UNITED INTERNATIONAL UNIVERSITY
Department of Computer Science and Engineering (CSE)

Course Title: Data Structure & Algorithm Lab II   **Course Code: CSE2218**

Time: 40 min   **Total marks: 15**

Class Test 01: Recursion

Q1: Balanced brackets   10

You are given a string which consists of opening and closing round brackets.
Check whether it is a balanced bracket sequence using **recursion.**

Input:
The only line of input contains a **string**.
Each character in the string will be '(' or ')'.

Output:
Print "YES" if the bracket sequence is balanced, and "NO" otherwise.

Sample Input	Sample Output
(( ) (( ))) ( )	YES
( )) ( )	NO
(((( ))))	YES

Q2: Power of Fibonacci   5

You are given two integers N, M. Write a **recursive** program to calculate the
power of x (x^y). Where x,y is N^{th} and M^{th} Fibonacci number.

Sample Input	Sample Output
1 2	1
3 4	8
6 5	32768