**Programming Data structures and Algorithums-1**

**Session 4-Exercises**

1. You are required to write a program input a string through keyboard and output the reserves of the string using Stack data structure.

E.g.: Input : Hello

Output : 0lleH

1. You are required to write a program input expression with parenthesis and output a message as “Balanced” or Not Balanced”. You need to go through following guidelines.

* Input the expression into a character array.
* Sequentially go through the expression in the character array and push them into a stack if it is a **starting bracket**. If it is a **closing bracket**, pop them from the stack.
* if the popped character is the equivalent starting bracket, then proceed. If not, the expression is unbalanced.
* After going through all the characters from the expression, if there is any parenthesis found in the stack or if the stack is not empty, then the expression is unbalanced.

E.g: Input : {[]}

Output : This is balanced.

Input : [(])

Output : This is unbalanced.

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