Assignment 6
## Graphical User Interface using JavaFX

JavaFX Notes

It is important to follow the methods taught in the slides for JavaFX. If you stray from them, you will likely receive significant penalties. If there is something you'd like to try and are unsure if it is allowed, contact your instructor.

Program:

Implement a java program to display the following GUI.

You should create an animal class (for example Bear, Dog, etc.) using the Java FX shapes you have lerant in the lectures. Create an object of that animal and add it to the GUI.

The black small rectangles on the GUI show the coordinates(x and y) for each tree object.
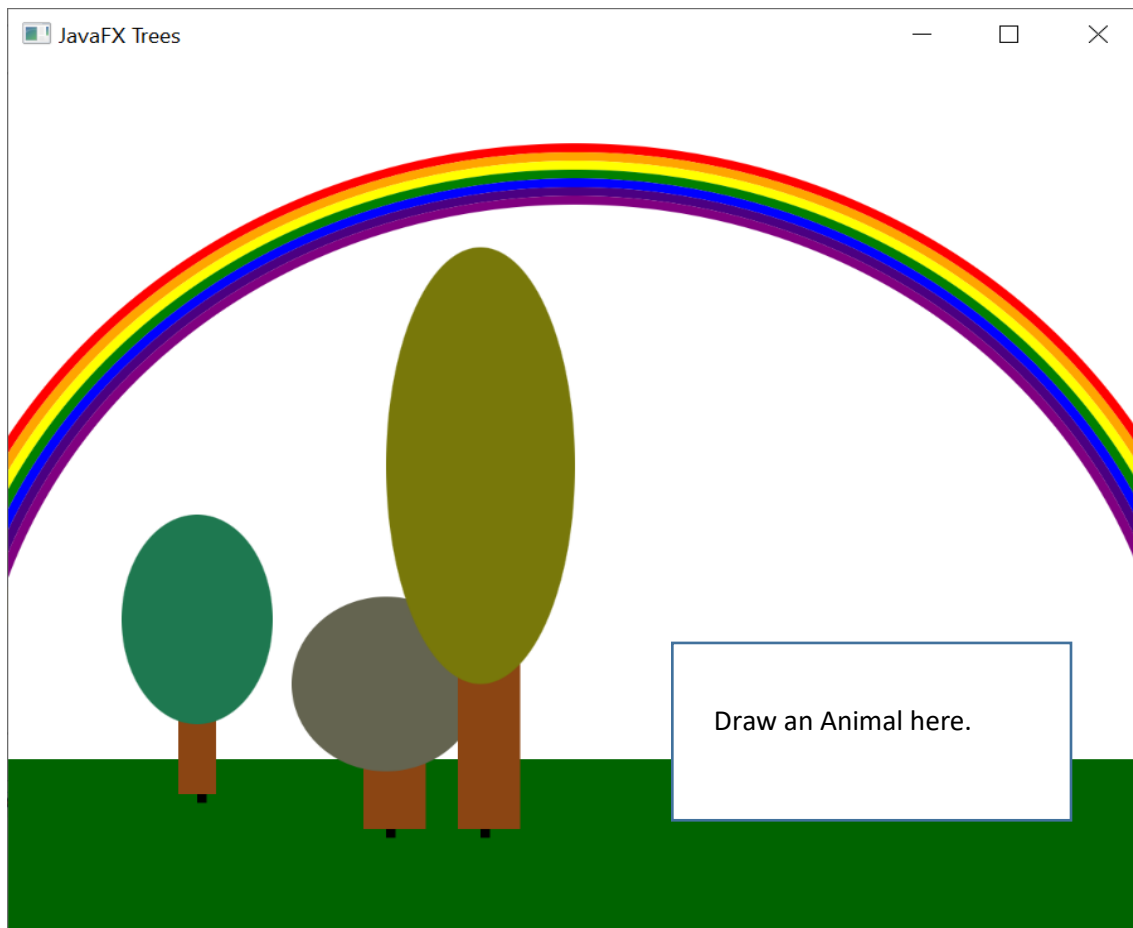
Download the Assignment6.zip file from BrightSpace and un-compress the file. The Assignment6 folder contains two files Tree.java and Scenery.java.

Do the following:

- o Modify the Tree class to be able to draw Trees of varying sizes and colors.
- o Test your modified Tree class by running the Scenery.java program.

- o Modify the Scenery.java to add a Rainbow arching over the trees.
  To draw the rainbow:
    - Create and set properties of the needed shapes and add them to the root element.
    - Try creating 2 or 3 stripes.
    - If successful, find a way to use a loop and or a method to avoid repeating code.
    - The rainbow colors are RED, ORANGE, YELLOW, BLUE, INDIGO, and PURPLE.
- o Using different shapes you have seen in the lecture, create your favorite Animal class (for example a Bear, a Dog or any other animals). This class is similar to the Tree class but it adds an animal to the GUI.
  Modify the Scenery.java to create an animal object and add it to the GUI.

Please note that the Scenery.java file must be changes to show the rainbow and the animal on the GUI.

Submit a single ZIP (Compressed) file to BrightSpace containing:

The source code for: Tree.java, Bear.java, and Scenery.java

Marking Scheme

- • [15] Modify the Tree class so the size and the color can be specified.
- • [20] Add rainbow to the GUI program
- • [20] Create an Animal class and modify the Scenery program to show the animal on the GUI.
- • [10] Documentation: Javadoc for all the methods headers, purpose of the program, inline comments
- • [5] Programming Style: Meaningful variable names and constants following the conventions, consistent indentation.