

CST8110 – Introduction to Programming

Assignment #4 – arrays

DUE: This assignment must be completed and submitted to Blackboard by 6pm SHARP on Friday December 6. Late assignments receive a grade of 0.

Problem Solution Parameters:

- The solution to this problem must adhere to Object Oriented Programming principles and conventions – specifically (but not limited to):
 - Each class written should contain data member fields that have appropriate access specifier (private or protected), appropriate names that specifically describe the data being held and that start with a lower case letter (and subsequent words capitalized), and that are required in every object of that class. Data which is not required in every object (for the length of the object) of a class is local data to a method, and should be declared in the method.
 - Each class written should contain methods that have appropriate name (starting with a verb and a lower case letter, subsequent words should be capitalized) and should contain only the lines of code that are needed to complete the task indicated by the name of the method
 - The purpose of a constructor in a class is to initialize the data in a class. Ensure that all fields are initialized (if necessary) to appropriate values in ALL constructors of each class.
 - Class names should describe the data being modeled in that class and should start with a capital letter. The specific names of the classes for this assignment should be Assign4 (which will contain method main), and UniqueNumbers.
 - Each class should start with a comment header which contains description of the class and each data member and method, student name, date,.

Problem Description

Write **a program** using an array to solve the following problem:

- Prompt the user to enter the number of numbers they wish to enter
- Prompt the user to then enter that number of integer numbers
- Store each number entered into an array ONLY if it is not already stored in the array
- Display the numbers in the array

Example 1: (green is entered by user)

Enter the number of integers you will enter:

5

Enter 5 numbers: 20 30 10 20 10

The unique numbers are:

20 30 10

Example 2:

Enter the number of integers you will enter:

3

Enter 3 numbers: 1 1 1

The unique numbers are:

1

Example 3:

Enter the number of integers you will enter:

-4

Error...must be positive number...re-enter the number of integers you will enter:

4

Enter 4 numbers: 1 2 3 2

The unique numbers are:

1 2 3

Submission Requirements:

- You must create a .zip file that contains ONLY the following:
 - Your program code - Assign4.java and UniqueNumbers.java files - (with your name, section, lab teacher listed in comments in the header of each class)
 - A document created with either Notepad, Wordpad or Word named Assign4.docx or Assign4.txt with your test plan - note this should contain your name, section and lab teacher listed at the top.
- The .zip file must have the following as it's name
 - Your last name, your first name, the word assign and the assign number ...
Example CraneLindaAssign4.zip
- Submit the .zip file through the Assignment feature which has been enabled in the CST8110 Blackboard course. This should be directly under the Assignment description.
- Marks will be given for correct submission (ie marks will be deducted for incorrect submission!)