

1. 1. Write a program to implement a Stack using array. In order to implement the stack, program for following stack operations has to be written:
  - void push(int): to insert data onto the stack.
  - Int pop(): to remove and return the last inserted element from the stack.
  - Int top(): Returns the last inserted element without removing it.
  - int Size(): Returns the number of elements stored in the stack.
  - int IsEmptyStack(): Indicates whether any elements are stored in the stack or not.
  - int IsFullStack(): Indicates whether the stack is full or not.
2. Implement the stack using linked list. Repeat the stack operations mentioned in Question 1.
3. Write a program to convert an infix expression to postfix. Here, input should be a string and output should also be a string. For example, if input is "(A+B)\*(A-B)" then output will be "AB+AB-\*". You have to use only following operators: +, -, \*, / and paranthesis as ().
4. Write a program to evaluate a postfix expression using stack. Here, input will be a string but output will be a numeric value such as integers, float etc. For example, if the postfix expression (as input) is "123\*+5-" then output will be 2. You have to use only following operators: +, -, \*, / in the postfix expression.
5. Given an array of characters formed with a's and b's. The string is marked with special character X which represents the middle of the list (for example: ababa...ababXbabab baaa). Check whether the string is palindrome or not using stack.