CS 1120 – Computer Science II (with Java) Instructor: *Gupta*, Western Michigan University Lab TA: *Guo*

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**STACKS AND QUEUES – FOR LAB ASSIGNMENT** *2*

The program is able to use any data type and put that type into either a stack and Queue. With user interface you could test and see which one they wanted to use for the application. The minValue class works with a while loop, but you could as easily just bring each line in one at a time in order have a O(1).

Using the Node and Linked List classes as my bases for retrieving data was what seemed to make it easier than storing those variables in the stack and queues class. The program can call any of 6 methods. It can add one stack or queue, find minValue for the file, and use two stacks or queues to make the opposite.

Eventually after testing different data types I was able to see that they all work by using the Object variable. What I struggled most in this assignment was figuring out how to use two Queues to create a stack. I eventually figured out it’s like the Tower of Hanoi. The minvalue was also a little tricking in the fact you wanted O(1). Eventually after testing different options and trying not to use loops I figured it out.