

TEXAS A&M UNIVERSITY-CORPUS CHRISTI  
Computer Science Program

**COURSE:** COSC 2437 and COSC 5321  
**Lab #8:** Sorting Practice  
**ASSIGNED:** Apr 16, 2015  
**DUE:** Apr 22, 2015, 11:59pm  
**LATE DUE:** Apr 24, 2015, 11:59pm  
**OBJECTIVE:** Compare sorting efficiency of Selection, Insertion, and Quick sorts.

***Preliminary task:***

Declare an array (using `arrayListType.h`) hold from 60 to 70 integers.

Load the array with data from `lab8.dat`

Sort the array using the Selection sort (which is defined in `arrayListType.h`) and counting the number of loop iterations and the number of record moves.

Print the sorted array, the number of loop iterations and the number of record moves.

Do the same thing with the Insertion and Quick sorts.

This program uses the data file `lab8.dat`. Create the output file, *YourIslandIDlab8.out*, for all of your output.

***Note,*** you must start with the original unsorted array each time.

***Postliminary task:***

Format your output so that the user of your program understands the values that were input and what was output for each calculation. Your program should have a user-friendly interface.

Make sure your program is properly documented and good programming standards are followed. You are required to follow C++ Style guide, which is available on Blackboard.

Try your program with a variety of input values, to determine it works properly.

***Submission:***

You can use any kind of compiler or text editor for source code creation and testing; however, your program will be graded through Penguin and g++ compiler on Penguin. Therefore, please make sure that your program works on Penguin before you will submit your lab assignment.

You will be submitting this lab zipped in 1 file via Blackboard.  
Prepare the 1 file with the following:

- Your program source codes (Required implementation documents[depends on design], lab8.dat, *YourIslandIDL*lab8.out, and makefile).
- The zipped file will be called: *YourIslandIDL*Lab8.zip