Laboratory work №1

Classifying with k-Nearest Neighbors

You are given Iris Plants Databaset (flowers)
Your task is to write KNN algorithm and classify these examples:

1) sepal length in cm: 7.0
   sepal width in cm: 3.2
   petal length in cm: 4.8
   petal width in cm: 1.3
2) sepal length in cm: 5.1
   sepal width in cm: 3.2
   petal length in cm: 1.5
   petal width in cm: 0.6
3) sepal length in cm: 6.2
   sepal width in cm: 3.0
   petal length in cm: 5.9
   petal width in cm: 2.3
4) sepal length in cm: 6.0
   sepal width in cm: 2.9
   petal length in cm: 4.5
   petal width in cm: 1.6
5) sepal length in cm: 7.5
   sepal width in cm: 3.1
   petal length in cm: 6.6
   petal width in cm: 2.0

Information about dataset:

- The data set contains 3 classes of 50 instances each
- Predicted attribute: class of iris plant
- Number of Instances: 150 (50 in each of three classes)
- Number of Attributes: 4 numeric, predictive attributes and the class
- Attribute Information:
  1. sepal length in cm
  2. sepal width in cm
  3. petal length in cm
  4. petal width in cm
  5. class:
     -- Iris Setosa
     -- Iris Versicolour
     -- Iris Virginica

You can download dataset from here:

http://archive.ics.uci.edu/ml/machine-learning-databases/iris/

or from intranet

Hint: Read chapter 2 in “Machine Learning in Action”