Coding Assignment-6

Q1. Program to find the frequency of characters in a string in O(n) time complexity.

Input: kiit

Output: k – 1
i – 2
t – 1

Q2. Program to check if two strings are anagrams or not. Two strings are given as input and those strings have to be checked if they are anagrams or not. Anagram means that both strings contain the same character set, only their order is different. Therefore, in both strings, the frequency of each letter must be the same. For example, strings "act" **and** "cat" **are** anagrams.

Q3. **Program to find the first non-repeating character in a string.**

Input: teeterson

Output: r

Q4. Program to capitalize first and last letter of each word in a line. The basic algorithm is to keep track of the spaces and capitalize the letter before the space and after space. The first letter and the last letter of the given line should be capitalized.

There are only a few things that need to be considered:

- More than one occurrence of spaces between two words.
- There can be a single word like 'a' that needs to be capitalized.
- There may be two words like "me" where both letters must be capitalized.

Input: kiit university

Output: KiiT UniversitY

Q5. In a mathematics class, Jason the mathematics teacher asked to solve a book of expressions consisting of characters, operators, and brackets. But Jason wants to give simplified expressions by removing brackets from the expressions. Write an algorithm to help Jason simplify an expression by removing brackets

Input: x-(p+q)+(y-a)

Output: x-p+q+y-a