

Submit

Please build a folder with your netID in **lowercase**, for example, *abc123456*.

Put all outputfiles (including the ones from `reducedim1.py` and `reducedim2.py`) in the folder and turn the whole folder to TA. There should be $30 + 12$ files in the folder.

The output files should be the **exactly same as given**.

Part I

There are 3 test datasets: *iris*, *wine* and *seed*.

The `.data` and `.labels` files are the inputs. the `.txt` files are the outputs.

Run the following commands:

```
python3 pca1.py iris.data iris.labels pca1_vec.iris.txt pca1_reduced_iris.txt
python3 pca1.py wine.data wine.labels pca1_vec.wine.txt pca1_reduced_wine.txt
python3 pca1.py seed.data seed.labels pca1_vec.seed.txt pca1_reduced_seed.txt
```

```
python3 pca2.py iris.data iris.labels pca2_vec.iris.txt pca2_reduced_iris.txt
python3 pca2.py wine.data wine.labels pca2_vec.wine.txt pca2_reduced_wine.txt
python3 pca2.py seed.data seed.labels pca2_vec.seed.txt pca2_reduced_seed.txt
```

```
python3 scatter1.py iris.data iris.labels scatter1_vec.iris.txt scatter1_reduced_iris.txt
python3 scatter1.py wine.data wine.labels scatter1_vec.wine.txt scatter1_reduced_wine.txt
python3 scatter1.py seed.data seed.labels scatter1_vec.seed.txt scatter1_reduced_seed.txt
```

```
python3 scatter2.py iris.data iris.labels scatter2_vec.iris.txt scatter2_reduced_iris.txt
python3 scatter2.py wine.data wine.labels scatter2_vec.wine.txt scatter2_reduced_wine.txt
python3 scatter2.py seed.data seed.labels scatter2_vec.seed.txt scatter2_reduced_seed.txt
```

```
python3 scatter3.py iris.data iris.labels scatter3_vec.iris.txt scatter3_reduced_iris.txt
python3 scatter3.py wine.data wine.labels scatter3_vec.wine.txt scatter3_reduced_wine.txt
python3 scatter3.py seed.data seed.labels scatter3_vec.seed.txt scatter3_reduced_seed.txt
```

Part II

In Part II, there are 2 test datasets: *iris*, *wine*.

Run the followin commands:

Case 1:

```
python3 reducedim1.py iris.data iris.labels reducedim1_vec.iris.txt reducedim1_reduced_iris.txt
python3 nearest.py reducedim1_reduced_iris.txt reducedim1_vec.iris.txt iris.labels reducedim1_iris_query.data
reducedim1_iris_query.labels reducedim1_nn_iris.txt
```

```
python3 reducedim1.py wine.data wine.labels reducedim1_vec.wine.txt reducedim1_reduced_wine.txt
python3 nearest.py reducedim1_reduced_wine.txt reducedim1_vec.wine.txt wine.labels reducedim1_wine_query.data
reducedim1_wine_query.labels reducedim1_nn_wine.txt
```

Case 2:

```
python3 reducedim2.py iris.data iris.labels reducedim2_vec.iris.txt reducedim2_reduced_iris.txt
python3 nearest.py reducedim2_reduced_iris.txt reducedim2_vec.iris.txt iris.labels reducedim2_iris_query.data
reducedim2_iris_query.labels reducedim2_nn_iris.txt
```

```
python3 reducedim2.py wine.data wine.labels reducedim2_vec.wine.txt reducedim2_reduced_wine.txt
python3 nearest.py reducedim2_reduced_wine.txt reducedim2_vec.wine.txt wine.labels reducedim2_wine_query.data
reducedim2_wine_query.labels reducedim2_nn_wine.txt
```