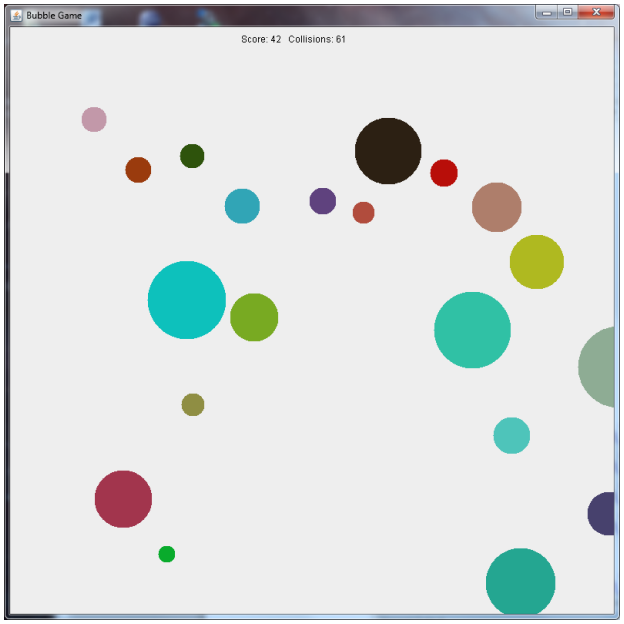
Department of Computer Science & CINSAM

NKU Summer Programming Workshop 2015



Project 14: Mouse Listener

In this project, you will finish the implementation of the BubbleGame. Given to you is the Bubble class and the BubbleGameSkeleton. The game works like this:

Create some number of Bubbles (for instance 20). Star the Timer. At each Timer event, increase the size of all of the Bubbles using actionPerformed. This will require that you use a for loop to call bubbles[i].increase(size); The increase in size is based on logic given the number of times the user has used the mouse. Also, test to see if any Bubble has touched (collided with) another Bubble. This will require 2 nested for loops.

If the user presses the mouse button, check to see if the mouse is inside a Bubble using bubbles[i].isClicked(x,y);. This returns true if the mouse is currently in (or near) bubbles[i]. If true, add 1 to score and create a new Bubble for bubbles[i]. This will have the appearance of the Bubble disappearing and a new one appearing.

The paintComponent method will use a for loop to draw all of the Bubbles and also draw a String to output the score and collisions so far. In paintComponent, have an if statement to stop the timer should the number of collisions reach some maximum amount of the game (such as 100).

Enhancements:

1. Instead of incrementing the score for each popped Bubble, increase the score based on the Bubble's current size. For instance, you might use 150-bubbles[i].getSize(). If the size is 100, this adds 50 points. If the size is 50, this adds 100 points.
2. A collision will also be counted if a Bubble becomes too large (say 150). In such a case, the Bubble is set to a new Bubble so that it reappears elsewhere.
3. Alter some of the values such as the speed, number of Bubbles, size of the playing area.