Lab 12

Name:______________________  Checked:______

Objectives:
Practice using arrays as parameters and arrays of objects.

A. Arrays as parameters
1. Run the example TrianglePanel.java. Note the use of arrays as parameters.

2. Change the numbers so that you get nice blue V on a white triangle.

3. Add the method addTen() to the TrianglePanel class and incorporate some code in the paintComponent() method to use addTen() so as to shift the blue V to the right.

   public void addTen(int[] a) 
   
   { 
   
   for (int i = 0; i < a.length; i++)
   
   a[i] += 10;
   
   }

4. Create another method addN() similar to addTen() which gives you more flexibility by using a second parameter to allow you to add any value to each element of the array. For example addN(anArray, -72) would subtract 72 from each element of anArray. Try it with TrianglePanel to draw additional triangles. Finish by creating a design of your choice.

5. Compare your design with your partner's. Sign and optionally comment on their design.

   Lab partner's comments: ______________________________________________________

   Lab partner's signature: ____________________________

B. Arrays of objects
1. Review the textbook example of a DVD database: DVD.java, DVDCollection.java and Movies.java.

2. Aren't shoes better than movies? Maybe you disagree, but, in any event, we will create a program similar to the one above, using shoes instead of DVDs\(^1\). Using the Shoe class you designed for Project 6, create a class called ShoeCollection, similar to the DVDCollection – it should maintain a database of Shoe objects, using an array of Shoes. Create a program YouVeGotMoreShoes.java to test ShoeCollection.java.

\(^1\) If you prefer, you may do this exercise using a different class, such as the Account class or the Person class – any kind of object could be used in place of DVD objects. The point is to use an array to store a collection of objects.
3. In the space below, sketch the UML class diagram for your program. (Hint: It should be similar to the UML class diagram of the textbook example.)

4. Compare your diagram with your partner's. Approve (and correct, as necessary) each other's solution; then sign each other's worksheet.

Lab partner's signature (indicates approval): ________________________________
Lab 12 Comments  Name:_____________________

Comments on this lab, please:

What was the most valuable thing you learned in this lab?

What did you like best about this lab?

Was there any particular problem?

Do you have any suggestions for improving this lab as an effective learning experience?