**Project Brief: Bank Customer Churn Prediction**

**Objective:**

The goal of this project is to predict whether a bank customer will leave the bank based on their demographics and financial information. This project aims to develop your skills in classification tasks, data preprocessing, and predictive modeling.

**Project Overview:**

In this project, you will analyze a dataset containing various details about bank customers. Your main tasks are to:

1. *Predict Customer Churn*: Build a predictive model to estimate the likelihood of a customer leaving the bank.
2. *Feature Impact Analysis*: Identify and analyze the variables that most significantly impact customer churn.
3. *Recommendation* : Provide suggestions and recommendations based on your analysis and findings for the firm.

**Dataset Description:**

The Bank Customer Churn Prediction dataset includes the following features:

1. RowNumber: Row number.
2. CustomerId: Unique identification key for different customers.
3. Surname: Customer's last name.
4. CreditScore: Credit score of the customer.
5. Geography: Country of the customer.
6. Age: Age of the customer.
7. Tenure: Number of years the customer has been with the bank.
8. Balance: Bank balance of the customer.
9. NumOfProducts: Number of bank products the customer is utilizing.
10. HasCrCard: Binary flag indicating whether the customer holds a credit card with the bank.
11. IsActiveMember: Binary flag indicating whether the customer is an active member with the bank.
12. EstimatedSalary: Estimated salary of the customer in dollars.
13. Excited: Binary flag indicating if the customer closed the account with the bank (1 if closed, 0 if retained).