**CMSC 113: Computer Science I**

ArrayList**s in** GraphicsProgram**s**

Write a compound object DarkeningCircle that contains a white filled-in circle centered at the compound object's hotspot. (You can choose the size.) Include a method darken() that makes the circle become a shade darker. It should take 255 calls to darken() to fully make the circle black. (Further calls to darken() should *not* cause a crash.)

Then, write a program. Every click should create a new DarkeningCircle. Each circle should darken every 5 milliseconds. Note that each circle has its own shade of gray.

Once you've gotten that working, make it so that every time you click on an existing DarkeningCircle, it resets to white again. (Don't just make a new DarkeningCircle on top of the old one.) This will require adding a new method to your compound object.