QUERY FOR SQL

TABLE CREATION

```
CREATE TABLE CUSTOMER (
 RowNumber SERIAL,
CustomerId INT,
 Surname VARCHAR(255),
 CreditScore INT,
Geography VARCHAR(255),
Gender VARCHAR(50),
Age INT,
 Tenure INT,
 Balance FLOAT,
NumOfProducts INT,
HasCrCard INT,
IsActiveMember INT,
EstimatedSalary FLOAT,
Exited INT,
PRIMARY KEY (CustomerId)
);
```

IMPORTING CSV FILE

```
FROM 'D:\CUSTOMER.csv'
DELIMITER ','
CSV HEADER;
```

VIEWING THE TABLE

```
SELECT*FROM CUSTOMER
```

SUMMARY STATISTICS FOR NUMERICAL VARIABLES USING SQL

```
SELECT
AVG(CreditScore) AS average_credit_score,
AVG(Age) AS average_age,
AVG(Tenure) AS average_tenure,
AVG(Balance) AS average_balance,
AVG(EstimatedSalary) AS average_estimated_salary,
PERCENTILE_CONT(0.5) WITHIN GROUP (ORDER BY CreditScore) AS Median_Credit_Score,
PERCENTILE_CONT(0.5) WITHIN GROUP (ORDER BY Age) AS Median_Age,
PERCENTILE_CONT(0.5) WITHIN GROUP (ORDER BY Tenure) AS Median_Tenure,
PERCENTILE_CONT(0.5) WITHIN GROUP (ORDER BY Balance) AS Median_Balance,
PERCENTILE_CONT(0.5) WITHIN GROUP (ORDER BY EstimatedSalary) AS Median_EstimatedSalary,
MIN(CreditScore) AS Min_Credit_Score,
MIN(Age) AS Min_Age,
MIN(Tenure) AS Min_Tenure,
MIN(Balance) AS Min_Balance,
MIN(EstimatedSalary) AS Min_Estimated_Salary,
MAX(CreditScore) AS Max_Credit_Score,
MAX(Age) AS Max_Age,
MAX(Tenure) AS Max_Tenure,
```

```
MAX(Balance) AS Max_Balance,
MAX(EstimatedSalary) AS Max_Estimated_Salary,
STDDEV(CreditScore)AS Std_Credit_Score,
STDDEV(Age) AS Std_Age,
STDDEV(Tenure)AS Std_Tenure,
STDDEV(Balance)AS Std_Balance,
STDDEV(EstimatedSalary) AS Std_Estimated_Salary
FROM CUSTOMER;
```

QUERY FOR TOTAL CUSTOMER IS CHURNED AND NOT CHURNED

```
SELECT
SUM(CASE WHEN exited = 1 THEN 1 ELSE 0 END) AS Churned,
SUM(CASE WHEN exited = 0 THEN 1 ELSE 0 END) AS Non_Churned
FROM CUSTOMER;
```

USING WINDOW FUNCTIONS, EXPLORE THE TOP 5 CUSTOMERS BASED ON CERTAIN CHARACTERISTICS AND HIGHLIGHT ANY TRENDS/PATTERNS YOU SEE

```
WITH RankedCustomers AS (
SELECT CustomerId,CreditScore,Balance,Age,Tenure,
NumOfProducts,EstimatedSalary,Exited,
ROW_NUMBER() OVER (PARTITION BY Exited ORDER BY CreditScore DESC) AS
RankByCreditScore,
ROW_NUMBER() OVER (PARTITION BY Exited ORDER BY NumOfProducts DESC)
AS RankByNumOfPrducts,
ROW_NUMBER() OVER (PARTITION BY Exited ORDER BY EstimatedSalary DESC)
AS RankByEstimatedSalary
```

```
FROM CUSTOMER)

SELECT
CustomerId,CreditScore,Balance,Age,Tenure,NumOfProducts,EstimatedSalary,
Exited,

CASE WHEN Exited = 1 then 'Churned' else 'NON_Churned' end as
Churn_status

FROM RankedCustomers

WHERE RankByCreditScore <= 5 OR RankByNumOfPrducts <=5 OR
RankByEstimatedSalary <=5

ORDER BY Exited DESC, RankByCreditScore,
RankByNumOfPrducts,RankByEstimatedSalary;
```

IF YOU WERE TO CHOOSE THE TOP 5 CUSTOMERS BASED ON ANY CRITERIA OF YOUR CHOICE TO OFFER A REDUCED INTEREST RATE, HOW WOULD YOU CHOOSE THEM? WHAT CRITERIA WOULD YOU USE? WHAT DO YOU EXPECT THE OUTCOME TO BE?

TOP 10 CUSTOMER BASED ON CREDIT SCORE

```
WITH TopCustomers AS (

SELECT

CustomerId,Surname,CreditScore,Exited,

ROW_NUMBER() OVER (ORDER BY CreditScore DESC) AS RankByCreditScore

FROM CUSTOMER)

SELECT CustomerId,Surname,CreditScore,

CASE WHEN Exited = 1 then 'Churned' else 'NON_Churned' end as
Churn_status

FROM TopCustomers

WHERE RankByCreditScore <= 10;
```

TOP 5 CUSTOMER BASED ON CREDIT SCORE

```
WITH TopCustomers AS (
SELECT
CustomerId,Surname,CreditScore,Exited,
ROW_NUMBER() OVER (ORDER BY CreditScore DESC) AS RankByCreditScore
FROM CUSTOMER)
SELECT CustomerId,Surname,CreditScore,
CASE WHEN Exited = 1 then 'Churned' else 'NON_Churned' end as
Churn_status
FROM TopCustomers
WHERE RankByCreditScore <= 5;
```

TOP 3 CUSTOMER BASED ON CREDIT SCORE

```
WITH TopCustomers AS (
SELECT
CustomerId,Surname,CreditScore,Exited,
ROW_NUMBER() OVER (ORDER BY CreditScore DESC) AS RankByCreditScore
FROM CUSTOMER)
SELECT CustomerId,Surname,CreditScore,
```

```
CASE WHEN Exited = 1 then 'Churned' else 'NON_Churned' end as
Churn_status

FROM TopCustomers

WHERE RankByCreditScore <= 3;
```