

Lab Fa Results

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Below is test plan to determine if both my Queue and Stack are working correctly. Both structures are singly list structures and used the last object pointing to NULL as the way to determine if the list was NULL.

Test Case	Input Values	Driver Functions	Expected Outcome	Observed Outcomes
Are the number's stored and printing in accordance with the structure order (LIFO & FIFO)	I used various values. Mostly I test values in consecutive order so it's visually easier to ensure their print in order of the structure order (Stack vs Queue)	While loop which peeks and then removes the number from the lists	Expecting for the program to print according to the structure order Ex: Queue (1, 2, 3, 4, ...) and Stack (4, 3, 2, 1, ..)	The queue and stack printed as planned and did not exceed N+1 items in the list. Which also shows the isEmpty function is correctly detecting when the lists are empty
Attempting to access N+1 items from the list	Attempted to remove items from each list knowing the list is empty	Remove() function from both class	Console message stating "the list is empty"	List were empty and overcame the runtime exception and notified the user the "list was empty" and did not terminate the program
Were there any memory leaks in the program	Various integer values including negative numbers and various inputs	Using Valgrind in Flip server	Expecting no memory leaks and deallocation of dynamic memory	As per Valgrind, no leaks were possible and all memory was deallocated correctly. I was particularly concerned with deallocation

				when the list was at N-1
Ensure the isEmpty function is properly working	Various integer values	Adding various integer values and removing them afterwards	<p>Was unsure if the isEmpty function was going to properly work for the Queue.</p> <p>Was not as worried for the Stack isEmpty Boolean function.</p>	Worked correctly when attempting to access the values and especially when attempting to access an empty list. It did not allow for me to go any further and did not terminate the program with a runtime exception error.