

Lab 9 - Description

(Pub/Sub in C)

Lab Overview:

For this lab, we will be learning how to use POSIX threads to create a simple pub/sub setup in C. This lab builds off of the concepts in lab 8 with some alterations. For this lab, the main tasks concern editing our lab 8 code to be thread-safe and then adding 2 thread-pools for publishers and subscribers respectively. Most of the instructive content for this lab is contained in the file **lab9-skeleton**. So this document will be rather brief.

Core Tasks:

1. Alter the CRB code to be thread-safe.
2. Implement the publisher's function.
3. Implement the subscriber function.
4. Add code to main that builds the thread-pools.

Remarks:

See the attached file (**lab8-skeleton** for more details on what to do).

Submission Requirements:

In order to receive any credit for a lab, completion of the labs' core tasks must be demonstrated to the TA's. In order to receive points for this lab the student must do the following:

1. Compile and run your code (we must see it compile and execute successfully).
2. Valgrind output with leak-check and mem-check showing no memory leaks.
3. Submit your file to Canvas.
 - a. The submission must take place before the end of the lab. Canvas will lock the submission after your lab time. If you are switching your lab day (perfectly fine), you must tell us before your assigned day.