

CSc 2720 - Data Structures: Lab 3

Deadline to Submit: Please submit your answers to Lab-3 submission folder on iCollege by 1/29/2021, 11:00pm ET(US)

Failure to submit will result in a zero for this lab.

Problem 1: [100 points]

Write a function called `backspaceCompare` that takes two strings `s1` and `s2` and evaluate them when both are typed into empty text editors. (**# means a backspace character**). `backspaceCompare` should return true if the evaluated strings are equal or false if they are not equal. You should make use of the built-in java implementation of the stack data structure under `java.util.Stack`. (assume that the user inputs correct strings).

Example 1:

Input: `s1 = "DataStructuresIssss###Fun"`, `s2 = "DataStructuresIszwp###Fun"`

Output: `true`

Explanation: Both `s1` and `s2` become `"DataStructuresIsFun"`.

Example 2:

Input: `S = "abc##"`, `T = "wc#d#"`

Output: `false`

Explanation: `s1` becomes `"a"` while `s2` becomes `"w"`

-----Function Template-----

```
import java.util.Stack;
public class Lab3 {

    public static void main (String[] args){ String
        s1 = "DataStructuresIssss###Fun"; String
        s2 = "DataStructuresIszwp###Fun"; boolean
        ans = backspaceCompare(s1,s2);
        System.out.println(ans); // Should be True
    }
    public static boolean backspaceCompare(String s1, String s2){
        Stack<Character> s1_stack = new Stack<Character>();
        Stack<Character> s2_stack = new Stack<Character>();

        // Example of push        stack.push("D")
        // Example of peek        stack.peek()
        // Example of pop          stack.pop()
        // Example of isEmpty      stack.isEmpty()

        // INSERT YOUR CODE HERE
    }
}
```