EGRE 347 Applied Object Oriented Programming
Homework #4 – C++ containers

This homework must be your own (individual) work as defined in the course syllabus and discussed in class.

1) Starting with your C++ solution for Homework #1, you must make the following changes to the program:

    1. Change the array of *part* structures (i.e., *part_list*) in the main routine to a vector container. The initial size of the container should be the default – i.e., the vector should not be defined as having a size of NO_OF_PARTS initially.
    2. Delete the *swap_parts()* function from the source code – you will not need it.
    3. Modify the *print_catalog()* and *print_full_catalog()* functions to take a vector of *part* structures as an argument instead of an array of *part* structures.
    4. Modify the *sort_catalog()* function to also take a vector of *part* structures as an argument instead of an array of *part* structures. Modify the *sort_catalog()* function to use the *sort()* algorithm from the C++ standard template library to sort the vector of *parts*. Note that this will require that you write comparison functions for *parts* structures which return a Boolean if one *part* is "less than" another – one by price comparison, another by part number comparison and another by manufacturer part number. Refer to the example shown in class that describes how to do this.

    For this assignment, you must turn in a git bundle file (hw4.bundle) with all of your source files and a working Makefile to compile your solution. The Makefile should compile the solution in C++ with no errors or warnings. Turn in your assignment by attaching the git bundle file to the assignment submission page.

    Remember the class policy on late submissions – no late submissions are allowed unless prior arrangement is made with the instructor.