Lab 13 – Half Lab: Familiarization of Map, Associative Arrays (learning by example).

Implement a brief C++ program that ***counts the frequency of words in a text file and prints out the result***. The program = must use the STL data structure ***map*** or ***multimap***, use standard input (cin) as input redirected on the command line and output to standard out (cout).

Input data a standard a text file of unsorted words, each word is on a separate line, and it may contain duplicates.

Output each unique word together ***with its frequency*** appear in one line in the form:
`<number_of_occurences> <word>`

Input is from the file is read from standard input and output written to standard output.

Test Files (data2.txt) – program should return the same output as UNIX command:
cat data2.txt | sort -k 1 | uniq -c

Test Files (data2.txt):	Sample Output:
Great minds discuss ideas Average minds discuss events Small minds discuss people Eleanor Roosevelt	1 average 3 discuss 1 eleanor 1 events 1 great 1 ideas 3 minds 1 people 1 roosevelt 1 small

Provided files:
`cp ~ingrid/1730/Lab13/* ./`

Makefile
README.txt

data0.txt.
data1.txt
data2.txt

get_input.cpp // gets input from stdin & puts output to stout (and using <vector>)
map_bikes.cpp // how to use <map> library for a simple mapping of string to int & iterator.
map_nested.cpp // high-level demonstrating a nested map: A map within a map
multimap_words.cpp // multimap & iterator demonstration

1) Get checked with TA – run all three testcases in 2 windows for comparison (one window using UNIX commands, the other using your program).

   Run your executable **Lab13** as given below and compare it to UNIX command.

   Test 0:
   - `cat data0.txt | tr [:upper:] [:lower:] | sort -k 1 | uniq -c`
   - `cat data0.txt | tr [:upper:] [:lower:] | Lab13`

   Test 1:
   - `cat data1.txt | tr [:upper:] [:lower:] | sort -k 1 | uniq -c`
   - `cat data1.txt | tr [:upper:] [:lower:] | Lab13`

   Test 2:
   - `cat data2.txt | tr [:upper:] [:lower:] | sort -k 1 | uniq -c`
   - `cat data2.txt | tr [:upper:] [:lower:] | Lab13`

2) Submit your code:
   - `submit Lab13 csci-1730/`