

Android Animation: Bouncing Practice Part 2

Lab Project: 100 Points

Description

Modify your Bouncer App to have the following features. Remember to consult the class page tutorials, your previous Apps, and the Android Developer site.

1. Create a Class named Actor that has the following fields and functions. (30 Points)

Fields (private):

- Point p for location
- Integer c for color
- Integer s for size
- Integer dx for speed of change in x position
- Integer dy for speed of change in y position
- Paint paint to hold the Paint Object

Functions:

```
public int getX()
public int getY()
public int getSize()
public Paint getPaint()
public void setColor(int col)
public void goTo(int x, int y)
public void setDX(int speed)
public void setDY(int speed)
public void changeDX(float a)
public void changeDY(float a)
public void move()
public void bounce(Canvas canvas)
public void bounceOff(Actor a)
public void drawCircle(Canvas c) // Calls the c.drawCircle from within Actor
public void drawSquare(Canvas c) // Calls the c.drawRect from within Actor
```

2. Create an ArrayList structure named actorList in the AnimatedView class. Populate the actorList with at least 5 Actor instances with different sizes, colors, and speed. Use a for loop structure to call the bounce and draw functions in onDraw(). (25 Points)

3. Using the tutorials and the Pedometer App as a model, add an Accelerometer Listener to the Main.java class that passes x, y, and z acceleration to the AnimatedView class. The AnimatedView class should then pass this information to the Actors to have them react to user input via tilt gestures. (30 Points)

4. Add, Commit, and Push your App to your Github repository. Place a Screenshot of your app running on your Google Site on a page called "Animation" (15 Points).