Lab 3: Problems in Linked Lists, Stacks and Queues

February 3, 2021

1. Find the merge point of two linked lists.
2. Create an n-disc towers of hanoi. Move all the discs from tower A to tower C. Watch this video for learning what a Tower of Hanoi is.
3. Solve towers of hanoi using recursion video.
4. Reverse a stack using recursion.
5. Suppose you have a stack of capacity, l. You keep performing push operations until you fill the stack. Then perform amortized expansion of 5 units. Implement this! For k push operations, calculate the runtime. (give me a function in terms of n)
6. For the previous problem, if instead of a stack it were a queue, and you performed two dequeues after 8 enqueus, calculate the runtime. You need not implement this. (give me a function in terms of n)