Programming, and Data Structures

Workbook 4

This worksheet WILL be graded.

Today’s lab is about searching for data in linear data structures. We are going to implement what we saw in the lecture notes. For each part, create an array of integer data yourselves. For Part3.java, make sure that your array is already sorted (remember, Binary Search only works on sorted data).

Before you begin.

1. Ensure that your workspace is in a folder which is backed up to the web/ network e.g. college network drive, google drive. You may like to have it in the following folder structure …/GriffithCollege/PDS/workspace
2. Load Eclipse selecting the appropriate workspace
3. Make a new java project called Workbook04
4. Make a new package in this project called workbook04

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**\* COMMENT YOUR CODE!!!!!!! SERIOUSLY. I CANNOT GIVE MARKS IF YOU DON’T**

**\* EXPLAIN WHAT YOU ARE DOING.**

**\*/**

Today’s lab is about sorting data in linear data structures. We are going to implement what we saw in the lecture notes. For each part, create an array of unsorted integer data yourselves.

Download the Array Structures Skelteon template from Moodle and implement the sorting algorithms below.

1. **SelectionSort** Create an array of integer data and sort it using the Selection Sort algorithm. Your method should be called selection*Sort*(), and should take in an array *myArray.* Test your method by printing the array before and after you call your sorting algorithm.
2. **InsertionSort** Create an array of integer data and sort it using the Insertion Sort algorithm. Your method should be called *insertionSort*(), and should take in an array *myArray.* Test your method by printing the array before and after you call your sorting algorithm.
3. **BubbleSort** Create an array of integer data and sort it using Bubble Sort. Your method should be called *bubblesort*(), and should take in an array *myArray.* Test your method by printing the array before and after you call your sorting algorithm.

Submit your software via Moodle before the deadline. To submit, create an archive in the format

Lastname\_firstname\_studentNumber\_workBookNumber.zip eg Cronin\_Alex\_123456\_workkbook04.zip