Lab 5 Tasks

Q1. Given a string, you need to reverse the order of characters in each word within a sentence while still preserving whitespace, period (full stop), comma, semi-colon, exclamation sign and also initial word order.

Input: Hello! Let's write a C program
Output: olleH! s'teL etirw a C margorp

Q2. The user will enter anywhere between 3 to 50 different integers as input in a single line separated by space. The program will select the three integers from the input whose product will be maximum and print the product.

Input: 7 2 5 9 2 Output: 315	Input: 2 3 4 -7 -8 Output: 224
Input: 1 -7 3 1 Output: 3	Input: -2 -3 -4 -8 -6 Output: -24

Q3. Given a string **S** and a string **T**, count the number of distinct subsequences of **S** which equals **T**.

A subsequence of a string is a new string which is formed from the original string by deleting some (can be none) of the characters without disturbing the relative positions of the remaining characters. (ie, "ACE" is a subsequence of "ABCDE" while "AEC" is not).

Input: Rabbbit Rabbit
Output: 3

Q4. Given an array of non-negative integers, you are initially positioned at the first index of the array. Each element in the array represents your maximum jump length at that position. Determine if you are able to reach the last index.

The first line of input will contain the number of integers in the array. The second line will contain all the integers for the array.

The output will print 'true' if it is possible to jump to the last index and 'false' otherwise.

You must use recursion to solve this problem

Input: 5 2 2 3 1 4 Output: true	Input: 5 3 2 1 0 4 Output: false