**Assignment VI**

Consider a process with three threads A, B, and C. The default thread of the process receives two inputs (X,Y) and places them in a queue that is accessible by all the three threads A, B and C. For each pair of input (X,Y), we require that the request must first be processed by thread A (Multiplication (X\*Y)),then B(Division (X\*Y)/2), then C (Addition (X+Y)), then B again ( (X\*Y) /(X+Y)), and finally by A((X+Y)\* (X+Y)) before the pair (X,Y) can be removed and discarded from the queue.

Thread A must read the next request from the queue only after it is finished with all the above steps of the previous one. Write down code for the functions run by the threads A, B, and C, to enable this synchronization. You may use any synchronization primitive of your choice to solve this question.