**Directions:**

Follow along with your teacher for the first part of the lab. For the second part, complete the exercises shown and submit a copy of your code and the output in google classroom.

**Assignment:**

1. Create a heterogenous array containing the following literals: *3.14, 41, true, false, 2.72*. What should be the common data type for these literals for your array? Hint: These literals are not just primitives; they also have corresponding class versions.
2. Iterate through the array you have created above and print out which numbers are decimals, integers, or booleans. For example, for the array above, you should produce output like this:

Decimal: 3.14  
Integer: 41  
Boolean: true  
Boolean: false  
Decimal: 2.72  
  
Hint: You will need to use the *instanceof* operator in java.

1. Add a Box class to the graphics package. A Box is a rectangle. ***Do not use the class name Rectangle as it is already used by the Swing graphics library used in the project.*** Look inside the existing Square, Shape, and Triangle classes for clues on how to add this new Box polygon.
2. Be sure your Box class contains the following code:  
     
    @Override public void changeSize(int width) {  
    changeSize(2 \* width, width);  
    }

public void changeSize(int length, int width) {  
 // you have to write this part  
 }

1. Create a heterogeneous array called *shapeList* consisting of 1 Circle, 2 Boxes, 1 Square and 3 Triangles. Populate this array using *anonymous objects*.
2. Loop through the *shapeList* array. Space the polygons apart so that they all appear on the canvas without touching each other. Also make each polygon a different size.
3. Using a separate *for-each* loop, change the color of the circles to red, the boxes to blue, the squares to magenta, and the triangles to green.