SQL Query

Business Report

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Problem Statement-

New-Wheels sales have been dipping steadily in the past year, and due to the critical customer feedback and ratings online, there has been a drop in new customers every quarter, which is concerning to the business. The CEO of the company now wants a quarterly report with all the key metrics sent to him so he can assess the health of the business and make the necessary decisions.

Data Description:

You have data on the vehicles you sell: what is the make, model, and year? What is the price point? Data on your customers, such as where they live and payment methods, data on orders and shipments, such as when the order was shipped and received, what the after-sales feedback was, and so on.
- shipper_id: Unique ID of the Shipper
- shipper_name: Name of the Shipper
- shipper_contact_details: Contact detail of the Shipper
- product_id: Unique ID of the Product
- vehicle_maker: Vehicle Manufacturing company name
- vehicle_model: Vehicle model name
- vehicle_color: Colour of the Vehicle
- vehicle_model_year: Year of Manufacturing
- vehicle_price: Price of the Vehicle
- quantity: Ordered Quantity
- customer_id: Unique ID of the customer
- customer_name: Name of the customer
- gender: Gender of the customer
- job_title: Job Title of the customer
- phone_number: Contact detail of the customer
- email_address: Email address of the customer
- city: Residing city of the customer
- country: Residing country of the customer
- state: Residing state of the customer

- customer_address: Address of the customer
- order_date: Date on which customer ordered the vehicle
- order_id: Unique ID of the order
- ship_date: Shipment Date
- ship_mode: Shipping Mode/Class
- shipping: Shipping Ways
- postal_code: Postal Code of the customer
- discount: Discount given to the customer for the particular order by credit card in percentage
- credit_card_type: Credit Card Type
- credit_card_number: Credit card number
- customer_feedback: Feedback of the customer
- quarter_number : Quarter Number

Q.1 What is the distribution of customers across states?

State	no_of_customers
California	97
Texas	97
Florida	86
New York	69
District of Columbia	35
Colorado	33
Ohio	33
Alabama	29
Washington	28
Arizona	26
Illinois	25
Pennsylvania	25
Virginia	24
Tennessee	23
Missouri	23
Connecticut	22

Indiana	21
Louisiana	20
North Carolina	20
Georgia	18
Minnesota	17
Nevada	17
Michigan	17
Oklahoma	16
Massachusetts	14
Maryland	14
Kansas	13
Iowa	11
Utah	10
West Virginia	10
Alaska	10
New Jersey	9
South Carolina	9
Wisconsin	8
Kentucky	8
Nebraska	7
Idaho	7
Oregon	7
Arkansas	6
Hawaii	6
Delaware	6
New Mexico	5
New Hampshire	3
Montana	3
North Dakota	2
Mississippi	2
Maine	1
Wyoming	1
Vermont	1

Q.2 What is the average rating in each quarter?Very Bad is 1, Bad is 2, Okay is 3, Good is 4, Very Good is 5.

quarter_number	average_customer_rating
1	3.55
2	3.35
3	2.96
4	2.4

Q.3 Are customers getting more dissatisfied over time?

quarter_number	customer_feedback	percentage_customer_feedback
1	Bad	11.29
1	Good	28.71
1	Okay	19.03
1	Very Bad	10.97
1	Very Good	30
2	Bad	14.12
2	Good	22.14
2	Okay	20.23
2	Very Bad	14.89
2	Very Good	28.63
3	Bad	22.71
3	Good	20.96
3	Okay	21.83
3	Very Bad	17.9
3	Very Good	16.59
4	Bad	29.15
4	Good	10.05
4	Okay	20.1
4	Very Bad	30.65
4	Very Good	10.05

Q.4 Which are the top 5 vehicle makers preferred by the customer.

vehicle_maker	customer_count
Chevrolet	83
Ford	63
Toyota	52
Dodge	50
Pontiac	50

Q.5 What is the most preferred vehicle make in each state?

state	vehicle_maker	count
Alabama	Dodge	5
Alaska	Chevrolet	2
Arizona	Cadillac	3
Arizona	Pontiac	3
Arkansas	Chevrolet	1
Arkansas	GMC	1
Arkansas	Mitsubishi	1
Arkansas	Pontiac	1
Arkansas	Suzuki	1
Arkansas	Volkswagen	1
California	Audi	6
California	Chevrolet	6
California	Dodge	6
California	Ford	6
California	Nissan	6
Colorado	Chevrolet	5
Connecticut	Chevrolet	2
Connecticut	Maserati	2
Connecticut	Mercury	2
Connecticut	Volvo	2

Delaware	Mitsubishi	2
District of Columbia	Chevrolet	4
Florida	Toyota	7
Georgia	Toyota	3
Hawaii	Cadillac	1
Hawaii	Ford	1
Hawaii	GMC	1
Hawaii	Nissan	1
Hawaii	Pontiac	1
Hawaii	Toyota	1
Idaho	Dodge	2
Illinois	Chevrolet	3
Illinois	GMC	3
Illinois	Ford	3
Indiana	Mazda	4
Iowa	Chevrolet	1
Iowa	Chrysler	1
Iowa	Dodge	1
Iowa	Ford	1
Iowa	Hyundai	1
Iowa	Isuzu	1
Iowa	Jeep	1
Iowa	Mazda	1
Iowa	Pontiac	1
Iowa	Porsche	1
Iowa	Subaru	1
Kansas	Buick	1
Kansas	Dodge	1
Kansas	Ford	1
Kansas	GMC	1
Kansas	Honda	1
Kansas	Lexus	1
Kansas	Maserati	1

Kansas	Mazda	1
Kansas	Mercedes-Benz	1
Kansas	Nissan	1
Kansas	Saab	1
Kansas	Suzuki	1
Kansas	Volkswagen	1
Kentucky	Acura	1
Kentucky	Audi	1
Kentucky	Mercedes-Benz	1
Kentucky	Mercury	1
Kentucky	Nissan	1
Kentucky	Pontiac	1
Kentucky	Ram	1
Kentucky	Volvo	1
Louisiana	Nissan	2
Louisiana	BMW	2
Louisiana	Ford	2
Louisiana	Pontiac	2
Louisiana	Kia	2
Maine	Mercedes-Benz	1
Maryland	Ford	5
Massachusetts	Dodge	2
Massachusetts	Chevrolet	2
Michigan	Ford	3
Minnesota	GMC	3
Mississippi	Dodge	1
Mississippi	Toyota	1
Missouri	Chevrolet	4
Montana	Chevrolet	1
Montana	Dodge	1
Montana	Mitsubishi	1
Nebraska	Cadillac	1
Nebraska	Chevrolet	1

Nebraska	Mercedes-Benz	1
Nebraska	Nissan	1
Nebraska	Pontiac	1
Nebraska	Toyota	1
Nebraska	Volkswagen	1
Nevada	Pontiac	3
New Hampshire	Chrysler	1
New Hampshire	Lexus	1
New Hampshire	Lincoln	1
New Jersey	Hyundai	2
New Jersey	Mercedes-Benz	2
New Mexico	Dodge	2
New York	Toyota	5
New York	Pontiac	5
North Carolina	Volvo	3
North Dakota	Ford	1
North Dakota	Hyundai	1
Ohio	Chevrolet	6
Oklahoma	Ferrari	2
Oklahoma	Mazda	2
Oklahoma	Toyota	2
Oregon	Toyota	2
Pennsylvania	Toyota	3
South Carolina	Acura	1
South Carolina	BMW	1
South Carolina	Buick	1
South Carolina	Dodge	1
South Carolina	Isuzu	1
South Carolina	Jaguar	1
South Carolina	Kia	1
South Carolina	Mazda	1
South Carolina	Mitsubishi	1
Tennessee	Mazda	3

Texas	Chevrolet	9
Utah	Buick	1
Utah	Chevrolet	1
Utah	Dodge	1
Utah	Isuzu	1
Utah	Lincoln	1
Utah	Maybach	1
Utah	Oldsmobile	1
Utah	Pontiac	1
Utah	Subaru	1
Utah	Volkswagen	1
Vermont	Mazda	1
Virginia	Ford	5
Washington	Chevrolet	5
West Virginia	Mercedes-Benz	2
Wisconsin	Acura	1
Wisconsin	Cadillac	1
Wisconsin	Chevrolet	1
Wisconsin	Dodge	1
Wisconsin	Honda	1
Wisconsin	Mazda	1
Wisconsin	Nissan	1
Wisconsin	Pontiac	1
Wyoming	Buick	1

Q.6 What is the trend of number of orders by quarters?

quarter_number	number_of_orders
1	310
2	262
3	229
4	199

Q.7 What is the quarter over quarter % change in revenue?

quarter_number	revenue	previous_quarter_revenue	percentage_change_in_revenue
1	26375015.66	NULL	NULL
2	21465757.27	26375015.66	-18.61
3	19582283.12	21465757.27	-8.77
4	15182375.04	19582283.12	-22.47

Q.8 What is the trend of revenue and orders by quarters?

quarter_number	number_of_orders	revenue
1	310	26375015.66
2	262	21465757.27
3	229	19582283.12
4	199	15182375.04

Q.9 What is the average discount offered for different types of credit cards?

credit_card_type	average_discount
americanexpress	517.37
bankcard	516.74
china-unionpay	523
diners-club-carte-blanche	503.24
diners-club-enroute	506.05
diners-club-international	491.22
diners-club-us-ca	500.54
instapayment	515.53
jcb	500.42
laser	557.24
maestro	525.41
mastercard	519.62
solo	509.64
switch	511.8
visa	506.05
visa-electron	512.19

Q.10 What is the average time taken to ship the placed orders for each quarters?

quarter_number	average_days_to_ship
1	57.17
2	71.11
3	117.76
4	174.1

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