1(20pts) Show how a condition variable can be implemented using a binary semaphore.

2(20pts) Solve exercise 7.8 on p237 in text using a monitor. Provide pseudocode as shown in book.

3(20pts) Exercise 8.8 on p268 in text.

4(20pts) Exercise 8.13 on p269 in text.

5(20pts) Briefly describe the processing management used by an Operating System of your choice. You must identify the OS and include the following: process states, process scheduling algorithm, at least two process synchronization primitives provided, and at least two process communication primitives provided.