CSCI - B 536: Assignment #3

Due on Wednesday, September 28, 2016

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Contents

Problem 1

How exactly is synchronization achieved using semaphore in our assignment?

- We have used *wait* and *signal* for keeping the control of the critical section. First wait indicates the consumer process to wait and allows the common buffer n to be executed by the producer followed by producer sending a signal to consumer indicating that they can now take control of the critical block (i.e. the common buffer n) which then consumes and they do it in turn with each other.
- The operations of *wait* and *signal* are **atomic**.

Problem 2

Can the above synchronization be achieved with just one semaphore? Why or why not?

- I don't think so because we need two different semaphores to indicate the exclusiveness of the critical section. One semaphore to handle the consumer and one to handle the producer. These are used to indicate *wait* and *signal* for accessing the critical block.

Submission Links

1. GitHub Repo
2. Branch for Assignment 3

Task Distribution

- Pooja Singh - Implemented Consumer - void consumer(int count).
- Vivek Patani - Implemented Producer - void producer(int count).
- Collaboratively - Implemented xsh_prodcons and added functions to shell.