1. **Problem statement:**

Ask user enter two character sequences and search one character sequence pointed by a pointer in the other character sequence. If the character sequence is found, display the first character in the sequence. If not, tell the user that the character sequence is not found. For example, search for “BC” in “ABC”, the found character is B. Search for “BD” in “ABCD”, the result is not found.

1. **Analysis:**

Inputs: two const char arrays representing two character sequences

Outputs: the result whether the character sequence is found in another character sequence

Additional requirements: must write a self-defined function to achieve the goal

1. **Design:**

Main function

1. declare two strings s1,s2 and two const char pointers p1,p2
2. ask user to enter two strings and copy the content of two strings to const char arrays
3. search for the character sequence of p2 in p1 by using function findC and give the return value to a pointer
4. display the results

function findC

1. declare a char pointer
2. get the length of passed char arrays
3. compare the character one by one
4. if the two characters are same, set a flag and let the pointer points to that character and stop comparing this character. In this case, if later there is another character found same, compare the former characters of both sequences. If they are equal, stop comparing this character. For other cases, return NULL pointer
5. if the character has compared to the final character and did not find any same character, return NULL pointer
6. for other case, do nothing and continue the circulation
7. return the pointer

**4. Implementation**: see C++ code in file 1405347\_3-3.cpp with comments.

**5. Testing:**

The C++ program was tested by carrying out a set of experiments and the C ++program output was verified successfully. For example,

