Learning Objectives.

1. How Queues works, especially within the O.S.
2. Learn how to output data to specific coordinates on the monitor.

* Write a “C” program. Use Pelles C for your IDE.
* Going to work with Queues.
* Name the python file CmpSc472\_Queues.PY.

Requirements

1. Create a Queue as an Integer array.
2. Make size of Queue = 10. Make this a constant.
3. Display a Queue on the monitor. Display the Queue vertically. Use the Enhanced Ascii Table to draw slots the for Queue
4. To start, place 3 positive integers in the Queue.
5. Add data (positive integers) to the Tail of the Queue
   1. To Add data to the Tail of the Queue, user hits the “A” key.
   2. Prompt the user to type in a positive integer.
   3. After they hit Enter, add the data to the Tail.
   4. Increment Tail by 1 (circular)
6. Remove data from the Head of the Queue.
   1. The user will hit the “R” key.
   2. Remove the item from the Head, and increase the Head by 1 (circular)
   3. Allow user to add integers to the Queue, whenever they want.
7. If user tries to Add more data than the Queue can hold, display a message that the Queue is full.
8. The program will end when the user hits the Escape key.

Optional requirements

* Have items be removed from the queue when a timer elapses.