**CSCI 4727 Homework 1**

**Due: January 28, 5:00 pm**

This assignment simulates an automated store and warehouse that fills orders for products by passing an order record through various stations for processing. The program you write will give you some practice with C++, including files, keyboard input, and screen output.

A product is modeled by the following record, defined in the file ~barrettm/4727/product\_record.h:

struct product\_record {

int idnumber; // Unique identification

char name[PRODUCTSIZE]; // String description

double price; // Unit cost

int number; // Number ordered

double tax; // Tax on order

double sANDh; // Shipping and handling

double total; // Total order cost

int stations[MAXSTAGES]; // Stations processed

};

For now, MAXSTAGES is 5 and PRODUCTSIZE is 128. Your program will open an input text file (see below for determining its name) containing product orders. Each order will contain the above pieces of information, each starting on a new line; don't over-think reading in this simple file. For example, the product\_record

43

toaster

20.00

2

0.00

0.00

0.00

0 0 0 0 0

represents product #43, a toaster, which costs $20.00; this order is for 2 toasters, and (so far) has no tax assigned and no shipping and handling assigned, nor has the total been calculated. The stations vector has not yet been assigned, either – this will used later. Make sure that the stages are initialized to 0 – if that’s not what was in the file, set these to 0 anyway. Note that the output file should be formatted in the same way as an input file.

The command line will accept two parameters – the name of the input order file and the name of the output order file. Open the input file and read in the product\_record’s, one at a time. Display them on the screen, one at a time, holding the screen after each product\_record is displayed until the user types a single character. Then write the product\_record’s to the output file in the same format. Note that, as a test, your program should be able to read the output file: it should be in the same format.

**Deliverables** Send me via email at barrettm@etsu.edu containing the source code for hw1. You’ll have to download the source from einstein. If your program uses multiple source files – like if you actually do an object oriented version (not required) – send each file separately.