CSE 333 13su Exercise 9

out: Wednesday, July 17, 2013
due: Friday, July 19, 2013 by **9:00 am**.

Write a C++ program that tests whether or not class instances are passed by value or passed by reference. Specifically:

- in file "IntPair.h", declare a class called "IntPair".
  - The constructor to the class should accept two integers and store them in private instance variables.
  - There should be a public method called Get that returns the two integers through output parameters.
  - There should be a public method called Set that sets the two integers.
- in file "IntPair.cc", implement the class.
- in file "ex9.cc", write a function called "Test" that accepts an instance of IntPair as an argument, and uses Get() and Set() to increment each of the two integers stored by the instance by one.
- in file "ex9.cc", write a main function that instantiates an instance of IntPair, calls Test(), and then determines whether IntPair was passed by value or passed by reference to Test.
  - if it was passed by value, print out "Is pass by value\n" (without the quotes, and that's a newline character at the end)
  - if it was passed by reference, print out "Is pass by reference\n" (without the quotes, and that's a newline character at the end)

Your code must:

- compile without errors or warnings on CSE Linux machines (lab workstations, attu, or CSE home VM) using the following command sequence:
  - g++ -g -Wall -c *.cc
  - g++ -g -o ex9 *.o

  do not submit a Makefile.
- have no crashes, memory leaks, or memory errors on CSE linux machines
- follow the style guidelines we covered in class, including naming conventions for classes, methods, and instance variables (if in doubt, follow the Google C++ style guide, but you may use streams and import directives), proper use of const, and appropriate comments (cpplint.py may be helpful in flagging potential style problems)
- be pretty: the formatting, modularization, variable and function names, and so on must make us smile rather than cry.
- be robust: you should think about handling bogus input from the user, and you should handle hard-to-handle cases (if there are any) gracefully.
- have a comment at the top of your source files with your name, student number, and CSE or UW email address.

You should submit your exercise using the assignment dropbox linked on the main course web page.