**TASK C**

On handwritten letter data, fix on 10 classes. Use the data handler to generate training and test data files. Do this for seven different splits: (train=5 test=34), (train=10 test=29), (train=15 test=24) , (train=20 test=19), (train=25 test=24) , (train=30 test=9) , (train=35 test=4).

On these seven different cases, run the centroid classifier to compute average test image classification accuracy. Plot these 7 average accuracy on one curve in a figure. What trend can you observe? When do this task, the training data and test data do not need be written into files.

**REPORT**

CLASS = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

1. train=5 test=34

Accuracy: 73.82352941176471

2. train=10 test=29

Accuracy: 82.41379310344827

3. train=15 test=24

Accuracy: 77.91666666666667

4. train=20 test=19

Accuracy: 80.52631578947368

5. train=25 test=24

Accuracy: 80.0

6. train=30 test=9

Accuracy: 81.11111111111111

7. train=35 test=4

Accuracy: 82.5

The trend that we see from the splits given are mentioned above

We can figure the lowest accuracy is for

train=5 test=34

Accuracy: 73.82352941176471

We can figure the highest accuracy is for

train=35 test=4

Accuracy: 82.5