand demand variations.

6. Repeat Passenger Frequency and City Contribution Analysis
   - Analyse the frequency of trips taken by repeat passengers in each city (e.g., % of repeat passengers taking 2 trips, 3 trips, etc.). Identify which cities contribute most to higher trip frequencies among repeat passengers, and examine if there are distinguishable patterns between tourism-focused and business-focused cities.

7. Monthly Target Achievement Analysis for Key Metrics
   - For each city, evaluate monthly performance against targets for total trips, new passengers, and average passenger ratings from targets_db. Determine if each metric met, exceeded, or missed the target, and calculate the percentage difference. Identify any consistent patterns in target achievement, particularly across tourism versus business-focused cities.

8. Highest and Lowest Repeat Passenger Rate (RPR%) by City and Month
   - Analyse the Repeat Passenger Rate (RPR%) for each city across the six-month period. Identify the top 2 and bottom 2 cities based on their RPR% to determine which locations have the strongest and weakest rates.
   - Similarly, analyse the RPR% by month across all cities and identify the months with the highest and lowest repeat passenger rates. This will help to pinpoint any seasonal patterns or months with higher repeat passenger loyalty.

Further analysis & recommendations:

1. Factors Influencing Repeat Passenger Rates
   - What factors (such as quality of service, competitive pricing, or city demographics) might contribute to higher or lower repeat passenger rates in different cities? Are there correlations with socioeconomic or lifestyle patterns in these cities?

2. Tourism vs. Business Demand Impact
   - How do tourism seasons or local events (festivals, conferences) impact Goodcabs' demand patterns? Would tailoring marketing efforts to these events increase trip volume in tourism-oriented cities?

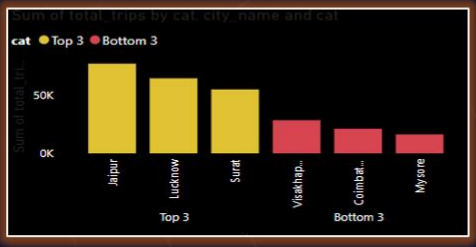
3. Emerging Mobility Trends and Goodcabs' Adaptation
   - What emerging mobility trends (such as electric vehicle adoption, green energy use) are impacting the cab service market in tier-2 cities? Should Goodcabs consider integrating electric vehicles or eco-friendly initiatives to stay competitive?

4. Partnership Opportunities with Local Businesses
   - Are there opportunities for Goodcabs to partner with local businesses (such as hotels, malls, or event venues) to boost demand and improve customer loyalty? Could these partnerships drive more traffic, especially in tourism-heavy or high-footfall areas?

5. Data Collection for Enhanced Data-Driven Decisions
   - To make Goodcabs more data-driven and improve its performance across key metrics (such as repeat passenger rate, customer satisfaction, new passengers and trip volume), what additional data should Goodcabs collect? Consider data that could provide deeper insights into customer behaviour, operational efficiency, and market trends.

Question 1

Identify the top 3 and bottom 3 cities by total trips over the entire analysis period.



Jaipur , Lucknow , Surat are top 3 cities and Vishakapatnam , Coimbatore , Mysore are bottom 3 in terms of total trips

Question 2

Calculate the average fare per trip for each city and compare it with the city's average trip distance. Identify the cities with the highest and lowest average fare per trip to assess pricing efficiency across locations.

city_name	Average Fare per Trip	Average Trip Distance
Jaipur	483.92	30.02
Kochi	335.25	24.07
Chandigarh	283.69	23.52
Visakhapatnam	282.67	22.55
Mysore	249.71	16.50
Indore	179.84	16.50
Coimbatore	166.98	14.98
Lucknow	147.18	12.51
Vadodara	118.57	11.52
Surat	117.27	11.00
Total	254.02	19.13

Jaipur has highest fare per trip (484 INR) and Surat has lowest fare per trip (117 INR)

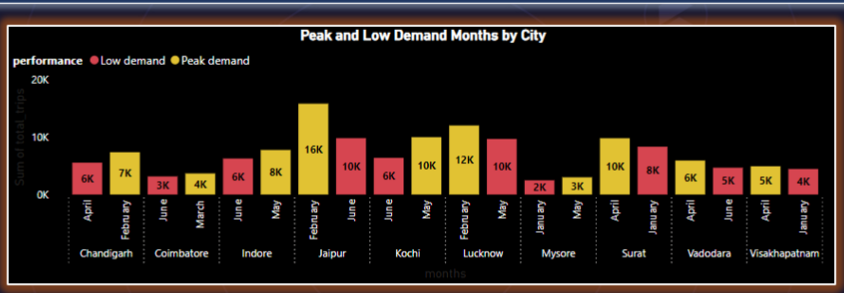
Question 3

Calculate the average passenger and driver ratings for each city, segmented by passenger type (new vs. repeat). Identify cities with the highest and lowest average ratings.

New Passenger rating : Jaipur Highest and Lucknow Lowest
Repeated Passenger rating : Kochi Highest and Vadodara Lowest
Driver rating : Kochi Highest and Surat Lowest

Question 4

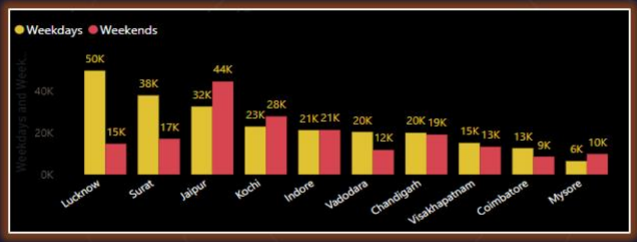
For each city, identify the month with the highest total trips (peak demand) and the month with the lowest total trips (low demand). This analysis will help Goodcabs understand seasonal patterns and adjust resources accordingly.



Most of the cities have peak demand in month of February ,May or April

Question 5

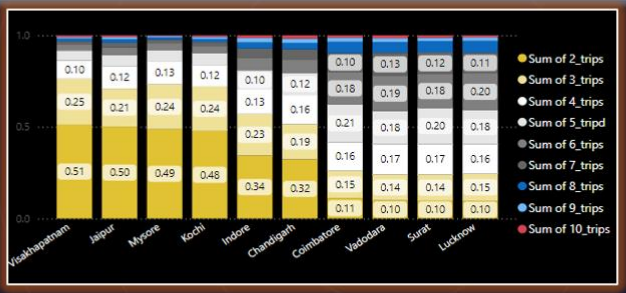
Compare the total trips taken on weekdays versus weekends for each city over the six-month period. Identify cities with a strong preference for either weekend or weekday trips to understand demand variations.



Weekday Preference : Lucknow ,Surat ,Vadodara , Chandigarh,Vishakapatnam ,Coimbatore
Weekend Preference : Jaipur ,Kochi ,Mysore

Question 6

Analyze the frequency of trips taken by repeat passengers in each city (e.g., % of repeat passengers taking 2 trips, 3 trips, etc.). Identify which cities contribute most to higher trip frequencies among repeat passengers, and examine if there are distinguishable patterns between tourism-focused and business-focused cities.



Surat , Lucknow ,Coimbatore ,Vadodara contribute more to Higher trip frequencies ,these are business focused cities Jaipur , Mysore ,Vishakapatnam ,Kochi are Tourism focused cities and they have highest(50%) of two trips percentage.

Question 7

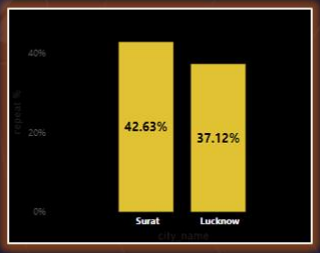
For each city, evaluate monthly performance against targets for total trips, new passengers, and average passenger ratings from targets_db. Determine if each metric met, exceeded, or missed the target, and calculate the percentage difference. Identify any consistent patterns in target achievement, particularly across tourism versus business-focused cities.

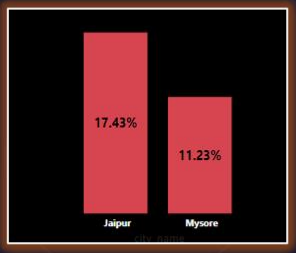
city_name	Total Trips	Target Trips	Target difference	Total New Passengers	Target New Passengers	New Passenger Difference	Passenger Rating	Target Rating	Rating Difference
Coimbatore	21104	21000	0.50%	8514	7500	13.52%	7.88	8.25	-0.37
Surat	54843	57000	-3.78%	11626	10500	10.72%	6.42	7.00	-0.58
Indore	42456	43500	-2.40%	14863	14100	5.41%	7.83	8.00	-0.17
Lucknow	64299	72000	-10.70%	16260	15600	4.23%	6.49	7.25	-0.76
Vadodara	32026	37500	-14.60%	10127	9900	2.29%	6.61	7.50	-0.89
Kochi	50702	49500	2.43%	26416	27000	-2.16%	8.52	8.50	0.02
Mysore	16238	13500	20.28%	11681	12000	-2.66%	8.70	8.50	0.20
Visakhapatnam	28366	28500	-0.47%	12747	13500	-5.58%	8.43	8.50	-0.07
Chandigarh	38981	39000	-0.05%	18908	21000	-9.96%	7.98	8.00	-0.02
Jaipur	76888	67500	13.91%	45856	54000	-15.08%	8.58	8.25	0.33
Total	425903	429000	-0.72%	176998	185100	-4.38%	7.66	7.98	-0.31

Tourism cities like Jaipur , Mysore ,Kochi has reached more than target trips and more than Target rating

Question 8 A

Analyze the Repeat Passenger Rate (RPR%) for each city across the six-month period. Identify the top 2 and bottom 2 cities based on their RPR% to determine which locations have the strongest and weakest rates.





Surat and Lucknow have Highest RPR% and
Jaipur ,Mysore have lowest RPR%

Question 8 B

Similarly, analyze the RPR% by month across all cities and identify the months with the highest and lowest repeat passenger rates. This will help to pinpoint any seasonal patterns or months with higher repeat passenger loyalty.

month_name	April	February	January	June	March	May
Surat	17.73%	14.28%	12.70%	19.08%	16.85%	19.37%
Lucknow	17.18%	13.98%	12.77%	20.41%	14.83%	20.83%
Indore	17.96%	14.01%	13.48%	18.15%	14.39%	22.01%
Vadodara	18.67%	11.98%	11.18%	21.06%	16.29%	20.82%
Visakhapatnam	20.23%	14.42%	11.89%	17.17%	17.26%	19.04%
Coimbatore	19.63%	12.22%	12.47%	17.39%	15.30%	23.00%
Kochi	18.02%	13.93%	10.46%	19.24%	16.16%	22.18%
Chandigarh	18.40%	13.19%	11.89%	20.15%	16.30%	20.07%
Jaipur	20.09%	12.13%	10.92%	15.44%	18.07%	23.35%
Mysore	16.94%	11.88%	12.01%	22.21%	14.10%	22.86%

All cities except Vishakapatnam has highest RPR% in May
Vishakapatnam has highest RPR% in April