Queue Manager Test Interface Requirements

CSE325

For your queue manager, I am providing the specifications of a test interface. Your project should be able to accept commands, as defined in this document, as a way to exercise your queue manager. As other managers are added, additional commands may be introduced to enhance testing of the new functionality.

The commands listed are not necessarily all the commands you might need to test your design and implementation. I have only designed commands to test specific functionality that is required for the assignment. If you have other internal functionality, you might have to add new commands to be able to fully test your implementation.

Initialization Commands

1. *init_Q*

The directive initializes the data structure and elements of the queue. It should clear all data structure elements and build whatever linked lists are needed. It should return the name of each linked list and number of elements on all linked lists.

Status Commands

1. *list*

The directive will output the list of process-numbers in the queue. It does not invoke any of the queue manager commands, but will walk the queue to provide its output.

Action Commands

1. *enqueue* process-number psw page-table reg0 reg1 reg2

   This command invokes the ENQUEUE operation.

2. *dequeue*

   This command invokes the DEQUEUE operation and displays the process-number of the process it dequeued.

3. *delete* process-number
   This command invokes the DELETE operation and displays the process-number of the process it deleted.

4. *list*

This command will output the list of process-numbers in the queue, in the order they are in the queue, from head to tail. It does not invoke any of the queue manager commands, but will walk the queue to provide its output.

Notes

To keep some things simple, there will be no error checking needed for the command line with the exception of unidentified commands.