Due at the beginning of recitation R24 on Wednesday December 5.

The following three processes are run on a shared processor. They can coordinate their execution via shared semaphores that respond to the standard signal(S) and wait(S) procedures. Assume that execution may switch between any of the three processes at any point in time.

You would like to ensure that only the sequence CAB can be printed and that it will be printed exactly once. Add any missing wait(S) and signal(S) calls to the code below (where S is one of a, b or c) to ensure that the three processes can only print CAB exactly once. Remember to specify the initial value for each of your semaphores. Recall that semaphores cannot be initialized to negative numbers.

Semaphores: a = 0; b = 0; c = 1;