COP-2210 – Lab 8

Objective

Students will be able to develop Java programs that use the array data type, by implementing exercises that require array declaration, accessing elements in an array, traversing arrays, and algorithms to process arrays.

Guidelines

- The assignment is to be completed in pairs.
- Questions are based on content discussed in the Lecture and book readings.
- NetBeans is the IDE of choice.
- Students are expected to attend each lab session and actively participate in the lab activities.
- Lab should be completed and submitted by the end of the lab time. Extra time would be considered on a case by case analysis and last day to submit would be Friday.
- To submit, upload your lab solutions to the dropbox in Canvas.
- Make sure you include the information of the developers as a comment in the first lines of each program of the lab:

Student Name: _____ Student Name: _____
Panther ID: _____ Panther ID: _____
Week: _____
Section: _____

Lab Questions

The lab involves completing a number of questions from the Chapter 7 of our textbook.

1) Write a program that fills an array with 10 random integers in [1, 20], asks the user to provide a value, and counts how many numbers in the array are equal to the value entered by the user.

2) Write a program that fills an array with 20 random integers in [1, 100] and prints the **location** in the array of the smallest (the minimum) integer.

3) **E7.5** Write a program that computes the alternating sum of all elements in an array. For example, if the array elements are

1 4 9 16 9 7 4 9 11

then it computes

$$1 - 4 + 9 - 16 + 9 - 7 + 4 - 9 + 11 = -2$$

4) **A variation of E7.10 i** Write a program that determines if an array contains two adjacent duplicate elements.

Grading Rubric

Lab grade is 16 points (out of 1000 total course points). Question weights are as follows:

Question	Points
1	4 pts
2	4 pts
3	4 pts
4	4 pts

Answers will be graded based on correctness, completion, and organization.