Project Description:

First Step:

- Choose a dataset from UCI repository (https://archive.ics.uci.edu/ml/index.php) other than IRIS dataset .
- You must have the following in your dataset:
  - Your dataset Must have clear target /class.
  - Your dataset Must have categorical, real or/ and integer as attribute characteristics.
  - Your dataset task Must be classification or regression.
  - **Your dataset MUSTNOT include images or text.**

Second Step:

- **Pre-Processing (**You need to check if your dataset have / need any/ all of the following):
  - Missing Values.
  - Multi-class classification.
  - Categorical attribute.
  - Normalization.

Third Step (Phase1):

- Implement two clustering algorithms [K-means + Hieratical] using python.

Report: (if any information taken from the labs [copy-paste] half the mark will be deducted)

- Introduction → Explain the 2 algorithms in details.
- Dataset → Dataset explanation + Data Preprocessing done.
- Comparison between the 2 algorithms + Visualization + Accuracy.
- Conclusion – regarding your findings.
- References.

Fourth Step (Phase2):

- Implement two classification algorithms [SVM or NB or DT or KNN] +[NN].

Report: (if any information taken from the labs [copy-paste] half the mark will be deducted)

- Introduction → Explain the 2 algorithms in details.
- Data Preprocessing done (if any different from phase1).
- Comparison between the 2 algorithms + Visualization + Accuracy.
- Conclusion.
- References.