CSE325 Interprocess Communication

Assignment #4

Design and Implement an Inter-process Communication Manager that is implemented with message passing.

Design document due: Mar 6, 4:00pm
Implementation due: Mar 22, 4:00pm

You are to work in groups of 2 or 3, with names of group members listed on the design document.

Functionality

You are to design a manager that will provide inter-process communication for up to 10 different managers. You will develop a design document that will consist of at least the following information:

- The high-level flow diagram of the code (IPC manager) to be implemented, not the test interface
- A state diagram and description of each possible state and transitions for a queue item (message)
- The actions that will be performed by this manager
- Descriptions of all elements of the inter-process facility (what they are and what they are used for)
- Any design decisions you made (including things like queue size, message size, etc)

Constraints on your design:

- Single-core system
- **No** system calls are allowed in your implementation of the interprocess-communication manager
- System calls are allowed in the testing interface portion of this assignment

Your design must be approved before you perform the implementation. If you turn in your design early, it is likely to be approved early. Designs may not necessarily be approved as submitted and changes may be required.

Assignment Deliverables

1. Design document as defined above
2. Code implementing the design
3. Test set of commands that exercises your code
4. Captured results of your test set
5. Presentation in lab of your implementation.