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2 //Name                Sai Chaitanya Kilambi
3 //Course              CPSC 131 Data Structures, Fall, 2022
4 //Assignment          No.3 question:3
5 //Due date            09/14/2022
6 // Purpose:
7 // This program checks if the two given inputs are anagrams or not
8 //-----
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9 // list of libraries
10 //
11 //importing the required libraries
12 #include <iostream>
13 #include<string>
14 #include<algorithm>
15
16 //fuction to remove the spaces if any in the input
17 void remove_space(std::string& s) {
18
19     for (int i = 0; i < s.length() ; i++) {
20         if (s[i] == ' ') {
21             s.erase(i, 1);
22         }
23     }
24 }
25
26
27 //coverting all the letters in the input to lower casse
28 void convert_to_lower(std::string& s1) {
29     for (int i = 0; i < s1.length(); i++) {
30         s1[i] = tolower(s1[i]);
31     }
32 }
33
34 //sorting the letters in the string based on the ascii value
35 std::string string_sorting(std::string& s2) {
36
37     std::sort(s2.begin(), s2.end());
38     return s2;
39
40
41 }
42
43 //fuction that checks if it is a anagram or not
44 bool isAnagram(std::string st1, std::string st2)
45 {
46
```

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47     int i=0;
48     remove_space(st1);
49     remove_space(st2);
50     convert_to_lower(st1);
51     convert_to_lower(st2);
52     string_sorting(st1);
53     string_sorting(st2);
54
55     while (st1[i] != '\0')
56     {
57         if(st1[i]!=st2[i])
58         {
59             return 0;
60         }
61         i++;
62     }
63
64     return 1;
65 }
66
67 //main function
68 int main()
69 {
70     std::string str1,str2;
71     char flag = 'y';
72
73     //creating a while loop that continues till the user tells to stop
74     while (flag == 'y')
75     {
76
77         // first input prompt
78         std::cout << "Enter a string: ";
79
80         std::getline(std::cin, str1);
81
82
83         //second input prompt
84         std::cout<< "Enter another string: ";
85
86         std::getline(std::cin, str2);
87
88         //calling the isAnagram function
89         if (isAnagram(str1, str2)) {
90
91             //printing the output
92             std::cout<< "\" " << str1 <<"\" " <<" and " << "\" " <<str2<< "\" " <<
                "<<\" are Anagrams\n";
93         }
94         else {
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95         std::cout << "\"" << str1 << "\"" << " and " << "\"" <<
           str2 << "\"" << " are not Anagrams\n";
96     }
97
98     std::cout << std::endl << "CONTINUE(y/n)? ";
99     std::cin >> flag;
100    std::cin.ignore();
101    if (flag == 'n')
102        break;
103
104    }
105    return 0;
106 }
107
```