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Section 7303

Commentary

For my project I implemented a stack using pointers. Since stacks only work with one end of a data structure they are the perfect choice for this project. Thus, their computational complexity is O(1), with the included push, pop methods being O(1) as well. The reason I used pointers is because pointers are useful for memory location and effectively dealing with large amounts of data. They save memory and run faster since they do not have to duplicate data.

The function *bool isEmpty()* has a **computational complexity of O(1).**

The function *T pop()* has a **computational complexity of O(1).**

The function *void push(T item)* has a **computational complexity of O(1).**

The function *T peek()* has a **computational complexity of O(1).**

The functions *bool L1(char * inputString), bool L2(char * inputString), bool L3(char * inputString), bool L4(char * inputString)* each have a **computational complexity of O(n), n** being the number of elements that have to be searched through.