

Credit Card Data Analysis

Project Description:

To leverage Azure SQL Database and Azure Data Studio to perform comprehensive data analysis on credit card usage, customer demographics, and financial metrics. The objective is to gain actionable insights that can help the financial institution improve customer satisfaction, manage risks, and optimize their credit card offerings.

Business Requirements:

1.Count the Number of Customers

```
select COUNT(distinct client_Num) as Total_customers from Credit_card;
```

```
4
5 select COUNT(distinct client_Num) as Total_customers from Credit_card;
6
7
```

Results		Messages
	Total_customers	
1	10108	

2.Customers Distribution by Card Categories

```
select card_category, COUNT(distinct client_Num) as Total_customers from Credit_card
group BY card_category;
```

```
9 select card_category,COUNT(distinct client_Num) as Total_customers
10 from Credit_card
11 group BY card_category;
12
```

Results			Messages
	card_category	Total_customers	
1	Gold	188	
2	Blue	9214	
3	Platinum	67	
4	Silver	639	

3. Average Annual Fees by Card Category

```
select card_category, AVG(Annual_fees) as Avg_Annualfee from Credit_card
group by card_category;
```

```
14
15 select card_category, AVG(Annual_fees) as Avg_Annualfee
16 from Credit_card
17 group by card_category;
```

Results			Messages
	card_category	Avg_Annualfee	
1	Gold	298	
2	Blue	291	
3	Platinum	388	
4	Silver	293	

4. Total Interest Earned by Card Category

```
select card_category, Round (SUM(Interest_earned),2) as Total_Interest_earned from
Credit_card group by card_category;
```

```
21 select card_category, Round(SUM(Interest_earned),2) as Total_Interest_earned
22 from Credit_card
23 group by card_category;|
```

	card_category	Total_Interest_earned
1	Gold	373784.16
2	Blue	6495887.74
3	Platinum	161629.05
4	Silver	812081.28

5. Average Utilization Ratio by Card Category

```
select card_category, ROUND(AVG(Avg_Utilization_Ratio),4) as Avg_Utilization_Ratio from
Credit_card group BY card_category;
```

```
27 select card_category , ROUND(AVG(Avg_Utilization_Ratio),4) as Avg_Utilization_Ratio
28 from Credit_card
29 group BY card_category;
```

	card_category	Avg_Utilization_Ratio
1	Gold	0.1241
2	Blue	0.2922
3	Platinum	0.1512
4	Silver	0.0826

6. Number of Clients Who Activated Within 30 Days

```
select COUNT(distinct client_Num) as Activated_customers from Credit_card
WHERE Activation_30_Days =1;
34 select COUNT(distinct client_Num) as Activated_customers
35 from Credit_card
36 WHERE Activation_30_Days =1;
```

	Activated_customers
1	5809

7.Total Transaction Amount and Volume by Expense Type

```
select Exp_Type,SUM(Total_Trans_Amt) as Total_tran_amount,SUM(Total_Trans_Vol)
as Total_Tran_volume FROM Credit_card group by Exp_Type;
```

```
--
40 select Exp_Type,SUM(Total_Trans_Amt) as Total_tran_amount,SUM(Total_Trans_Vol)
41 as Total_Tran_volume
42 FROM Credit_card
43 group by Exp_Type;
```

	Exp_Type	Total_tran_amount	Total_Tran_volume
1	Grocery	6904779	102555
2	Food	6708507	88184
3	Travel	4847995	48723
4	Entertainment	7603478	124888
5	Fuel	7477522	115705
6	Bills	10979732	175596

8. Average Credit Limit by Card Category

```
select card_category, Round(AVG(Credit_Limit),2) as Avg_Creditlimit
from Credit_card group by card_category;
```

```
48 select card_category, Round(AVG(Credit_Limit),2) as Avg_Creditlimit
49 from Credit_card
50 group by card_category;
```

	card_category	Avg_Creditlimit
1	Gold	21857.84
2	Blue	7285.66
3	Platinum	16455.13
4	Silver	23391.64

9. Total Revolving Balance by Use Chip (Chip/Swipe/Online)

```
select Use_Chip, SUM(Total_Revolving_Bal) as Total_Revolving_Bal
from Credit_card GROUP by Use_Chip;
```

```
54 select Use_Chip ,SUM(Total_Revolving_Bal) as Total_Revolving_Bal
55 from Credit_card
56 GROUP by Use_Chip;
```

	Use_Chip	Total_Revolving_Bal
1	Online	684184
2	Chip	2586139
3	Swipe	8483260

10. Count of Delinquent Accounts by Card Category

```
select card_category, COUNT(Delinquent_Acc) as Delinquent_Acc
from Credit_card where Delinquent_Acc=1 GROUP by card_category;
```

```
60 select card_category, COUNT(Delinquent_Acc) as Delinquent_Acc
61 from Credit_card
62 where Delinquent_Acc=1 GROUP by card_category;
```

	card_category	Delinquent_Acc
1	Blue	559
2	Gold	12
3	Platinum	4
4	Silver	39

11. Average Interest Earned by Whether the Client Used Chip or Not

```
select Use_Chip, Round(AVG(Interest_earned),2) as Avg_Interest_earned from
Credit_card group by Use_Chip;
```

```
66 select Use_Chip, Round(AVG(Interest_earned),2) as Avg_Interest_earned from
67 Credit_card group by Use_Chip;
```

	Use_Chip	Avg_Interest_earned
1	Online	829.1
2	Chip	996.71
3	Swipe	696.48

12. Top 5 Clients by Total Transaction Amount

```
select top 5 client_Num, Total_Trans_Amt as Total_Trans_Amount from
Credit_card ORDER by Total_Trans_Amt DESC ;
```

```

72 select top 5 client_Num,Total_Trans_Amt as Total_Trans_Amount from
73 Credit_card ORDER by Total_Trans_Amt DESC ;
74

```

Results Messages		
	client_Num	Total_Trans_Amount
1	718140783	18484
2	717642633	17995
3	881036033	17744
4	716004258	17634
5	713758758	17628

13. Total Customer Acquisition Cost by Card Category

```

select card_category, SUM(Customer_Acq_Cost) as Customer_Acq_Cost from Credit_card
GROUP by card_category;

```

```

78 select card_category, SUM(Customer_Acq_Cost) as Customer_Acq_Cost from Credit_card
79 GROUP by card_category;

```

Results Messages		
	card_category	Customer_Acq_Cost
1	Gold	17542
2	Blue	887973
3	Platinum	6570
4	Silver	60851

14. Average Total Transaction Volume for Clients with Platinum Cards

```

select AVG(Total_Trans_Vol) as avg_Total_Trans_Vol from Credit_card
where card_category= 'Platinum';

```

```

83 select AVG(Total_Trans_Vol) as avg_Total_Trans_Vol from Credit_card
84 where card_category= 'Platinum';

```

Results Messages		
	avg_Total_Trans_Vol	
1	111	

Results grid

15. Average and Total Credit Limit for Clients with a Delinquent Account

```

select Round(AVG(Credit_Limit),2) as avg_Credit_Limit, Round(SUM(Credit_Limit),2) as
Total_Credit_Limit from Credit_card where Delinquent_Acc= 1;

```

```

88 select Round(AVG(Credit_Limit),2) as avg_Credit_Limit, Round(SUM(Credit_Limit),2) as Total_Credit_Limit from
89 Credit_card where Delinquent_Acc= 1;

```

Results Messages		
	avg_Credit_Limit	Total_Credit_Limit
1	8768.77	5384021.9

16. Number of Clients by Week Number

```

select Week_Num, COUNT(client_Num) as Total_customers from Credit_card
group by Week_Num;

```

```

161 select Week_Num, COUNT(client_Num) as Total_customers from Credit_card
162 group by Week_Num;

```

Results Messages Chart		
	Week_Num	Total_customers
1	Week-1	205
2	Week-2	205
3	Week-3	205
4	Week-4	205
5	Week-5	205
6	Week-6	205
7	Week-7	205
8	Week-8	205
9	Week-9	205
10	Week-10	205
11	Week-11	205
12	Week-12	205
13	Week-13	205
14	Week-14	205
15	Week-15	205
16	Week-16	205
17	Week-17	205
18	Week-18	205
19	Week-19	205
20	Week-20	205
21	Week-21	205
22	Week-22	205
23	Week-23	205
24	Week-24	205
25	Week-25	205
26	Week-26	205
27	Week-27	205
28	Week-28	205
29	Week-29	205
30	Week-30	205
31	Week-31	205
32	Week-32	205
33	Week-33	205
34	Week-34	205
35	Week-35	205
36	Week-36	205
37	Week-37	205
38	Week-38	205
39	Week-39	205
40	Week-40	205
41	Week-41	205
42	Week-42	205
43	Week-43	205
44	Week-44	205
45	Week-45	205
46	Week-46	205
47	Week-47	205
48	Week-48	205
49	Week-49	205
50	Week-50	205

Results grid

17. Total Interest Earned by Week Number

```
select Week_Num, SUM(Interest_earned) as Total_Interest_earned from Credit_card
group by Week_Num;
```

```
110 select Week_Num, sum(Interest_earned) as Total_Interest_earned from Credit_card
111 group by Week_Num;
```

Week_Num	Total_Interest_earned
1	215400.00000000002
2	254800.00000000006
3	138960.00000000003
4	135576.00000000002
5	162407.00000000003
6	168477.00000000002
7	162743.00000000002
8	162915.00000000003
9	167241.00000000003
10	201600.00000000003
11	136276.00000000003
12	138390.00000000003
13	148731.00000000003
14	148460.00000000002
15	151606.00000000003
16	161116.00000000003
17	159260.00000000003
18	149320.00000000003
19	151016.00000000003
20	139531.00000000003
21	137767.00000000003
22	148621.00000000003
23	174554.00000000003

18. Count of Clients with High Utilization Ratio (>0.5)

```
select COUNT(client_Num) as Customers_count from Credit_card where Avg_Utilization_Ratio >
0.5;
```

```
103
104 select COUNT(client_Num) as Customers_count from Credit_card where Avg_Utilization_Ratio > 0.5;
105
106
```

Customers_count
1

19. Average Customer Acquisition Cost by Week

```
select Week_Num, AVG(Customer_Acq_Cost) as Customer_Acq_Cost from Credit_card
group by Week_Num;
```

```
109 select week_Num, avg(Customer_Acq_Cost) as Customer_Acq_Cost from Credit_card
110 group by week_Num;
```

Week_Num	Customer_Acq_Cost
1	94
2	95
3	100
4	98
5	92
6	95
7	97
8	94
9	98
10	93
11	97
12	96
13	93
14	97
15	96
16	98
17	96
18	92
19	93
20	93
21	95
22	94
23	94
24	97

20. Total Transaction Amount by Expense Type for Clients with Delinquent Accounts

```
select Exp_Type, SUM(Total_Trans_Amt) as Total_Trans_Amt from Credit_card where
Delinquent_Acc=1 group by Exp_Type;
```

```
113 select Exp_Type, SUM(Total_Trans_Amt) as Total_Trans_Amt from Credit_card where Delinquent_Acc=1
114 group by Exp_Type;
```

Exp_Type	Total_Trans_Amt
1	733420
2	416286
3	374594
4	472187
5	481077
6	287544

21. Customer Average Income by Card Category

```
select cc.Card_Category, AVG(c.Income) as avg_Income from Credit_card cc
join Customer c on cc.client_Num=c.client_Num group By cc.Card_Category;
```

```
118 select cc.Card_Category, AVG(c.Income) as avg_Income from Credit_card cc
119 join Customer c on cc.client_Num=c.client_Num
120 group By cc.Card_Category;
121
```

	Card_Category	avg_Income
1	Gold	140729
2	Blue	51966
3	Platinum	189098
4	Silver	90720

22. Customer Satisfaction Score by Card Category

```
select cc.Card_Category, avg(c.Cust_Satisfaction_Score) as Customer_Satisfaction_Score from
Customer c join
Credit_card cc on cc.client_Num=c.client_Num group By cc.Card_Category;
```

```
124 select cc.Card_Category, avg(c.Cust_Satisfaction_Score) as Customer_Satisfaction_Score from Customer c join
125 Credit_card cc on cc.client_Num=c.client_Num group By cc.Card_Category;
126
127
128
```

	Card_Category	Customer_Satisfaction_Score
1	Gold	3
2	Blue	3
3	Platinum	2
4	Silver	3

23. Total Interest Earned by Gender

```
select c.Gender, Round(SUM(cc.Interest_Earned),2) as Total_Interest_Earned from Credit_Card
cc join Customer c
on cc.client_Num=c.client_Num group by c.Gender;
```

```
128
129 select c.Gender, Round(SUM(cc.Interest_Earned),2) as Total_Interest_Earned from Credit_Card cc join Customer c
130 on cc.client_Num=c.client_Num group by c.Gender;
131
```

	Gender	Total_Interest_Earned
1	F	3613717.19
2	M	4229665.04

Results grid

24. Number of Delinquent Accounts by Education Level

```
select c.Education_Level, count(cc.Delinquent_Acc) as Delinquent_Accounts from Credit_Card
cc join
Customer c on cc.client_Num=c.client_Num where cc.Delinquent_Acc = 1 group by
c.Education_Level;
```

```
134 select c.Education_Level, count(cc.Delinquent_Acc) as Delinquent_Accounts from Credit_Card cc join
135 Customer c on cc.client_Num=c.client_Num where cc.Delinquent_Acc = 1 group by c.Education_Level;
136
```

	Education_Level	Delinquent_Accounts
1	Doctorate	33
2	Graduate	238
3	High School	280
4	Post-graduate	52
5	Uneducated	95
6	Unknown	280

Results grid

25. Total Transaction Amount by Job Type

```
select c.Customer_Job, SUM(cc.Total_Trans_Amt) as Total_Trans_Amt from Credit_Card cc join  
Customer c on cc.client_Num=c.client_Num group By c.Customer_Job;
```

```
140 select c.Customer_Job, SUM(cc.Total_Trans_Amt) as Total_Trans_Amt from Credit_Card cc join
141 Customer c on cc.client_Num=c.client_Num group By c.Customer_Job;
```

Results		Messages
	Customer_Job	Total_Trans_Amt
1	Businessman	14285412
2	Govt	6587875
3	White-collar	8221742
4	Retirees	3623120
5	Blue-collar	5488838
6	Selfemployed	6395026

Results grid

26. Total Transaction amount by Gender and Job Type

```
select c.Gender, c.Customer_Job, ROUND(SUM(cc.Total_Trans_Amt),2) as Total_Trans_Amount from  
Credit_Card cc join Customer c on cc.client_Num=c.client_Num group by  
c.Gender,c.Customer_Job;
```

```
143
146 select c.Gender, c.Customer_Job, ROUND(SUM(cc.Total_Trans_Amt),2) as Total_Trans_Amount from Credit_Card cc join
147 Customer c on cc.client_Num=c.client_Num group by c.Gender,c.Customer_Job;
```

Results		Messages	
	Gender	Customer_Job	Total_Trans_Amount
1	M	Govt	4273414
2	M	Businessman	6995639
3	F	White-collar	2376535
4	F	Blue-collar	2376139
5	F	Retirees	1558012
6	F	Selfemployed	3921800
7	F	Businessman	7289773
8	F	Govt	2234461
9	M	White-collar	5845207
10	M	Selfemployed	2473226
11	M	Blue-collar	3112708
12	M	Retirees	2065108

27. Customers by Gender

```
select Gender, count(distinct client_Num) as Total_Customers from Customer GROUP by Gender;
```

```
152 select Gender, count(distinct client_Num) as Total_Customers from Customer GROUP by Gender;
```

Results		Messages
	Gender	Total_Customers
1	F	5880
2	M	4228

28. Top 5 Customers by Age

```
select top 5 Customer_Age, count(distinct client_Num) as Total_Customers from Customer  
group by Customer_Age order by Total_Customers DESC;
```

```
156 select top 5 Customer_Age, count(distinct client_Num) as Total_Customers from Customer
157 group by Customer_Age
158 order by Total_Customers DESC;
```

Results		Messages
	Customer_Age	Total_Customers
1	44	499
2	46	490
3	45	485
4	47	476
5	49	473

29. Customers by job type

```
select Customer_Job, count(distinct client_Num) as Total_Customers from Customer
GROUP by Customer_Job;
```

```
163 select Customer_Job, count(distinct client_Num) as Total_Customers from Customer
164 GROUP by Customer_Job;
```

	Customer_Job	Total_Customers
1	Businessman	1901
2	Govt	1525
3	White-collar	1542
4	Retirees	986
5	Blue-collar	1579
6	Selfemployed	2575

30. Customers by Marital Status

```
select Marital_Status, count(distinct client_Num) as Total_Customers from Customer
GROUP by Marital_Status;
```

```
167 select Marital_Status, count(distinct client_Num) as Total_Customers from Customer
168 GROUP by Marital_Status;
```

	Marital_Status	Total_Customers
1	Unknown	744
2	Married	5128
3	Single	4236

31. Customers by Education Level

```
select Education_Level, count(distinct client_Num) as Total_Customers from Customer
GROUP by Education_Level;
```

```
173 select Education_Level, count(distinct client_Num) as Total_Customers from Customer
174 GROUP by Education_Level;
```

	Education_Level	Total_Customers
1	Unknown	1515
2	High School	2809
3	Doctorate	451
4	Post-Graduate	516
5	Graduate	4134
6	Uneducated	1483

32. Number of Customers Having House and Car

```
select count(distinct client_Num) as Total_Customers from Customer where Car_Owner=1 and
House_Owner=1;
```

```
178 select count(distinct client_Num) as Total_Customers from Customer
179
180 where Car_Owner=1 and House_Owner=1;
```

	Total_Customers
1	1867

33. Top 5 Customer age Having High Income

```
select top 5 Customer_Age, sum(Income) as Income from Customer group by Customer_Age
ORDER by Income DESC;
```

```
183
184 select top 5 Customer_Age, sum(Income) as Income from Customer group by Customer_Age
185 ORDER by Income DESC;
```

Results		Messages	
	Customer_Age	Income	
1	58	38821444	
2	46	29518581	
3	43	27582868	
4	44	27481498	
5	53	26457699	

34. Top 3 Average Customer satisfaction Score by Gender, Job Type, Education, Marital Status

```
select top 3
Gender, Customer_Job, Education_Level, Marital_Status, AVG(Cust_Satisfaction_Score) as
Customer_Satisfaction_Score from Customer group by
Gender, Customer_Job, Education_Level, Marital_Status ORDER by Customer_Satisfaction_Score
desc;
```

```
188 189 select top 3 Gender, Customer_Job, Education_Level, Marital_Status, AVG(Cust_Satisfaction_Score) as Customer_Satisfaction_Score from Customer 190 191 group by Gender, Customer_Job, Education_Level, Marital_Status ORDER by Customer_Satisfaction_Score desc;
```

Results		Messages			
	Gender	Customer_Job	Education_Level	Marital_Status	Customer_Satisfaction_Score
1	F	Retirees	Doctorate	Unknown	5
2	F	Retirees	Post-Graduate	Unknown	5
3	F	Govt	Unknown	Unknown	4

35. Monthly average Interest Earned and Total Interest earned

```
select FORMAT(Week_Start_Date, 'MMMM') as Month_name , round(AVG(Interest_Earned),2) AS
Avg_Interest_Earned , ROUND(sum(Interest_Earned),2) as Total_Interest_Earned
from Credit_Card GROUP BY FORMAT(Week_Start_Date, 'MMMM');
```

```
197
198 select FORMAT(Week_Start_Date, 'MMMM') as Month_name , round(sum(Interest_Earned),2) AS Avg_Interest_Earned ,
199 ROUND(sum(Interest_Earned),2) as Total_Interest_Earned
200 from Credit_Card GROUP BY FORMAT(Week_Start_Date, 'MMMM');
```

Results		Messages	
	Month_name	Avg_Interest_Earned	Total_Interest_Earned
1	February	792.86	618833.67
2	August	789.82	615435.99
3	June	885.24	628890.96
4	April	742.91	724341.37
5	December	759.68	569888.01
6	January	785.29	764889.17
7	September	778.42	687163.91
8	May	761.86	554248.19
9	October	737.28	728848.28
10	November	769.75	688888.76
11	March	744.52	588721.93
12	July	842.89	823819.79

36. Customer Transactions by Expense Type and Job Type

```
select c.Customer_Job, cc.Exp_Type, sum(cc.Total_Trans_Amt) as Total_Trans_Amt from
Credit_Card cc JOIN
Customer c on cc.client_Num=c.client_Num group by c.Customer_Job, cc.Exp_Type;
```

```
201
202 select c.Customer_Job, cc.Exp_Type, sum(cc.Total_Trans_Amt) as Total_Trans_Amt from
203 Credit_Card cc JOIN
204 Customer c on cc.client_Num=c.client_Num group by c.Customer_Job, cc.Exp_Type;
```

Results		Messages	
	Customer_Job	Exp_Type	Total_Trans_Amt
1	Retirees	Food	48888
2	Retirees	Travel	14888
3	Retirees	Entertainment	18888
4	Retirees	Entertainment	18888
5	Retirees	Travel	18888
6	Retirees	Entertainment	18888
7	Retirees	Entertainment	18888
8	Retirees	Food	18888
9	Retirees	Food	18888
10	Retirees	Food	18888
11	Retirees	Travel	18888
12	Retirees	Entertainment	18888
13	Retirees	Food	18888
14	Retirees	Entertainment	18888
15	Retirees	Food	18888
16	Retirees	Food	18888
17	Retirees	Food	18888
18	Retirees	Food	18888
19	Retirees	Food	18888
20	Retirees	Food	18888
21	Retirees	Food	18888
22	Retirees	Food	18888
23	Retirees	Food	18888
24	Retirees	Food	18888
25	Retirees	Food	18888
26	Retirees	Food	18888
27	Retirees	Food	18888
28	Retirees	Food	18888
29	Retirees	Food	18888
30	Retirees	Food	18888
31	Retirees	Food	18888
32	Retirees	Food	18888
33	Retirees	Food	18888
34	Retirees	Food	18888
35	Retirees	Food	18888
36	Retirees	Food	18888
37	Retirees	Food	18888
38	Retirees	Food	18888
39	Retirees	Food	18888
40	Retirees	Food	18888
41	Retirees	Food	18888
42	Retirees	Food	18888
43	Retirees	Food	18888
44	Retirees	Food	18888
45	Retirees	Food	18888
46	Retirees	Food	18888
47	Retirees	Food	18888
48	Retirees	Food	18888
49	Retirees	Food	18888
50	Retirees	Food	18888
51	Retirees	Food	18888
52	Retirees	Food	18888
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61	Retirees	Food	18888
62	Retirees	Food	18888
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64	Retirees	Food	18888
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66	Retirees	Food	18888
67	Retirees	Food	18888
68	Retirees	Food	18888
69	Retirees	Food	18888
70	Retirees	Food	18888
71	Retirees	Food	18888
72	Retirees	Food	18888
73	Retirees	Food	18888
74	Retirees	Food	18888
75	Retirees	Food	18888
76	Retirees	Food	18888
77	Retirees	Food	18888
78	Retirees	Food	18888
79	Retirees	Food	18888
80	Retirees	Food	18888
81	Retirees	Food	18888
82	Retirees	Food	18888
83	Retirees	Food	18888
84	Retirees	Food	18888
85	Retirees	Food	18888
86	Retirees	Food	18888
87	Retirees	Food	18888
88	Retirees	Food	18888
89	Retirees	Food	18888
90	Retirees	Food	18888
91	Retirees	Food	18888
92	Retirees	Food	18888
93	Retirees	Food	18888
94	Retirees	Food	18888
95	Retirees	Food	18888
96	Retirees	Food	18888
97	Retirees	Food	18888
98	Retirees	Food	18888
99	Retirees	Food	18888
100	Retirees	Food	18888

37. Top card Avg_Utilization_Ratio by Customer age

```
select top 5 c.Customer_Age, Round(AVG(cc.Avg_Utilization_Ratio),3) as Avg_Utilization_Ratio
from Credit_Card cc join
Customer c on c.client_Num=cc.client_Num group by c.Customer_Age order by
Avg_Utilization_Ratio DESC;
```

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```
select top 5 c.Customer_Age, Round(AVG(cc.Avg_Utilization_Ratio),3) as Avg_Utilization_Ratio from Credit_Card cc join
Customer c on c.client_Num=cc.client_Num group by c.Customer_Age order by Avg_Utilization_Ratio DESC;
```

Results Messages

	Customer_Age	Avg_Utilization_Ratio
1	25	0.65
2	68	0.459
3	66	0.393
4	67	0.339
5	62	0.333

38. Transaction Amount and Interest Earned by Quarter

```
select Qtr, ROUND(sum(Total_Trans_Amt),2) as Total_Trans_Amount,
ROUND(sum(Interest_Earned),2) as Interest_earned from Credit_Card GROUP by Qtr;
```

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214
215

```
select Qtr, ROUND(sum(Total_Trans_Amt),2) as Total_Trans_Amount, ROUND(sum(Interest_Earned),2)
as Interest_earned from Credit_Card GROUP by Qtr;
```

Results Messages

	Qtr	Total_Trans_Amount	Interest_earned
1	4.00	10686424	1888257.05
2	2.00	11135301	1946680.72
3	1.00	11250588	1964024.77
4	3.00	11449700	2044419.69

39. Transaction Amount and Interest Earned by Customer Personal Loan

```
select c.Personal_loan, ROUND(sum(cc.Total_Trans_Amt),2) as Total_Trans_Amount,
ROUND(sum(cc.Interest_Earned),2) as Interest_earned from Credit_Card cc join Customer c on
c.client_Num=cc.client_Num group by c.Personal_loan;
```

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220
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222

```
select c.Personal_loan, ROUND(sum(cc.Total_Trans_Amt),2) as Total_Trans_Amount, ROUND(sum(cc.Interest_Earned),2)
as Interest_earned from Credit_Card cc join Customer c on c.client_Num=cc.client_Num
group by c.Personal_loan;
```

Results Messages

	Personal_loan	Total_Trans_Amount	Interest_earned
1	0	38929311	6846897.85
2	1	5592702	996484.38

40. Monthly Revolving Balance Distribution

```
select FORMAT(Week_Start_Date, 'MMMM') as Month_Name, ROUND(sum(Total_Revolving_Bal),2) as
Total_Revolving_Bal from Credit_Card GROUP by FORMAT(Week_Start_Date, 'MMMM');
```

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228

```
select FORMAT(Week_Start_Date, 'MMMM') as Month_Name, ROUND(sum(Total_Revolving_Bal),2) as Total_Revolving_Bal
from Credit_Card GROUP by FORMAT(Week_Start_Date, 'MMMM');
```

Results Messages

	Month_Name	Total_Revolving_Bal
1	February	917525
2	August	905042
3	June	899589
4	April	1105623
5	December	870924
6	January	1111259
7	September	930157
8	May	948853
9	October	1130036
10	November	894849
11	March	894043
12	July	1157034

Results grid

