# Assignment: Predicting Customer Churn with Machine Learning.

## **Objective:**

Build a classification model to predict customer churn using a given dataset containing various customer features.

## **Dataset Description:**

You are provided with a dataset in CSV format that includes information about customers related to company X. It has 12 attributes.

### Task:

Your task is to develop a machine learning classification model that predicts whether a customer is likely to churn or not. Churn, in this context, refers to customers who are likely to discontinue their engagement with the services in the near future.

Customer churn, in simple terms, refers to the phenomenon where customers stop using or purchasing a company's products or services. It's a measure of the rate at which customers discontinue their relationship with a business. Predicting customer churn involves identifying patterns and factors that might indicate when a customer is likely to stop engaging with the company, helping us take proactive steps to retain valuable customers.

#### Note:-

You may follow these steps in the assignment

- 1. Data preprocessing
- 2. Feature Engineering
- 3. Modeling
- 4. Evaluation.

#### Code Standards Reminder:

As you work on the project, please keep in mind the importance of adhering to coding standards. Use clear and descriptive variable names, add comments to explain complex sections, and follow consistent formatting throughout your code. These practices ensure that your code is readable, understandable, and maintainable for both yourself and others.

Write your code in a jupyter notebook.