

ICS 332 Fall 2021

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Homework Assignment #7 – Synchronization [30 pts]

You are expected to do your own work on all homework assignments. (See the statement of Academic Dishonesty on the [Syllabus](#).)

Check the [Syllabus](#) for the late assignment policy for this course.

How to turn in?

Assignments need to be turned in via [Laulima](#). Check the [Syllabus](#) for the late assignment policy for the course.

What to turn in?

You should turn in a tarred archive named `ics332_hw7_USERNAME.tar` that contains a single top-level directory called `ics332_hw7_USERNAME` where `USERNAME` is your UH username in all lower-case letters. In that directory, you should have all the files **named exactly** as specified below.

Expected contents of the `ics332_hw7_USERNAME` directory:

- `README.txt`: your report for exercise 2
- `Makefile`: used to compile the program, do not modify
- `counter.c`: your solution with no concurrency bugs

Your code must compile without any warnings or errors.

Environment

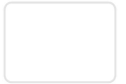
For this assignment **you need a Linux environment** (see [Assignment #0](#)).

Preliminaries

Before starting the assignment you should first download, compile, and run [counter.c](#) using this [Makefile](#). It contains a C program that uses threads to increment a counter.

Exercise #1 [10 pts]

Read through `counter.c` and make sure you understand what it is doing. Add descriptive comments for **each line of code**. A descriptive comment should be more than one word and make sense within the context of the surrounding comments.



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README. txt, identify all the concurrency bugs you found (refer to line numbers in the original counter. c and also include an explanation of how you fixed them. Include the line numbers of your newly added code in your README. txt file. You should also have comments for your new lines of code in the modified counter. c.

Your solution should **always** print the correct counter value. Converting the entire code to be sequential/single-threaded is not a valid solution.

My solution required 6 new lines of code. If you are using significantly more lines of code, you might not be doing it correctly.

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