------------------------------- GOAL ------------------------------

Write a program that implements the n nearest neighbor algorithm discussed in class and test it on the GLASS data provided in the data sources folder in this week. The First Attribute should be discarded - it is just a sample number (like 1,2,3). The last attribute IS THE TYPE OF GLASS - the classification attribute

Use the data below and answer what type of glass they are: You can provide the class number (like 1,2,3,etc) or translate the number to a type of glass. Note that the test data below DOES NOT HAVE ANYTHING LIKE THE INSTANCE NUMBER OR A CLASSIFICATION - YOU ARE TRYING TO DISCOVER THE CLASSIFICATION AND THE INSTANCE NUMBER IS USELESS TO US FOR CLASSIFICATION EVEN THOUGH IT APPEARS IN THE REAL DATA.

(A) 1.52211,14.19,3.78,0.91,71.36,0.23,9.14,0.00,0.37

(B) 1.51514,14.01,2.68,3.50,69.89,1.68,5.87,2.20,0.00

(C) 1.51915,12.73,1.85,1.86,72.69,0.60,10.09,0.00,0.00

------------------------------- RESULT ------------------------------

(A) belongs to type 3 (vehicle\_windows\_float\_processed)

(B) belongs to type 3 (vehicle\_windows\_float\_processed)

(C) belongs to type 1 (building\_windows\_float\_processed)

------------------------------- PROGRAM USAGE ------------------------------

./a.out input\_file\_path

So, when you run at your end, be sure to update the correct glass.data file path.

Edit arguments for XCode only, Product->Scheme->Edit Scheme->Arguments

Then the program prompt user for the testing glass attributes, please enter those attributes in one line separate by comma.

When enter "q", exit the program.

------------------------------- SAMPLE OUTPUT ------------------------------

Please enter the testing glass attributes: 1.52211,14.19,3.78,0.91,71.36,0.23,9.14,0.00,0.37

[3]: vehicle\_windows\_float\_processed

Please enter the testing glass attributes: 1.51514,14.01,2.68,3.50,69.89,1.68,5.87,2.20,0.00

[3]: vehicle\_windows\_float\_processed

Please enter the testing glass attributes: 1.51915,12.73,1.85,1.86,72.69,0.60,10.09,0.00,0.00

[1]: building\_windows\_float\_processed

Please enter the testing glass attributes: q

Program ended with exit code: 0