1.- Write a producer consumer program using Monitors(BACI). The producer produces IORB and insert them into the I/O request queue of the device( a disk). The IORB has the track number where the data is stored in the disk. The consumer picks a IORB at a time from the I/O request queue and move the read/write head to the track indicated in the IORB and reads the data. In your solution, assume you have a disk with 300 tracks; you have to compare the average access time for the following scheduling algorithms: SCAN and SSTF.

What to deliver:
   a) A list of the IORB produced by the producer(FIFO).
   b) A list of the request in the order they are served.
   c) Show the average access time for both cases.
   d) You must show at least three different scenarios.