

# SQL and Databases:

## Project Report

**By: <HARIKRISHNAN, PGPDSBA.O.DEC22.A>**

## Business Overview

Total Revenue

125.82 M

Total Orders

1000

Total Customers

994

Avg Rating

3.13

Last Qtr Revenue

23.49M

Last Qtr Orders

199

Avg Days to Ship

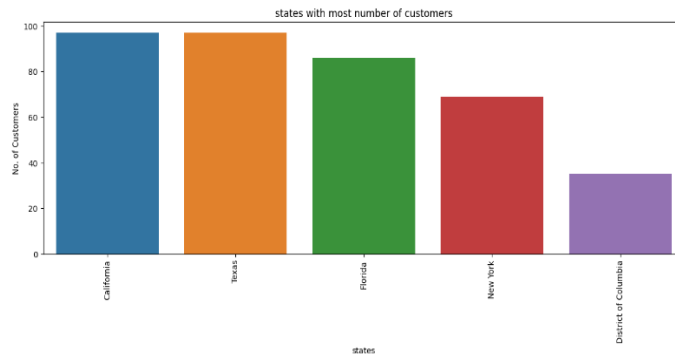
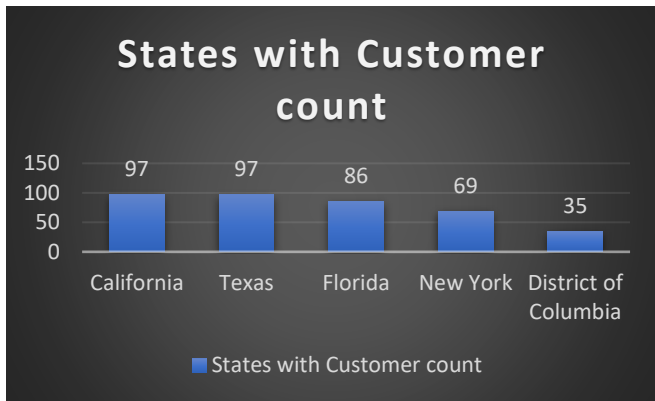
97

% Good Feedback

44%

# Customer Metrics

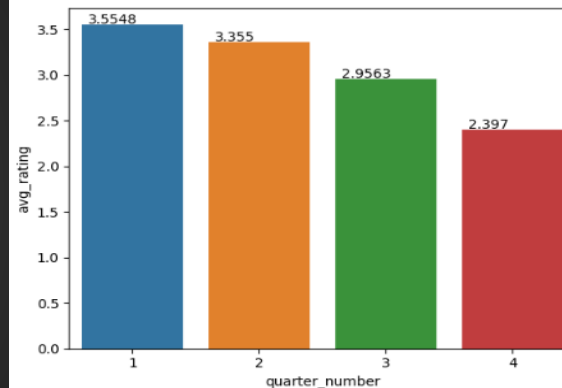
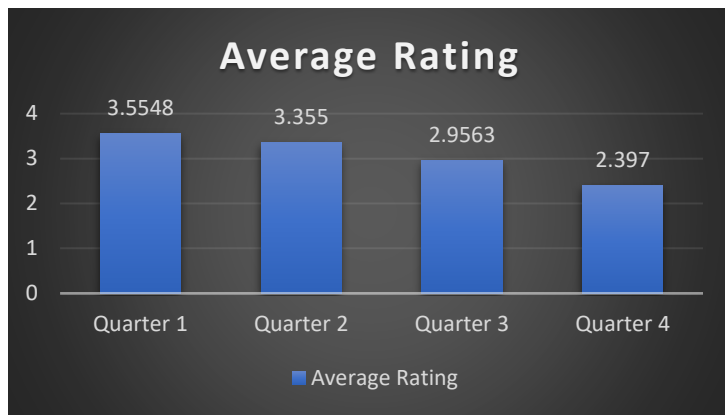
## Distribution of Customers across States



### Observations / Findings

- Texas and California each have 97 customers out of 994 total customers.
- Florida is in third place for having the most customers (86).
- District of Columbia (35) and New York (69) are in fourth and fifth place, respectively.
- There are not many clients in Maine, Wyoming, and Vermont.

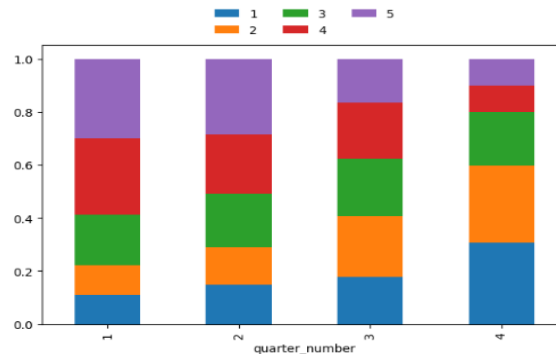
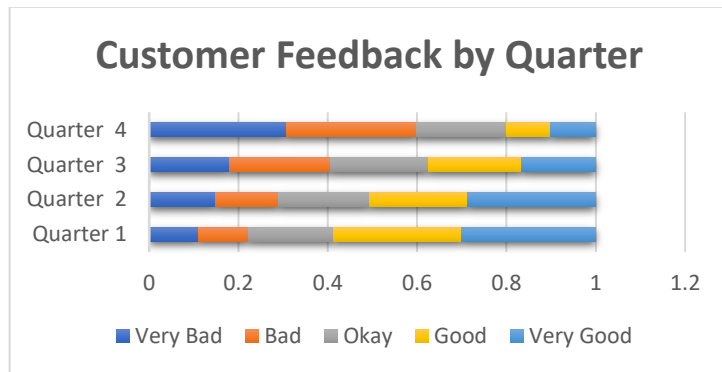
## Average Customer Ratings by Quarter



### Observations / Findings

- When compared to the ratings for the other quarters, the first quarter had a high average rating of 3.55.
- The lowest average rating was 2.39 in the fourth quarter.
- With average ratings of 3.35 and 2.95, respectively, the second and third quarters had a moderate rating.

## Trend of Customer Satisfaction

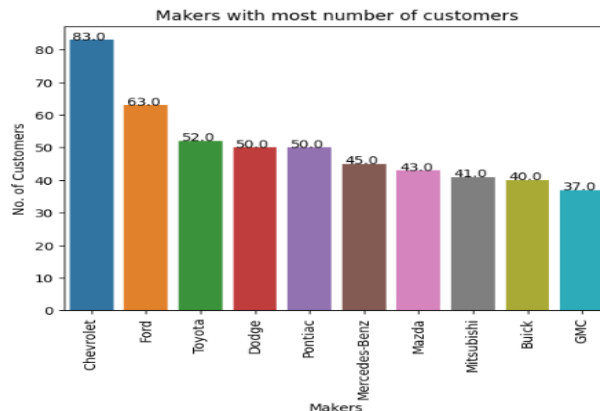
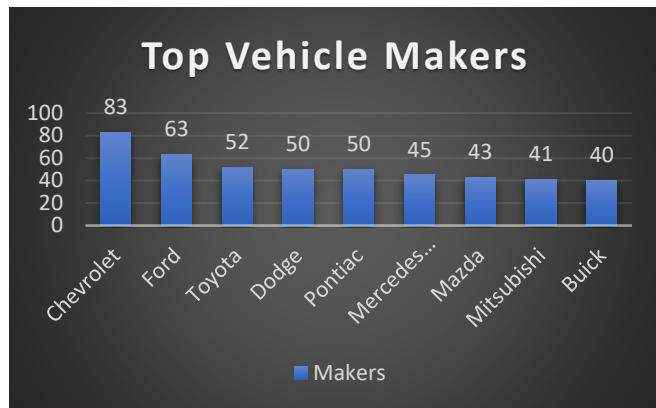


1: Very bad  
2: Bad  
3: okay  
4: Good  
5: Very Good

### Observations / Findings

- The percentage of positive evaluations is greater in the first and second quarters (51% and 58%, respectively).
- The fourth quarter had the lowest rating percentage, at 60%.
- 20% of all quarters fall under "Okay." 20% of products are therefore always in the usual group.

## Top Vehicle makers preferred by customers



### Observations / Findings

- Chevrolet has 83 more customers than other brands.
- Ford is in second place with 63 clients.
- 50 customers are present at Dodge and Pontiac. They may outsell Toyota in terms of consumer base if they offered certain price-competitive offers and high-quality designs.
- Mercedes is used by 45 different customers.

## Most preferred vehicle make in each state

state	Top vehicle_maker	num_customers
Texas	Chevrolet	9
Florida	Toyota	7
California	Ford	6
	Dodge	6
	Audi	6
	Nissan	6
	Chevrolet	6
Ohio	Chevrolet	6
Alabama	Dodge	5
Colorado	Chevrolet	5
Maryland	Ford	5
New York	Toyota	5
	Pontiac	5
Virginia	Ford	5
Washington	Chevrolet	5

District of Columbia	Chevrolet	4
Indiana	Mazda	4
Missouri	Chevrolet	4
Arizona	Pontiac	3
	Cadillac	3
Georgia	Toyota	3
Illinois	Ford	3
	GMC	3
	Chevrolet	3
Michigan	Ford	3
Minnesota	GMC	3
Nevada	Pontiac	3
North Carolina	Volvo	3
Pennsylvania	Toyota	3
Tennessee	Mazda	3
Alaska	Chevrolet	2
Connecticut	Chevrolet	2
	Mercury	2
	Maserati	2



	Volvo	2
Delaware	Mitsubishi	2
Idaho	Dodge	2
Louisiana	BMW	2
	Nissan	2
	Ford	2
	Pontiac	2
	Kia	2
Massachusetts	Dodge	2
	Chevrolet	2
New Jersey	Mercedes-Benz	2
	Hyundai	2
New Mexico	Dodge	2
Oklahoma	Toyota	2
	Ferrari	2
	Mazda	2
Oregon	Toyota	2
West Virginia	Mercedes-Benz	2
Arkansas	Suzuki	1
	Chevrolet	1

	Pontiac	1
	Volkswagen	1
	Mitsubishi	1
	GMC	1
Hawaii	Ford	1
	Toyota	1
	Pontiac	1
	Nissan	1
	Cadillac	1
	GMC	1
Iowa	Chrysler	1
	Chevrolet	1
	Hyundai	1
	Isuzu	1
	Dodge	1
	Mazda	1
	Porsche	1
	Jeep	1
	Ford	1
	Pontiac	1
	Subaru	1

Kansas	GMC	1
	Lexus	1
	Buick	1
	Mercedes-Benz	1
	Suzuki	1
	Honda	1
	Dodge	1
	Volkswagen	1
	Ford	1
	Mazda	1
	Maserati	1
	Nissan	1
	Saab	1
Kentucky	Acura	1
	Mercury	1
	Audi	1
	Ram	1
	Volvo	1
	Pontiac	1
	Nissan	1

	Mercedes-Benz	1
Maine	Mercedes-Benz	1
Mississippi	Dodge	1
	Toyota	1
Montana	Chevrolet	1
	Mitsubishi	1
	Dodge	1
	Chevrolet	1
	Mercedes-Benz	1
	Volkswagen	1
	Nissan	1
	Pontiac	1
	Toyota	1
	Cadillac	1
New Hampshire	Chrysler	1
	Lincoln	1
	Lexus	1
North Dakota	Hyundai	1
	Ford	1

South Carolina	Acura	1
	Buick	1
	BMW	1
	Kia	1
	Mazda	1
	Mitsubishi	1
	Dodge	1
	Jaguar	1
	Isuzu	1
Utah	Maybach	1
	Volkswagen	1
	Isuzu	1
	Subaru	1
	Lincoln	1
	Chevrolet	1
	Oldsmobile	1

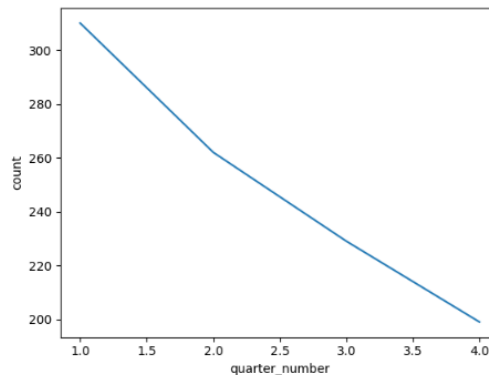
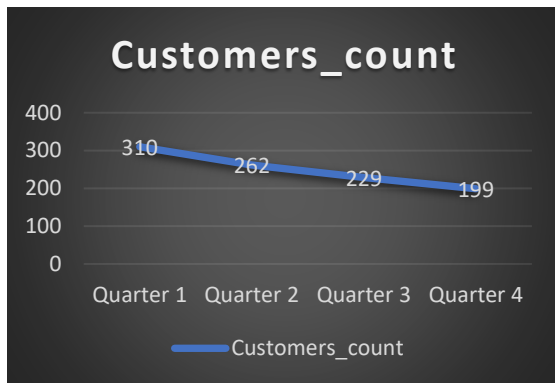
	Pontiac	1
	Dodge	1
	Buick	1
Vermont	Mazda	1
Wisconsin	Pontiac	1
	Chevrolet	1
	Acura	1
	Mazda	1
	Nissan	1
	Cadillac	1
	Dodge	1
	Honda	1
Wyoming	Buick	1

## Observations / Findings

- Texas is one of the states with the highest consumer volume and only one automobile manufacturer, Chevrolet.
- Toyota is the only automobile manufacturer in Florida, and it serves seven customers.
- California is home to several automakers There are six customers in each of the following manufacturers: Ford, Dodge, Audi, Nissan, and Chevrolet. Thus, California is the finest state in which to purchase any type of automobile.
- Chevrolet is the only manufacturer in Ohio, and there are six customers.
- In most states, Chevrolet is the favourite manufacturer.

# Revenue Metrics

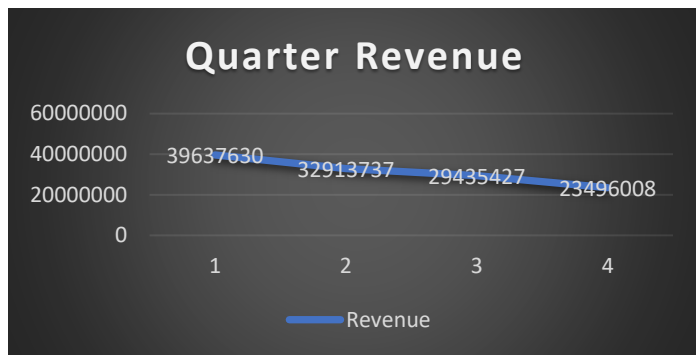
## Trend of purchases by Quarter



### Observations / Findings

- Since there were more clients in the first quarter, more people bought vehicles at that period.
- The consumer count in the fourth quarter was only 199.
- In the second and third quarters, there were 262 and 229 clients, respectively, which is a respectable figure.

## Quarter on Quarter % change in Revenue

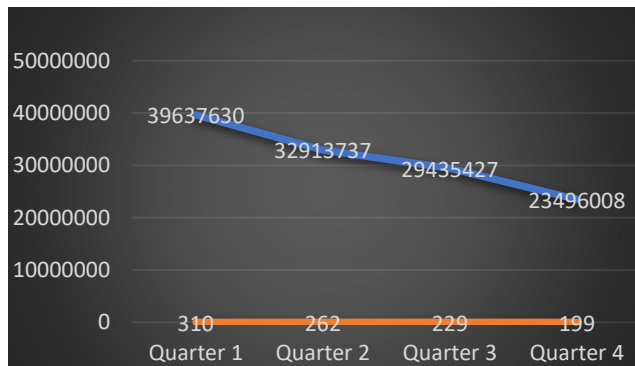


quarter_number	total_revenue	qoq_change (in Percentage)
1	39637630.97	
2	32913737.76	-16.963408
3	29435427.48	-10.567959
4	23496008.22	-20.177792

### Observations/ Findings

- The overall revenue for the first quarter was \$39637630.
- Revenue during the second quarter (\$32913737) was down 17% from revenue for the first quarter.
- Revenue for the third quarter (\$29435427) fell by 10.5% from the second quarter.
- Quarter 4 revenue (\$23496008) was 20% lower than Quarter 3, indicating fewer customers purchased vehicles in this quarter.

## Trend of Revenue and Orders by Quarter



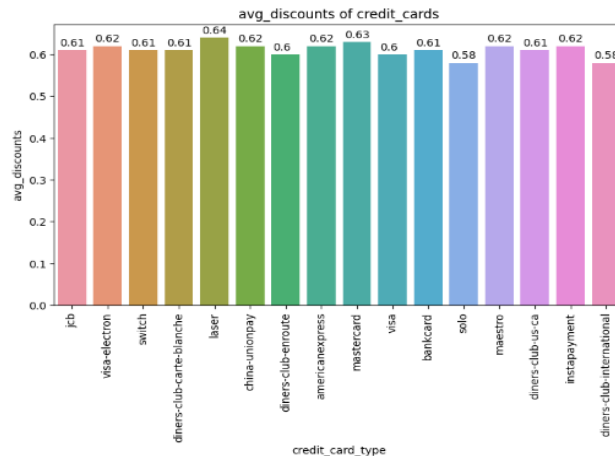
### Observations/ Findings

- The first quarter had a higher customer count of 310 and a higher revenue of \$39637630.
- Customer count 199 and revenue \$23496008 were lowest in the fourth quarter.
- Quarters 2 and 3 saw moderate revenue growth.
- Revenue and Customer count are positively correlated.



# Shipping Metrics

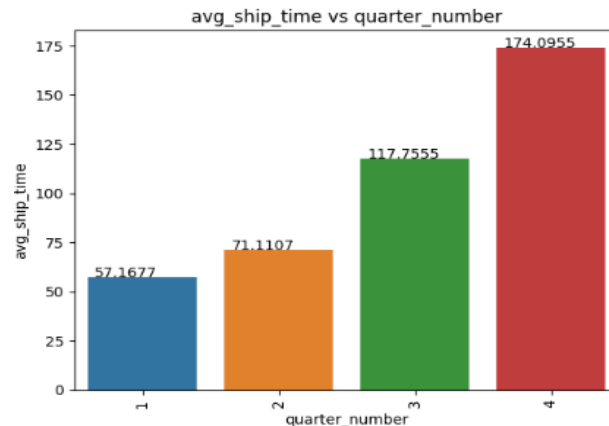
## Average discount offered by Credit Card type



### Observations/ Findings

- The average discount from Laser was 0.64.
- The majority of the cards offered discounts of 0.60 to 0.64
- Diners Club provided the lowest average discount of 0.584.
- Very few people used Diners club credit card.

## Time taken to ship orders by Quarter



### Observations/ Findings

- In Compared to past quarters, the first quarter's average shipment time for all orders was only 57 days.
- 174 days, or more than 150% longer on average, were needed to ship orders in the fourth quarter than in the first.
- The average shipment time for the second and third quarters is 71 days and 118 days, respectively.

# Insights and Recommendations

- The first quarter had a higher customer count of 310 and a higher revenue of \$39637630. It denotes customers are most interested to buy vehicles in first quarter itself.
- Quarter 4 revenue was 40% lower than Quarter 1, indicating fewer customers purchased vehicles in this quarter. So, manufacture should provide some offers like more discount, exchange bonus and corporate discount.
- In contrast to previous quarters, the first quarter's average shipping time for all purchases was just 57 days. Therefore, if we reduce shipping, we will be able to fill more orders on the remaining quarters.
- Chevrolet has 83 more customers than the competition, indicating that consumers prefer to purchase Chevrolet vehicles. Therefore, we can expand Chevrolet's branch office in a number of places, including Alabama, Maryland, and New York.
- Toyota needs to get better if it wants to outperform Chevrolet in terms of customer acquisition.
- 50 customers are present at Dodge and Pontiac. They may outsell Toyota in terms of consumer base if they offered certain price-competitive offers and high-quality designs.
- The first and second quarters have higher positive evaluation percentages (51% and 58%, respectively). This indicates that customers are receiving good service from manufacturers in terms of delivery and help.
- The majority of people used JCB credit cards, which have significant advantages over other cards. Other cards should therefore provide promotions in order to draw clients.

- Due to a lack of customer interest, manufacturers should produce fewer vehicles in the third and fourth quarters.
- Due to the limited number of manufacturing options, Texas and Florida are suitable locations for new manufacturing branches.
- Twenty percent of all quarters are "Okay." Therefore, 20% of products are always in the typical group. So, it might be slightly improved to receive favourable comments.
- By offering additional card discounts, you can get more customers. So that we may increase more discounts, we can check with the top second card issuers like Mastercard.