# Lab 9 Threads Lab

# Week beginning 26/11/2018

1. Run the code for GreetingThreadTester a few times. Do the 2 GreetingRunnable threads always run in the same order? No

2. Run the code in “Ball without threads” folder. Check that the GUI is nonresponsive. Change the code so that the code to bounce the ball is in a separate thread. Check that each time the “Start” button is clicked, another ball starts.

(a) Remove the following line from the Ball class:

Thread.sleep(5);

What is the effect?

The ball moves much faster as the ball moves slower when the thread is present.

(b) Add code so that when the “Stop” is clicked, the ball stops.

(c) After clicking Start multiple times, what is the effect of the Stop button?

The stop button becomes unresponsive where the balls will not stop beyond one click. Simply, the stop button has no effect.

(d) Update the code so that after clicking Start once, clicking it again has no effect.

3. The code in Scrolling Text folder does not use a thread. Why is it necessary to use a thread here? Change the code to use a thread for the scrolling text.

Allow the user enter the text to be scrolled.

Also give the user the option to change the color – a random color is chosen.

4. (a) Change the code in MyRunnable in Files example folder to extend Thread instead of implement Runnable

(b) Update the code to count all occurrences of searchString in the file, not just the number of lines containing searchString.