# ECS705/ECS717

### Lab Sheet 8: Threads and Classpath

## **Essential exercises:**

Exercise 44.

Write an application that contains 2 task classes that implement Runnable and 1 main class. The FirstTask class should take in a String printMe and int times. FirstTask when run should print to screen the string printMe, the number of times specified (times). The SecondTask class should take in an int countFrom. SecondTask should count down from countDown to 0. The main class should be in charge of creating threads and starting them up. The main class should create:

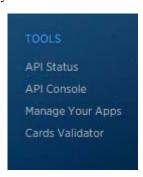
- 1. 1 FirstTask class that prints "Thread A" 12 times
- 2. 1 FirstTask class that prints "Thread B" 10 times
- 3. 1 SecondTask class that counts down from 50

When you print to the screen, please use a print rather than println.

### **Desirable exercises:**

Exercise 45.

Go to <a href="https://dev.twitter.com">https://dev.twitter.com</a>. Sign in (if you have a twitter account) or sign up and then sign in.



At the bottom, click Manage your Apps. Then click the button "Create new App". Fill out the form (Give it any name and description you like and <a href="http://www.eecs.qmul.ac.uk">http://www.eecs.qmul.ac.uk</a> for the URL). Click "Create Twitter Application", and get your consumer key/secret. Click "create access token" and get the access key and secret as well.

Consumer Key (API Key)

Consumer Secret (API Secret)

Download the Twitter 4J Jar provided and put the jar file on your classpath. Add the access token/secret and consumer key/secret to the code. Compile and run the example TwitterExample.

#### Exercise 46.

Modify the program in Exercise 45 to read in the users from localusers.txt. If a user doesn't exist just ignore it and move on, however if you receive a rate limit error then exit and say the rate limit has been exceeded.

#### Exercise 47.

Modify the program in Exercise 46 to deal with the rate limit error. Rather than exiting go to sleep for the time required and wake up and continue printing off the statuses.