You have to write a concurrent program using the BACI system. BACI provides the mechanisms to support the concurrent execution of programs written in the C- programming language. This tiny programming language, C-, allows you to use constructs to initiate the concurrent execution of two or more processes. All you have to do is to enclose all the process (threads) to be executed concurrently in a cobegin { ... } construct. For instance, we might indicate the concurrent execution of processes P1, P2, and P3 by using:

Cobegin{P1 (...); P2 (...); P3 (...)}

Process synchronization can be carried out in C- using Semaphores and Monitors.

Write a concurrent program using semaphores to implement the Producer/Consumer algorithm. We will have two cases:

1.- One producer, one consumer, and one buffer.(the producer run faster than the consumer)

2.- One producer, one consumer, and one buffer.(the consumer run faster than the producer)

You must turn in a floppy or CD with the pseudo code of the above mentioned procedures and clearly indicate the initial values, and a running version of your solution in BACI with results for different data sets(different buffer sizes). The buffer size must be smaller than the number of items produced.