**Deadline: May 10, 2017**

**K-means**

Implement k-means clustering algorithm on iris data. Print centroids and sum of squared distances between points and closest centroids after each iteration.

Provide command line or graphic user interface which allows to choose number of clusters (k).

Optional: Calculate purity of clusters which is sum of frequencies of most frequent iris class in each cluster divided by the number of all samples.

example:
cluster1: 3xvirginica 1xsetosa 1xversicolor
cluster2: 4xsetosa 2xvirginica 1xversicolor
cluster3: 6xsetosa 1xvirginica 1xversicolor
Purity=(3+4+6)/20=0.65