1. **a.** Write a Python program to predict house prices using Simple Linear Regression on a given dataset.
   b. Predict the salary of an employee based on their years of experience using Simple Linear Regression with train and test data.

2. **a.** Apply Logistic Regression to predict whether a person will take insurance or not based on their age for a given dataset.
   b. Use a Decision Tree Classifier model to decide whether to play cricket or not under given weather conditions.

3. **a.** Perform Exploratory Data Analysis (EDA) on any dataset of your choice and summarize its key insights.
   b. Predict home prices using Multiple Linear Regression for a given dataset.

4. **a.** Classify the Iris flower dataset using Support Vector Machine (SVM) and identify the flower type based on given input data.
   b. Predict whether breast cancer is benign or malignant using the K-Nearest Neighbors (KNN) Classifier for a given dataset.

5. **a.** Analyze weather data using Gaussian Naïve Bayes Classifier and predict whether cricket can be played under new conditions.
   b. Train the Random Forest model on the scikit-learn digits dataset and check if the model correctly predicts handwritten digits.

6. **a.** Use the K-Means clustering algorithm to classify employees into different income groups based on a given dataset.
   b. Perform dimensionality reduction on the Iris flower dataset using PCA, reducing it to 1D, and train a model to predict the species of a new flower.

7. **a.** Apply Simple Linear Regression to predict house prices and explain the model's accuracy using appropriate metrics.
   b. Perform Exploratory Data Analysis (EDA) on a dataset of your choice and discuss the data's distribution and outliers.

8. **a.** Train and test a Logistic Regression model to predict whether a person will take insurance based on age and visualize the decision boundary.
   b. Use the Decision Tree Classifier model to classify data and make predictions on whether cricket will be played or not, given new conditions.

9. **a.** Implement SVM to classify the Iris flower dataset into its respective flower types and evaluate the model's performance.
   b. Use KNN Classifier to predict whether a given breast cancer case is benign or malignant and explain the choice of parameters.

10. **a.** Compare the performance of multiple classification algorithms on a specific dataset, such as Logistic Regression, Decision Trees, and Random Forest.
    b. Use K-Means clustering to segment customers or employees into various clusters based on a given dataset, and visualizes the results.