ASSIGNMENT #1

Construct a machine learning based model for classification using Python for the following UCI datasets:

UCI datasets (can be loaded from the package itself):

a. Iris plants dataset: https://archive.ics.uci.edu/ml/datasets/Iris/
b. Wisconsin Breast Cancer Dataset: https://archive.ics.uci.edu/ml/datasets/Breast+Cancer+Wisconsin+(Diagnostic)

1. Employ Naive Bayes (Gaussian, Multinomial & Bernoulli) classifier and show classification results (Accuracy, Precision, Recall, F-score, confusion matrix).

2. Use Decision Tree classifier for all the two datasets and show classification results (Accuracy, Precision, Recall, F-score, confusion matrix). Generate the decision tree images for all cases highlighting information like Gini and Entropy.

Tune the parameters such that the maximum possible performance is achieved (90% <=performance<=100%)

Save the assignment in a single pdf file with the naming convention "**Full Class Roll No_Full Name.pdf**" and upload the report by using the Google form link: https://forms.gle/5T1PnLDhERTcQtAp9

Submission Deadline: **15th August, 2025 Friday (11:59 pm) EOD**