

Problem 3: Playing with Stacks

Data Structures Lab (CS111)

This question has two parts:

1. Implement stack using linked list and implement following operations on the implemented stack:

- buildStack(), push(), pop(), top(), isEmpty() **[5 marks]**

2. Consider the array implementation of a stack. You have to implement stack using only one array such that you can always find the minimum element of the stack in $O(1)$ time. You have to design following stack operations:

- push(), pop(), top(), isEmpty(), isFull()
- findMin() in $O(1)$ time **[15 marks]**