LabFa

Testing Document

Questions from assignment:

1. Stack: You only need a singly linked list to implement it. Why is that?
    This is because a stack is only in one direction and is first in last out. So each node only needs to know what the next node is.

2. How can you tell they are working correctly?
    If the stack is working properly then it is a first in last out and a queue is first in first out.

3. Add to your driver program a test to fill the queue and stack with N values and attempt to print N + 1. What happens? It tells the user that the stack or queue is already empty.

4. Why do you not need to test for putting too many items into either the stack or queue?
    This is because they are dynamically allocated. If they are set up properly you cannot put too many items into them unless you exceed the memory in the computer.

Testing:

Stack or Queue	Input	Expected Output	Actual Output
Stack	1, 2, 3, 4	Peek then Pop in the order of 4,3,2,1	Peek then Pop in the order of 4,3,2,1
Queue	1, 2, 3, 4	Peek then Pop in the order of 1,2,3,4	Peek then Pop in the order of 1,2,3,4
Stack	1,2,3,4 with extra call	Peek then Pop in the order of 4,3,2,1 then state the stack is empty	Peek then Pop in the order of 4,3,2,1 then state the stack is empty
Queue	1,2,3,4 with extra call	Peek then Pop in the order of 1,2,3,4 then state the queue is empty	Peek then Pop in the order of 1,2,3,4 then state the queue is empty
Stack	4, 3, 2, 1	Peek then Pop in the order of 1,2,3,4	Peek then Pop in the order of 1,2,3,4
Queue	4, 3, 2, 1	Peek then Pop in the order of 4,3,2,1	Peek then Pop in the order of 4,3,2,1