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1. Write a program to implement stack data structure which follows the property of stack. Implement the function push() and pop() (you may also write the function isEmpty() and isFull()).
2. Write a program to implement queue data structure that follows FIFO property. Implement the function enqueue() and dequeue() for the same.
    a. Improve the above data structure considering the property of circular queue and write the function enqueue and dequeue accordingly.
3. Implement Stack data structure using Queue. (you need to use 2 Queue in this case).
    a. Write the program by making push operation costly.
    b. Write the program by making pop operation costly
4. Implement Queue data structure using stack. (you need to use 2 stack in this case)
    a. Write the program by making enqueue operation costly
    b. Write the program by making dequeue operation costly
5. Consider the following string
    Reverse
    Write a program (Use stack) to reverse the given string
6. Consider the following expression. Write a program to evaluate whether the given expression is balanced or not. (Use stack data structure to evaluate the expression)
    {[{}{}]}[()]
    [{}()]{})
7. Consider the following expression
    4+5*3-2
    Write a program to evaluate the above expression using stack data structure
8. Write a program to evaluate the postfix expression using stack data structure
    138*+ will be evaluated to 25
    545*+5/ will be evaluated to 5 (consider every digit as one single unit)
9. Consider a scenario where one line is to submit one form. Once the line started moving the authority realized announced that few students from final year should be into another line, resulting creation of another line. The formation of other line is created as: Once the authority gets that the student belong to final year they push them to other line. The other line starts from the last student that has join the line. At the end both lines will be displayed on the screen. Write a program to demonstrate the above scenario.
    Input: 1,2,3,2,3,4,1,2,4,3
    Output: 1,2,3,2,3,1,2,3
    4,4
    Input: 1,2,3,4
10. Consider the queue which is able to perform insertion and deletion from both the end.