

CSC2111

Computer Science I

Lab 21

50 points

Due 04/16/16 10:00 pm

You should put comments in your take-home assignments. Solutions without comments will be deducted 5 points in grade.

Using the **vector type** as your list, implement functions for each of **sequential search**, **binary search**, **bubble sort**, and **insertion sort**. You may use function templates, or just force a particular vector type (for example `vector<int>`).

Create a test program where you add several items to a vector. Use your sequential search function several times to get the index of items, and show when an item is not found. Then use your bubble sort function to sort the vector, and then print out the entire vector to show it is sorted. Now use your binary search function several times to get the index of items, and show when an item is not found. Now add a few more items to the vector, and use insertion sort to sort that, and then print the whole vector to show it is sorted. *Alternatively, you could implement a looping test menu that gives options, such as add item, print whole list, use insertion sort, use binary search, etc.*

Grading Ruberic

- (10 points) Sequential Search function
- (10 points) Binary Search function
- (10 points) Bubble sort function
- (10 points) Insertion sort function
- (10 points) Vector usage