CS 3304 Data and Information Structures

Lab – Chapter 10

This assignment is adapted from Programming Problems #31 for Chapter 10 in Page 583.

The investment company of Pickum & Loozem has been recording the trading price of a particular stock over a 15-day period. Write a C++ program that reads these prices and stores them in a sequential container and then sorts them into increasing order. The program should find and display:

a. The trading range (the lowest and the highest prices recorded).
b. A sequence that shows how much the price rose or fell each day. (This has to be done on the original sequence of prices.)

Requirements:

1. Use random number generator to generate 12 prices in range $1 ~ $100 inclusively.
2. Generated numbers must be displayed on screen. On a separate line, the sequence of price differences are displayed, properly aligned with generated numbers. Then the numbers are sorted using STL Sort algorithm and the sorted list is displayed. The trading range is displayed in the last line. All output must be properly labeled.
3. The program must run in cyclic fashion, each time asking the user whether he/she wants to repeat. Using a different seed to initialize the random number generator each time so that a different sequence of numbers is generated.
4. Use Visual Studio to test your program. Set application type to "General" and project type to "Empty".
5. Turn in the C++ source files by the due date.