CSC120 – Computer Science I

Assignment 5

April 17th, 2019

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1. Design and implement a class called Shoe that represents inventory data for a shoe:

- manufacturer: String
- name: String
- price: double
- number of likes: integer
    - Represents how many people have clicked "like" on this shoe
- Colours: String[]

You are required to define the following methods:

- Constructors:
    - Empty constructor that initializes each attribute with an initial value
    - Constructor that initializes attributes with its parameters
    - A constructor that creates an object and initializes all attributes but number of likes. Because the number of likes is not supplied, this version of the constructor should initialize likes with 0
    - A copy Constructor that performs deep copy
- Accessor/getter and Mutator/setter methods:
    - A getter and setter for each attribute
- The like() method
    - The method like() is a mutator method but it does not take a parameter. It sets the number of likes to +1
- toString() method:
    - return all the attributes with meaningful hint/message for the user

<u>Driver</u>

- Implement a driver/main class such that you initialize/create 3 objects of Shoe. Use both constructors
- Store the 3 objects in an array or array list
- Use 1 setter, 1 getter
- Like 2 objects such that it increases the number of likes by 1 each invocation

- Finally, loop through the array/array list and print all data for each object by invoking toString()

2. Write a function that takes the following 2-D array and return the sum of its values:

```
int[][] arr_2d = {
      {10, 90, 80, 7, 9, 0, 1, 0},
      {9, 8, 0, 10, 2, 7, 9, 11},
      {13, 27, 28, 19, 20, 31, 23, 52},
      {61, 62, 63, 64, 78, 98, 89, 1},
      {17, 18, 19, 16, 15, 14, 13, 12}
};
```

```
/**
 *
 * @author:      yourName
 * Assignment:   Assignment #x
 * Date:         submission date
 * Description:  briefly, describe what the program does
 * Input:        input that the program expects (if any)
 * Output:       what does the program return
 *
 * Bugs:         write here if there is any bug that
                causes the program   to crash/terminate
 */
```

Email me and our TA with the email subject CSC120 assignment5 the .java file(s) of your program and a screenshot of the console that shows the output (i.e., compiled code).