

CS151 Intro to Data Structures

Quiz Review

LinkedLists and Stacks

Announcements

Quiz next class

- 30 minutes
- choose one question
- cheat sheet allowed (1 page single sided)

Anonymous Course survey (5 bonus points on exam):

<https://forms.gle/QRXSyZt9N5rT4iDf9>

Lab8 and HW6 deadline extended (thursday 4/4)

Reverse a LinkedList

Write a method called `reverse` that reverses a `LinkedList` in-place, meaning you should not use any additional data structures, you must operator on the `LinkedList` itself.

Reverse a LinkedList

Runtime complexity?

Space complexity?

Sort a Stack

Write a method to sort a stack in descending order. (After sorting, pop should return the smallest element).

The following are the only stack functions that should be used to write this program: push, pop, top, isEmpty.

You may use an additional stack

Sort a Stack

Runtime complexity?

Space complexity?

Remove an element from a LinkedList

Write a method `remove (LL l, Integer i)` to remove the value `i` from a linked list

Do the operation *in place*

Remove an element from a LinkedList

Runtime complexity?

Space complexity?

Remove an element from a Stack

Write a method `remove(Stack s, Integer i)` to remove the value `i` from a linked list

Remove an element from a Stack

Runtime complexity?

Space complexity?