**Bankruptcy Prevention**

**Problem Statement:**

The objective of this project is to develop a predictive classification model that assesses the probability of a business going bankrupt based on 6 key features.

The dataset comprises information about 250 companies, with each observation containing values for industrial risk, management risk, financial flexibility, credibility, competitiveness, operating risk, and the target variable, which indicates whether the company experienced bankruptcy or is classified as non-bankrupt.

**Steps to follow in project:**

1. Data Collection
   * Define the problem and the objective
   * Store data in data frame
   * Identify the features
2. Data Preprocessing
   * Handle missing values and outliers
   * Perform data cleaning and remove duplicate values
   * Encode categorical variables and labels
   * Fix class imbalance
3. Exploratory Data Analysis (EDA)
   * Perform descriptive statistics and summary
   * Visualize the data distribution.
   * Identify patterns and insights from the data
4. Feature Engineering
   * Select the relevant features for the model
5. Model Selection
   * Choose the appropriate classification algorithm
   * Split the data into training and testing sets
   * Train and tune the model parameters
6. Model Evaluation
   * Test the model performance on unseen data
   * Use appropriate metrics and plots to evaluate the model
   * Compare and analyse different models
7. Deployment
   * Save and export the final model
   * Deploy the model using stream lit