Stack min : Design a stack which other then push and pop has a function min which return min at O(1).

Ans.

Wrong approach :

1. To use separate collection to maintain min at a given node,

Have a variable min for each node, which will have min for a node

Q2 Implement a queue using two stack..

Ans.

Insert it like a stack .

When called dequeue, shift or push all elements to the 2nd stack . so 1st element will at the top ,

And pop this element . and keep on popping for dequeue until the 2nd stack is empty.

Q3 Sort a stack such that smallest is on top , you can any other stack , but not any other data structure

Ans. Wit stack it is easy, can pop and then push sorted into another stack , till we find correct space for the new entry.

Complexcity ? n2 and N in space

Better solution ?

Q 4Stack of plates

Simple maintain a current stack

List<stack> stackList = new LinkedList <stack>()

CurrentStack ;

Pop(){

If(currentstack.size > 0 )

Currentstack.pop()

} else {

stackList.get(currentIndex-1);

}

Q follow up implement popAt(index) :

popAt(index) means pop from any of stack, this may involve reshulling all the stacks from top to bottom, which can be recurvislu applied to all the stacks

Q5 Animal shelter Dog , cat , first-in, first out, should have three methods , getDog, getCat, getAny

Ans , any is bit tricky, simple solution is to maintain order or timestamp

Animal (){

Int order

}

Cat extends Animal

Dog extends Animal