Object-oriented Programming in C++

Practical Worksheet 12

Questions

*(Questions marked * need to be submitted to the NOW dropbox.)*

(Make a Visual Studio solution file by creating a new Visual Studio project for the first question. Add .cpp files, etc. Add further Visual Studio projects to this solution for each question.)

LECTURE 12 – Templates and Searching

50. On function templates.
    Write code to implement the sort function template from Lecture 12. Add a function to generate random numbers in a vector of integers, add a function template to print the int values, use the sort function template to order the int values, and finally re-use the function template to print the sorted int values. Repeat for a vector of chars using the function templates.

51. On class templates.
    Add a remove function to the template Link List example from Lecture 12

52. On linear and binary searches.
    Write code to use a linear search and then a binary search to find and output all occurrences of a digit from 0 to 9 in a vector of ordered, one digit integers. The code should count and output how many checks of a digit are made on the vector for each type of search. Use the function to generate random numbers in a vector of integers and the sort function template to order the int values from question 50.