Name:

Do your work in this directory:

**/data/courses/ece\_1111/current/quizzes/qu\_09/lastname\_firstname/p01**

Follow our usual procedure of creating a make file, a driver file named *p01.cc*, a header file named *p01.h*, and an implementation file *p01\_00.cc*. You must put all function implementations in the implementation file, except for the constructor and destructor.

**Task:** Write a C++ program that includes three functions. The first function, named, *read*, reads this file:

**/data/courses/ece\_1111/current/quizzes/qu\_09/picone\_joseph/example.dat**

into protected class data using a class named MyVector. The data must include the array of values as 32-bit floats and the number of values as a long integer. Your driver program will look something like this:

**MyVector mv;**

**mv.read(char\* fname);**

Then write a function that adds two vectors together and returns the result into the calling object:

**mv.add(mv1, mv2);**

Finally, write a function named display that prints the internal data:

**mv.display(FILE\* fp);**

Your driver program will look like this:

**MyVector mv, mv1, mv2;**

**mv1.read((char\*)argv[1]);**

**mv2.read((char\*)argv[2]);**

**mv.add(mv1, mv2);**

**mv.display(FILE\* fp);**

The interfaces to these functions should be:

**bool read(char\* fname);**

**bool add(MyVector& mv1, MyVector& mv2);**

**bool display(FILE\* fp);**

Make sure you implement a destructor that cleans up memory. Put a print statement that prints “... executing the destructor ...” to stdout. Your destructor should be called three times when your program exits.

I need to be able to run your program as follows:

**p01.exe <filename1> <filename2>**

It should print out the values of the sum of the two vectors using your display function.

**NOTE THAT FILES THAT ARE INCORRECTLY NAMED WILL RESULT IN A GRADE OF 0.** My testing script looks specifically for *p01.exe*.