OOP Laboratory Exam

1	Write a C++ program to create a class called STACK using an array of integers (memory should be dynamically allocated for array for the user requested size) and implement the following operations by overloading the operators +,++ and - - : i. s1=element +s1; where s1 is an object of the class STACK and element is an integer to be pushed on to top of the stack. ii. s1=s1- - ; where s1 is an object of the class STACK and -- operator pops off the top element. iii. s1=s1++; where s1 is an object of the class STACK and ++ operator should increment the value of each element in the stack by 1. You have to handle the STACK Empty and STACK Full conditions. Also display the contents of the stack after each operation, by overloading <<.
2	Write a JAVA program to add two integers using command line arguments.
3	Write a C++ Program to create a class called LIST (linked list) with the following member functions. L=L+ele; will add ele to all the elements in the list that are less than ele. L=L-ele; Search a node with an element ele in the list L and remove the node with ele from L. L3=L1==L2; should join L1 to L2 if lists L1 and L2 are same with respect to elements and store the new list in L3. L1=L1++; should convert the negative values (if any) in the list into their positive and sort the list. Overload << to display the content of the list after every list operations. In addition to the above functions you can add your own functions if needed.