



# STUDENT REPORT

## DETAILS

### Name

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### Roll Number

22BI24EE410-T

## EXPERIMENT

### Title

#### STRING SHORTENING

### Description

.You are provided with string str and your task is to shorten the string to the minimum length possible. The minimum length of the string has be attained by performing a set of operations that states that you could select two same characters and delete them but without disturbing the order in the shing which means that only the adjacent same letters can be deleted. For example, "baaab" can be reduced to "bab" in just one iteration.

Your task is to shorten the length of the string str and print the reduced string and if all the characters are deleted then prist "Empty String".

Input Format:

The Input consists of a single line:

The line contains string str

The input will be read from the STDIN by the candidate

Output Format:

Print the modified string. If the modified string contains character, then print "Empty String".

The output will be matched to the candidate's output printed on the STDOUT

Sample Input 1:

baaab

Output:

bab

Sample Input 2:

baab

Output:

Empty String

### Source Code:

```
def reduce_string(s):
    stack = []

    # Iterate over each character in the string
    for char in s:
        # If stack is not empty and the top of the stack matches the current character, pop the stack
        if stack and stack[-1] == char:
            stack.pop() # Remove the last character as it forms a pair with the current character
        else:
            stack.append(char) # Otherwise, push the current character to the stack

    # If stack is empty, return "Empty String", else join stack to form the result string
    return ''.join(stack) if stack else "Empty String"

# Input
s = input().strip()

# Output the reduced string
print(reduce_string(s))
```

## RESULT

5 / 5 Test Cases Passed | 100 %