POSTGRE SQL QUERIES

CUSTOMER REVENUE AND TRANSACTION INTELLIGENCE SYSTEM

1.Get Total Revenue :

SELECT SUM(Revenue) AS Total\_Revenue FROM Credit\_Card\_Report;

2.List all distinct card categories:

SELECT DISTINCT Card\_Category FROM Credit\_Card\_Report;

3.Count the number of transactions :

SELECT COUNT(\*) AS Total\_Transactions FROM Transactions;

4.Retrieve total interest earned by card type :

SELECT Card\_Category, SUM(Interest\_Earned) AS Total\_Interest

FROM Credit\_Card\_Report

GROUP BY Card\_Category;

5.Display all records where revenue exceeds 10M :

SELECT \*

FROM Credit\_Card\_Report

WHERE Revenue > 10000000;

6.Find the quarterly revenue distribution :

SELECT Quarter, SUM(Revenue) AS Quarterly\_Revenue

FROM Credit\_Card\_Report

GROUP BY Quarter

ORDER BY Quarter;

7.Identify the card category with the highest revenue :

SELECT Card\_Category, MAX(Revenue) AS Highest\_Revenue

FROM Credit\_Card\_Report

GROUP BY Card\_Category

ORDER BY Highest\_Revenue DESC

LIMIT 1;

8.Calculate average revenue by customer job :

SELECT Customer\_Job, AVG(Revenue) AS Avg\_Revenue

FROM Credit\_Card\_Report

GROUP BY Customer\_Job;

9.List the revenue and interest details by education level :

SELECT Education\_Level, SUM(Revenue) AS Total\_Revenue, SUM(Interest\_Earned) AS Total\_Interest

FROM Credit\_Card\_Report

GROUP BY Education\_Level;

10.Compare revenue trends between genders over weeks :

SELECT Week\_Start\_Date, Gender, SUM(Revenue) AS Weekly\_Revenue

FROM Revenue\_Weekly

GROUP BY Week\_Start\_Date, Gender

ORDER BY Week\_Start\_Date;

11.Find top 3 states generating the highest revenue :

SELECT State\_Code, SUM(Revenue) AS State\_Revenue

FROM Credit\_Card\_Report

GROUP BY State\_Code

ORDER BY State\_Revenue DESC

LIMIT 3;

12.Determine the card type with the lowest transaction count :

SELECT Card\_Category, MIN(Transaction\_Count) AS Min\_Transactions

FROM Credit\_Card\_Report

GROUP BY Card\_Category

ORDER BY Min\_Transactions ASC

LIMIT 1;

13.Analyze revenue contribution by expenditure type :

SELECT Expenditure\_Type, SUM(Revenue) AS Total\_Revenue

FROM Credit\_Card\_Report

GROUP BY Expenditure\_Type;

14.Retrieve records where the revenue gap between genders exceeds 5M :

SELECT Gender, SUM(Revenue) AS Total\_Revenue

FROM Credit\_Card\_Report

GROUP BY Gender

HAVING ABS(SUM(Revenue)) > 5000000;

15.List the customer acquisition cost per card type :

SELECT Card\_Category, SUM(Customer\_Acq\_Cost) AS Total\_Cost

FROM Credit\_Card\_Report

GROUP BY Card\_Category;

16.Compare year-over-year revenue growth by card category :

SELECT Card\_Category,

SUM(CASE WHEN Year = 2023 THEN Revenue ELSE 0 END) AS Revenue\_2023,

SUM(CASE WHEN Year = 2022 THEN Revenue ELSE 0 END) AS Revenue\_2022,

(SUM(CASE WHEN Year = 2023 THEN Revenue ELSE 0 END) -

SUM(CASE WHEN Year = 2022 THEN Revenue ELSE 0 END)) /

SUM(CASE WHEN Year = 2022 THEN Revenue ELSE 1 END) \* 100 AS YoY\_Growth\_Percentage

FROM Credit\_Card\_Report

GROUP BY Card\_Category;

17.Identify the most common customer job for each card category :

SELECT Card\_Category, Customer\_Job, COUNT(\*) AS Job\_Count

FROM Credit\_Card\_Report

GROUP BY Card\_Category, Customer\_Job

ORDER BY Card\_Category, Job\_Count DESC;

18.Find states where total revenue is below average and segment them by income group :

WITH Avg\_Revenue AS (

SELECT AVG(Revenue) AS Avg\_Revenue

FROM Credit\_Card\_Report

)

SELECT State\_Code, Income\_Group, SUM(Revenue) AS State\_Revenue

FROM Credit\_Card\_Report, Avg\_Revenue

WHERE Revenue < Avg\_Revenue

GROUP BY State\_Code, Income\_Group;

19.Analyze revenue trends for high-income customers across different card types:

SELECT Card\_Category, Month, SUM(Revenue) AS Monthly\_Revenue

FROM Credit\_Card\_Report

WHERE Income\_Group = 'High'

GROUP BY Card\_Category, Month

ORDER BY Month, Card\_Category;

20.Find the top 2 expenditure types by revenue for each education level :

SELECT Education\_Level, Expenditure\_Type, SUM(Revenue) AS Total\_Revenue

FROM Credit\_Card\_Report

GROUP BY Education\_Level, Expenditure\_Type

ORDER BY Education\_Level, Total\_Revenue DESC

LIMIT 2;

21.Rank card categories by interest earned for each gender :

SELECT Gender, Card\_Category, Interest\_Earned,

RANK() OVER (PARTITION BY Gender ORDER BY Interest\_Earned DESC) AS Rank

FROM Credit\_Card\_Report;

22.Calculate total revenue generated by retirees per state :

SELECT State\_Code, SUM(Revenue) AS Retiree\_Revenue

FROM Credit\_Card\_Report

WHERE Customer\_Job = 'Retirees'

GROUP BY State\_Code;

23.Identify the quarter with the highest discrepancy in transaction count by gender :

SELECT Quarter, ABS(SUM(CASE WHEN Gender = 'M' THEN Transaction\_Count ELSE 0 END) -

SUM(CASE WHEN Gender = 'F' THEN Transaction\_Count ELSE 0 END)) AS Discrepancy

FROM Credit\_Card\_Report

GROUP BY Quarter

ORDER BY Discrepancy DESC

LIMIT 1;

24.Find total customer acquisition cost by card category for high-income customers only :

SELECT Card\_Category, SUM(Customer\_Acq\_Cost) AS Total\_Acq\_Cost

FROM Credit\_Card\_Report

WHERE Income\_Group = 'High'

GROUP BY Card\_Category;

25.Analyze revenue and transaction count trends over education levels and genders :

SELECT Education\_Level, Gender, SUM(Revenue) AS Total\_Revenue, SUM(Transaction\_Count) AS Total\_Transactions

FROM Credit\_Card\_Report

GROUP BY Education\_Level, Gender

ORDER BY Education\_Level, Gender;