

# Assignment 9 – Clustering

## Submission

Submit your code files under Assignment 9 by the due date specified in Blackboard. Plan to **demonstrate** your working program to the instructor in class after the due date.

## Details

You should write a program to implement the k-means algorithm

- The input to your program will be a set of 150 observations of iris data
- Each observation contains petal length, petal width, sepal length, sepal width and the type of iris
- The algorithm has been explained in videos and text in the lectures on slides 16 - 31

## Requirements

- You should run your program with  $k=3$
- Your output should be similar to the chart below i.e., it should give a number of each species of iris in each cluster

| Table of CLUSTER by Species |         |            |           |       |
|-----------------------------|---------|------------|-----------|-------|
| CLUSTER                     | Species |            |           | Total |
|                             | Setosa  | Versicolor | Virginica |       |
| 1                           | 0       | 49         | 15        | 64    |
| 2                           | 0       | 1          | 35        | 36    |
| 3                           | 50      | 0          | 0         | 50    |
| Total                       | 50      | 50         | 50        | 150   |