

**CSCI 4060U – Laboratory #7**  
**Concurrency Programming Pitfalls in Java**  
Lab Due: 11:00pm Monday, April 3, 2023 (Canvas)

## **Introduction**

The main purpose of this lab is to learn about common concurrency programming pitfalls including starvation, deadlocks and data races. Furthermore, the lab will involve identifying concurrency programming pitfalls and addressing them in an existing Java program.

## **Activity #1**

In this activity, you will learn about common concurrency programming pitfalls by playing a serious game called ThreadedPaws (link provided in lab). This game has five levels, and each level introduces a new pitfall.

## **Activity #2**

In the second activity you will apply the knowledge learned about concurrency pitfalls and how to address them with an existing BankAccounts program written in Java. The goal of this activity is to identify and fix an existing concurrency bug.

## **Marking Scheme**

Activity #1:

- Complete all five levels of the ThreadedPaws game 5 marks

Activity #2:

- Fixed source code for the BankAccounts program 5 marks

TOTAL 10 MARKS

## **Submission**

There is no submission for Activity #1 – your teaching assistant will confirm completion of each level during the lab session. For Activity #2, you should submit your fixed BankAccounts source files through the lab drop box in Canvas.