credit card

Here are multiple queries for analysis based on the two schemas (ClientInfo and CustomerInfo):

**1. Data Validation Queries**

**a) Count the Total Number of Records in Each Table:**

SELECT COUNT(\*) AS Total\_Clients FROM ClientInfo;

SELECT COUNT(\*) AS Total\_Customers FROM CustomerInfo;

**b) Check for Missing or NULL Values in Both Tables:**

-- For ClientInfo

SELECT

COUNT(\*) AS Missing\_Records

FROM

ClientInfo

WHERE

Client\_Num IS NULL

OR Card\_Cate IS NULL

OR Week\_Start\_Date IS NULL;

-- For CustomerInfo

SELECT

COUNT(\*) AS Missing\_Records

FROM

CustomerInfo

WHERE

Client\_Num IS NULL

OR Customer\_Age IS NULL

OR Gender IS NULL;

**2. Join Both Tables for Combined Insights**

**a) Merge ClientInfo and CustomerInfo Using Client\_Num:**

SELECT

ci.Client\_Num,

c.Customer\_Age,

c.Gender,

c.Income,

ci.Card\_Cate,

ci.Credit\_Limit,

ci.Avg\_Utilization,

ci.Total\_Rev,

c.Cust\_Satisfaction\_Score

FROM

ClientInfo ci

INNER JOIN

CustomerInfo c

ON

ci.Client\_Num = c.Client\_Num;

**b) Find High-Income Customers With High Credit Utilization:**

SELECT

c.Client\_Num,

c.Customer\_Age,

c.Income,

ci.Avg\_Utilization,

ci.Credit\_Limit

FROM

CustomerInfo c

JOIN

ClientInfo ci ON c.Client\_Num = ci.Client\_Num

WHERE

c.Income > 100000 AND ci.Avg\_Utilization > 0.7;

**3. Credit Card Usage Analysis**

**a) Total Revenue and Average Utilization by Card Category:**

SELECT

Card\_Cate,

SUM(Total\_Rev) AS Total\_Revenue,

AVG(Avg\_Utilization) AS Avg\_Utilization

FROM

ClientInfo

GROUP BY

Card\_Cate;

**b) Identify Customers Who Use Chips for Transactions:**

SELECT

Client\_Num,

Use\_Chip,

Total\_Trans

FROM

ClientInfo

WHERE

Use\_Chip = 'yes';

**c) Top 5 Customers With Highest Credit Limits:**

SELECT

Client\_Num,

Credit\_Limit

FROM

ClientInfo

ORDER BY

Credit\_Limit DESC

LIMIT 5;

**4. Customer Satisfaction Analysis**

**a) Average Satisfaction Score by Education Level:**

SELECT

Education\_Level,

AVG(Cust\_Satisfaction\_Score) AS Avg\_Satisfaction\_Score

FROM

CustomerInfo

GROUP BY

Education\_Level;

**b) Customers With Low Satisfaction Scores (Below 3):**

SELECT

Client\_Num,

Customer\_Age,

Gender,

Cust\_Satisfaction\_Score

FROM

CustomerInfo

WHERE

Cust\_Satisfaction\_Score < 3;

**c) Correlation Between Income and Satisfaction Score:**

SELECT

Income,

Cust\_Satisfaction\_Score

FROM

CustomerInfo;

(Export this result and analyze further using correlation analysis in Python/Excel.)

**5. Financial Analysis**

**a) Total Revenue by Quarter:**

SELECT

Qtr,

SUM(Total\_Rev) AS Total\_Revenue

FROM

ClientInfo

GROUP BY

Qtr;

**b) Identify Customers With Outstanding Delinquent Accounts:**

SELECT

Client\_Num,

Delinquent\_Acc

FROM

ClientInfo

WHERE

Delinquent\_Acc > 0;

**c) Total Credit Limit and Average Income by State:**

SELECT

c.state\_cd,

SUM(ci.Credit\_Limit) AS Total\_Credit\_Limit,

AVG(c.Income) AS Avg\_Income

FROM

CustomerInfo c

JOIN

ClientInfo ci ON c.Client\_Num = ci.Client\_Num

GROUP BY

c.state\_cd;

**6. Demographic Analysis**

**a) Distribution of Customers by Marital Status:**

SELECT

Marital\_Status,

COUNT(\*) AS Total\_Customers

FROM

CustomerInfo

GROUP BY

Marital\_Status;

**b) Customers Who Own Both a Car and a House:**

SELECT

Client\_Num,

Customer\_Age,

Gender,

Income

FROM

CustomerInfo

WHERE

Car\_Owner = 'yes' AND House\_Owner = 'yes';

**7. Transaction Analysis**

**a) Average Number of Transactions by Activation Status:**

SELECT

Activation,

AVG(Total\_Tran) AS Avg\_Transactions

FROM

ClientInfo

GROUP BY

Activation;

**b) Customers With High Annual Fees and Low Utilization:**

SELECT

Client\_Num,

Annual\_Fee,

Avg\_Utilization

FROM

ClientInfo

WHERE

Annual\_Fee > 500 AND Avg\_Utilization < 0.5;

**c) Total Transactions by Week Number:**

SELECT

Week\_Num,

SUM(Total\_Tran) AS Total\_Transactions

FROM

ClientInfo

GROUP BY

Week\_Num;

**8. Combined Insights**

**a) Customers With High Revenue but Low Satisfaction:**

SELECT

c.Client\_Num,

c.Customer\_Age,

ci.Total\_Rev,

c.Cust\_Satisfaction\_Score

FROM

CustomerInfo c

JOIN

ClientInfo ci ON c.Client\_Num = ci.Client\_Num

WHERE

ci.Total\_Rev > 100000 AND c.Cust\_Satisfaction\_Score < 3;

**b) Customers Who Are Self-Employed and Have High Credit Limits:**

SELECT

c.Client\_Num,

c.Customer\_Job,

ci.Credit\_Limit

FROM

CustomerInfo c

JOIN

ClientInfo ci ON c.Client\_Num = ci.Client\_Num

WHERE

c.Customer\_Job = 'Selfemployeed' AND ci.Credit\_Limit > 50000;

These queries provide a detailed analysis of customer demographics, credit card usage, financial behavior, and customer satisfaction. Let me know if you need additional insights or further refinement!