



# **SQL and Databases:**

## **Project Report**

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**Batch : 4**

# Business Overview

Total Revenue

124.71M

Total Orders

1000

Total Customers

994

Avg Rating

3.1350

Last Qtr Revenue

23.34 M

Last Qtr Orders

199

Avg Days to Ship

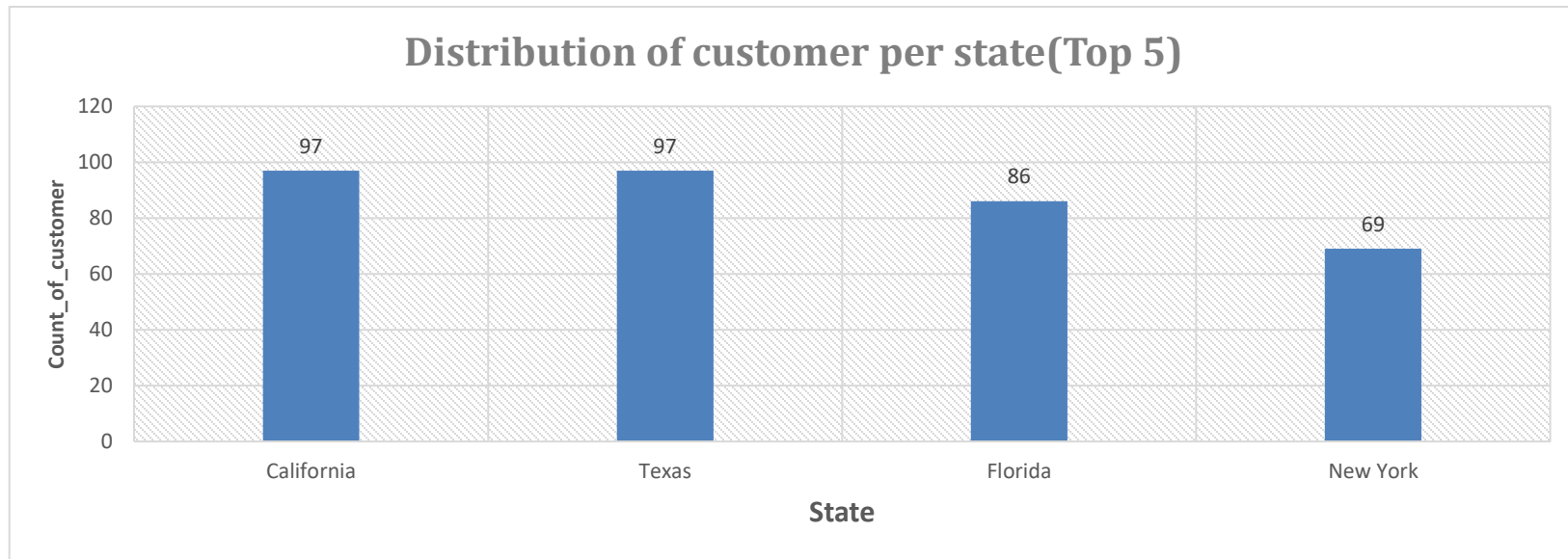
98

% Positive Feedback

44%

# Customer Metrics

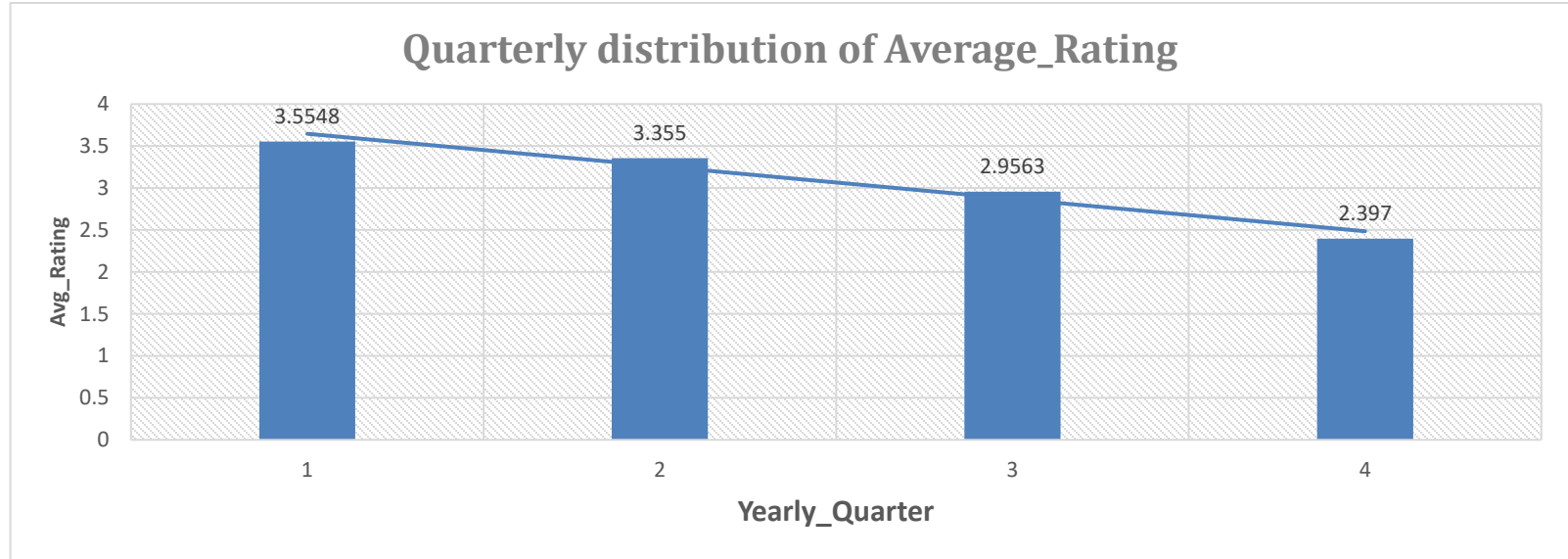
# Distribution of Customers across States



## Observations / Findings

- According to the data, California and Texas emerged as the leading states for car sales last year.
- Conversely, Maine, Wyoming, and Vermont experienced the lowest car sales figures based on the data.
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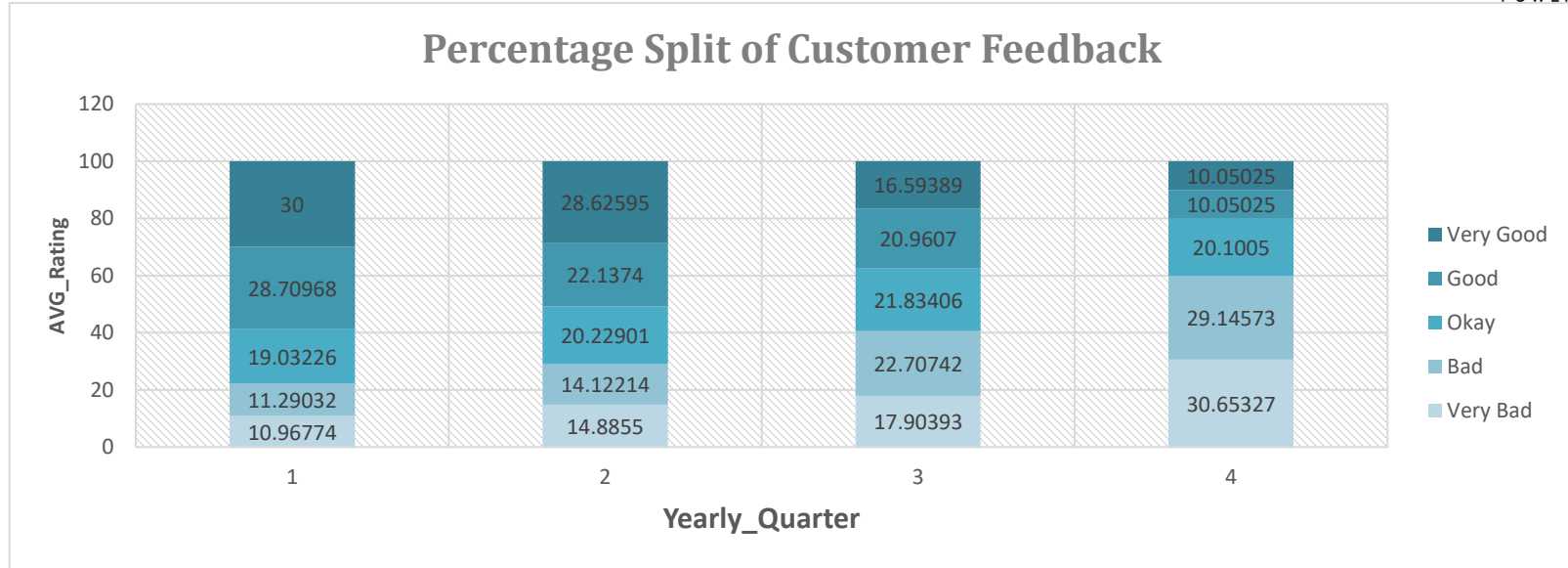
# Average Customer Ratings by Quarter



## Observations / Findings

- Highest rating received till now is 3.5548 on Quarter1.
- Lowest rating received till now is 2.397 on Quarter4.
- Trends show that Customer Rating is decreasing side.

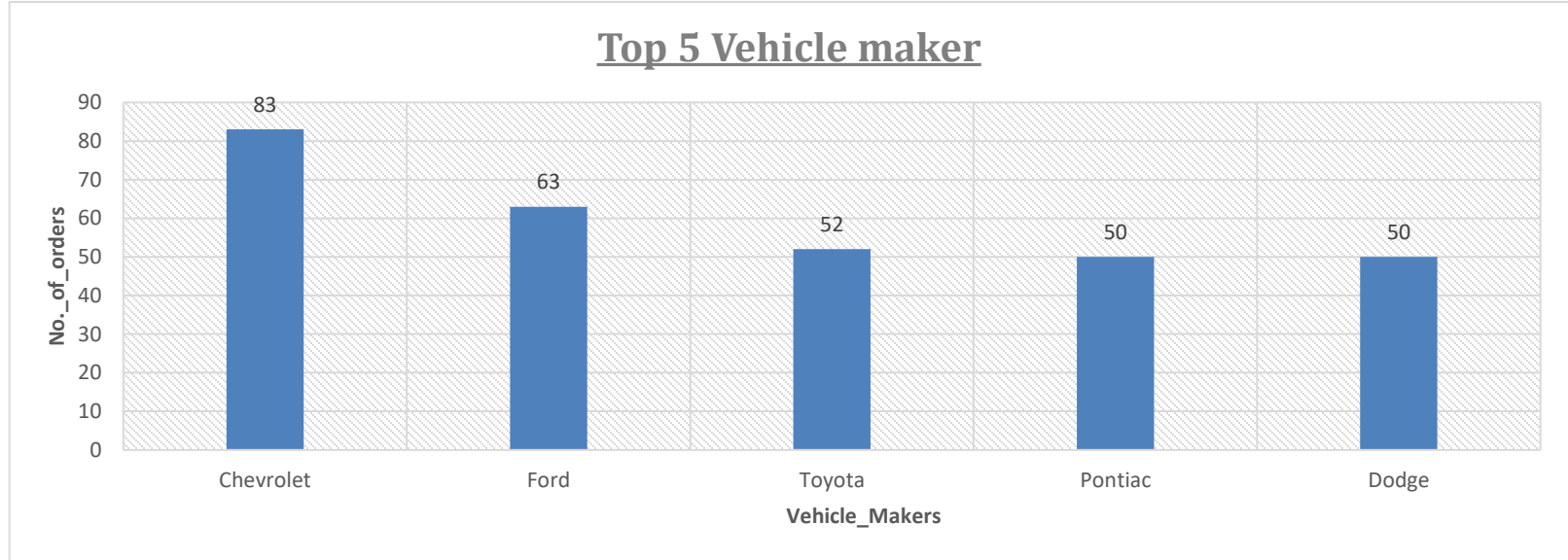
# Trend of Customer Satisfaction



## Observations / Findings

- The data reveals a consistent decrease in positive ratings over each quarter.
- Quarter One marked the peak in positive ratings, with the highest levels of satisfaction, including ratings classified as "good" and "very good."
- Conversely, the last quarter recorded the lowest ratings, indicating a notable decline in satisfaction levels.

# Top Vehicle makers preferred by customers



## Observations / Findings

- Chevrolet stands out as the most preferred vehicle maker among consumers.
- There exists a significant disparity in sales figures between Chevrolet and Dodge, indicating a substantial difference in popularity and market performance between the two brands.

# Most preferred vehicle make in each state

state	vehicle maker	Count_of customer	state	vehicle maker	Count_of customer	state	vehicle maker	Count_of customer	state	vehicle maker	Count_of customer
Alabama	Dodge	5	Colorado	Chevrolet	5	Idaho	Dodge	2	Iowa	Subaru	1
Alaska	Chevrolet	2	Connecticut	Chevrolet	2	Illinois	Ford	3	Kansas	GMC	1
Arizona	Pontiac	3	Connecticut	Mercury	2	Illinois	GMC	3	Kansas	Lexus	1
Arizona	Cadillac	3	Connecticut	Maserati	2	Illinois	Chevrolet	3	Kansas	Buick	1
Arkansas	Suzuki	1	Connecticut	Volvo	2	Indiana	Mazda	4	Kansas	Mercedes-Benz	1
Arkansas	Chevrolet	1	Delaware	Mitsubishi	2	Iowa	Chrysler	1	Kansas	Suzuki	1
Arkansas	Pontiac	1	District of Columbia	Chevrolet	4	Iowa	Chevrolet	1	Kansas	Honda	1
Arkansas	Volkswagen	1	Florida	Toyota	7	Iowa	Hyundai	1	Kansas	Dodge	1
Arkansas	Mitsubishi	1	Georgia	Toyota	3	Iowa	Isuzu	1	Kansas	Volkswagen	1
Arkansas	GMC	1	Hawaii	Ford	1	Iowa	Dodge	1	Kansas	Ford	1
California	Dodge	6	Hawaii	Toyota	1	Iowa	Mazda	1	Kansas	Mazda	1
California	Audi	6	Hawaii	Pontiac	1	Iowa	Porsche	1	Kansas	Maserati	1
California	Nissan	6	Hawaii	Nissan	1	Iowa	Jeep	1	Kansas	Nissan	1
California	Chevrolet	6	Hawaii	Cadillac	1	Iowa	Ford	1	Kansas	Saab	1
California	Ford	6	Hawaii	GMC	1	Iowa	Pontiac	1	Kentucky	Acura	1



state	vehicle maker	Count of customer	state	vehicle maker	Count of customer	state	vehicle maker	Count of customer	state	vehicle maker	Count of customer
Kentucky	Mercury	1	Massachusetts	Chevrolet	2	Nebraska	Cadillac	1	Oklahoma	Mazda	2
Kentucky	Audi	1	Michigan	Ford	3	Nevada	Pontiac	3	Oklahoma	Toyota	2
Kentucky	Ram	1	Minnesota	GMC	3	New Hampshire	Chrysler	1	Oregon	Toyota	2
Kentucky	Volvo	1	Mississippi	Dodge	1	New Hampshire	Lincoln	1	Pennsylvania	Toyota	3
Kentucky	Pontiac	1	Mississippi	Toyota	1	New Hampshire	Lexus	1	South Carolina	Acura	1
Kentucky	Nissan	1	Missouri	Chevrolet	4	New Jersey	Mercedes-Benz	2	South Carolina	Buick	1
Kentucky	Mercedes-Benz	1	Montana	Chevrolet	1	New Jersey	Hyundai	2	South Carolina	BMW	1
Louisiana	BMW	2	Montana	Mitsubishi	1	New Mexico	Dodge	2	South Carolina	Kia	1
Louisiana	Nissan	2	Montana	Dodge	1	New York	Toyota	5	South Carolina	Mazda	1
Louisiana	Ford	2	Nebraska	Chevrolet	1	New York	Pontiac	5	South Carolina	Mitsubishi	1
Louisiana	Pontiac	2	Nebraska	Mercedes-Benz	1	North Carolina	Volvo	3	South Carolina	Dodge	1
Louisiana	Kia	2	Nebraska	Volkswagen	1	North Dakota	Hyundai	1	South Carolina	Jaguar	1
Maine	Mercedes-Benz	1	Nebraska	Nissan	1	North Dakota	Ford	1	South Carolina	Isuzu	1
Maryland	Ford	5	Nebraska	Pontiac	1	Ohio	Chevrolet	6	Tennessee	Mazda	3
Massachusetts	Dodge	2	Nebraska	Toyota	1	Oklahoma	Ferrari	2	Texas	Chevrolet	9

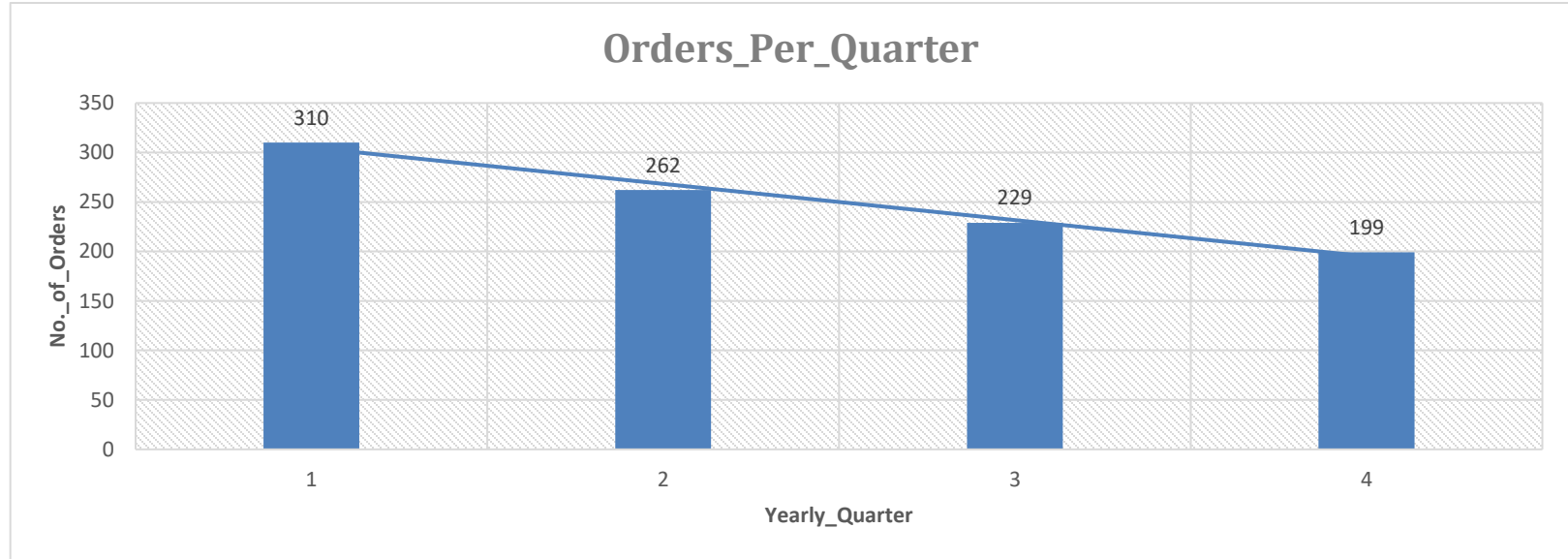
state	vehicle maker	Count_of customer	state	vehicle maker	Count_of customer
Utah	Maybach	1	Wisconsin	Chevrolet	1
Utah	Volkswagen	1	Wisconsin	Acura	1
Utah	Isuzu	1	Wisconsin	Mazda	1
Utah	Subaru	1	Wisconsin	Nissan	1
Utah	Lincoln	1	Wisconsin	Cadillac	1
Utah	Chevrolet	1	Wisconsin	Dodge	1
Utah	Oldsmobile	1	Wisconsin	Honda	1
Utah	Pontiac	1	Wyoming	Buick	1
Utah	Dodge	1			
Utah	Buick	1			
Vermont	Mazda	1			
Virginia	Ford	5			
Washington	Chevrolet	5			
West Virginia	Mercedes-Benz	2			
Wisconsin	Pontiac	1			

## Observations / Findings

- Many states show a preference for multiple vehicle makers, as indicated in the table.
- Conversely, in certain states, identifying a favorite vehicle maker is difficult due to minimal sales, with each maker having only 1 or 2 customers.
- The variability in customer preferences across states underscores the diverse market landscape within the automotive industry.

# Revenue Metrics

# Trend of purchases by Quarter



## Observations / Findings

- The first quarter recorded the highest number of orders received.
- Conversely, the last quarter marked the lowest number of orders received.
- A discernible trend reveals a consistent decrease in the number of orders received quarter by quarter.

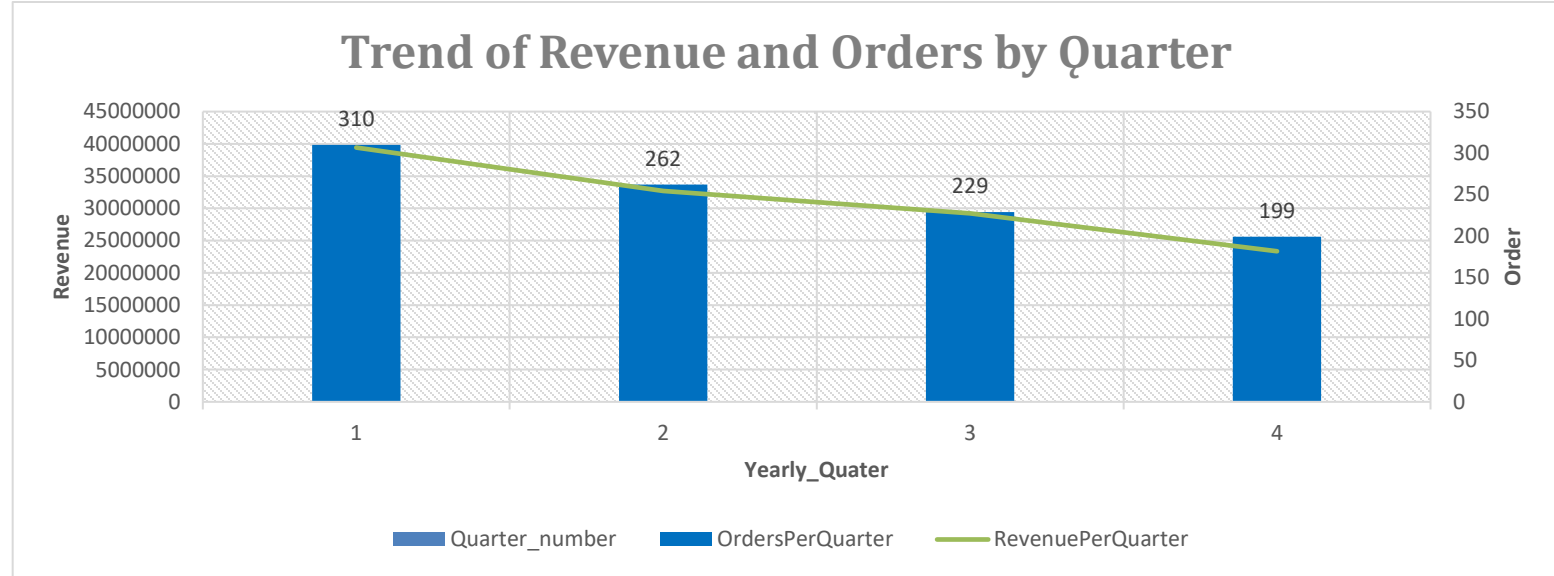
# Quarter on Quarter % change in Revenue

order_year	order_quarter	total_revenue	prev_quarter_revenue	qoq_percentage_change
2018	1	39421580.16	0	0
2018	2	32715830.34	39421580.16	-17.01035269
2018	3	29229896.19	32715830.34	-10.65519081
2018	4	23346779.63	29229896.19	-20.12705254

## Observations / Findings

- The company's revenue is experiencing a consistent decline quarter by quarter.
- Quarter 4 reflects the lowest revenue, while Quarter 1 marks the highest.
- The most substantial percentage change in revenue, approximately -20%, occurs in Quarter 4, indicating a significant decrease compared to the previous quarter, as denoted by the negative sign.

# Trend of Revenue and Orders by Quarter

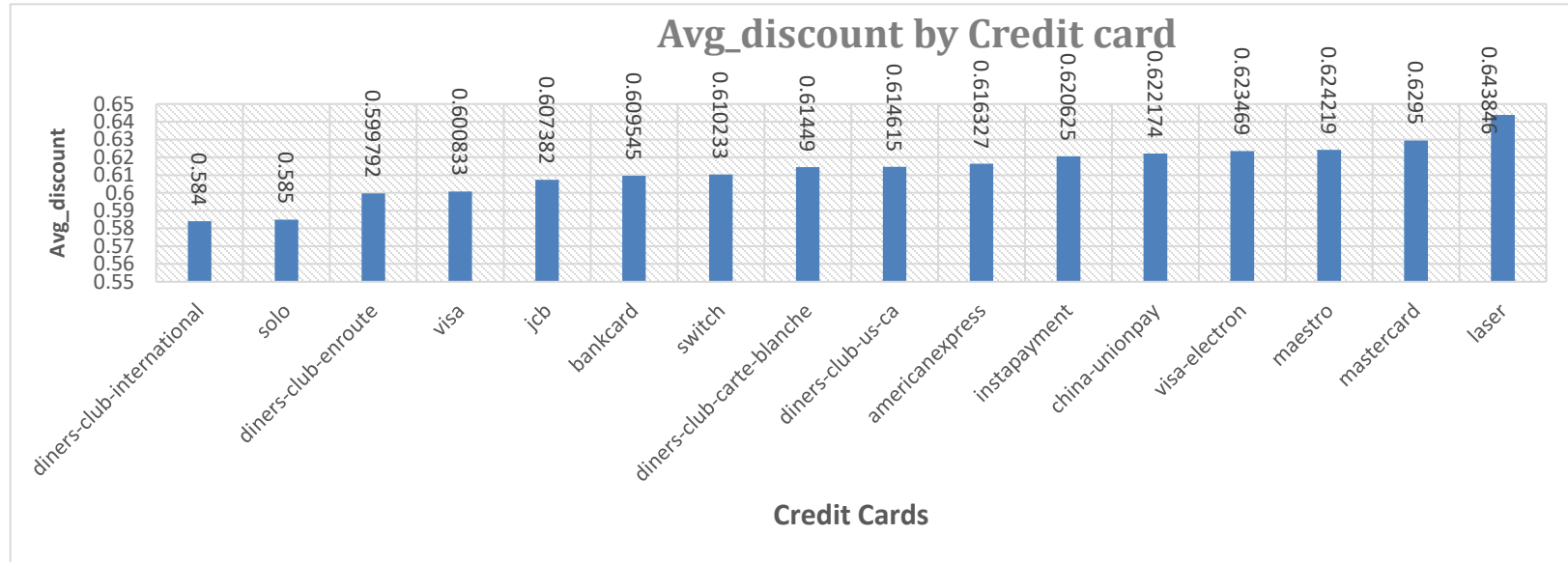


## Observations / Findings

- The company's revenue is declining in tandem with the decreasing number of orders quarter by quarter.
- The first quarter saw the highest number of orders received, reaching 310.
- Quarter 4 resulted in the lowest revenue generation for the company.

# Shipping Metrics

# Average discount offered by Credit Card type

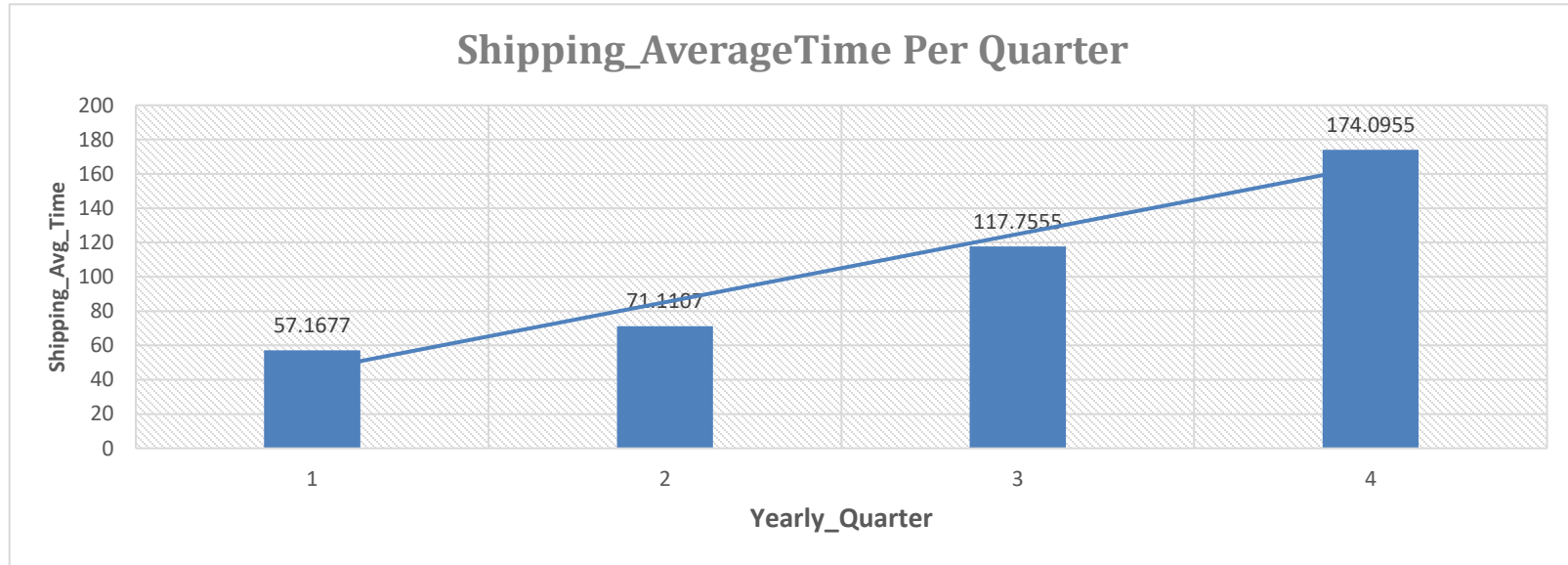


## Observations / Findings

- The lowest discount offered by Diners Club International credit card is 0.584.
- The highest discount provided by Laser credit card is 0.643846.
- 16 type of different credit card used by customer to purchase vehicle.



# Time taken to ship orders by Quarter



## Observations / Findings

- Shipping time is progressively increasing quarter by quarter.
- The average shipping time in the fourth quarter is three times longer than the average shipping time in the first quarter.
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# Insights and Recommendations

- The customer feedback rating is on a continuous downward trend, significantly impacting overall sales performance.
- This decline in customer satisfaction is also correlating with a noticeable decrease in company revenue.
- A primary factor contributing to the negative feedback is the extended delivery times, which have nearly tripled between the last and first quarters.
- To reverse this trend and improve company revenue, there is a critical need to expedite vehicle delivery processes.
- Given Chevrolet's popularity as the most preferred vehicle maker, implementing higher discounts on Chevrolet models could potentially stimulate sales.
- Currently, the highest discount offered on credit cards stands at a mere 0.64 percent, falling short of market standards.
- Increasing the discount rate on credit card transactions could serve as a catalyst for driving higher sales volumes.
- Addressing the issue of prolonged delivery times is paramount to enhancing overall customer satisfaction levels.
- Proactive measures should be taken to streamline delivery processes and ensure timely vehicle handovers to customers.
- By prioritizing efficient delivery and offering competitive discounts, the company can not only boost sales but also enhance its reputation and customer loyalty in the market.