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algorithm permu(longStr, shortStr, leftIndex)
    Input: longStr that can contain shortStr
    Input: shortStr where the permutations are going to be checked in longStr
    Output: printed whether permutation is found in longString and where it's
located

    if leftIndex == shortStr.length()

        // print the permutation
        Print(shortStr)

        foundIndex <- longStr.indexOf(shortStr)

        if foundIndex is not -1(if shortStr has been found in the
longStr)
            Print("Found one match: " $shortStr " is in " $longStr " at
location " $foundIndex)
        else
            for i <- leftIndex to shortStr.length()
                swapped <- swap(shortStr, leftIndex, i)
                permu(longStr, swapped, leftIndex + 1)
            end
        end
    end

algorithm swap(a,i,j)
    Input: str - string that will have two of its characters swapped
    Input: I - first swapped index in the string
    Input: J - second swapped index in the string

    charArray <- str to an array

    temp <- charArray[i]

    charArray[i] = charArray[j]
    charArray[j] = temp
    return charArray

end

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#### Explanation:

The algorithm has the acceptable complexity of  $O(n!)$ . That's the amount of calculations it takes to go through an n-lengthed string's permutations, so there isn't a lower complexity this can take. The program is not scalable, as working on a small set at 10 characters or less works, but once you go above 10, the time takes much too long for a computer to go through all of the permutations.