```c
1    #include <stdio.h>
2    #include <ctype.h>
3    #include <stdbool.h>
4
5    void scan_word(int *occurrences);
6    bool is_anagram(int *occurrences1, int *occurrences2);
7
8    int main(void) {
9        int occurrences1[26] = {0}; // empty array for first word
10       int occurrences2[26] = {0}; // empty array for second word
11
12       printf("Enter first word: "); // prompts user to enter first word
13       scan_word(occurrences1); // calls function and scans the array of first word
14
15       printf("Enter second word: "); // prompts user to enter the second word
16       scan_word(occurrences2); // calls function and scans array of second word
17
18       if (is_anagram(occurrences1, occurrences2)) { // accepts the 2 arrays of first and second word
19           printf("The words are anagrams.\n"); // if true, it is an anagram
20       } else {
21           printf("The words are not anagrams.\n"); // if false, not an anagram
22       }
23
24       return 0;
25   }
27   void scan_word(int *occurrences) { // accepts array as the parameter
28       char c;
29       while ((c = getchar()) != '\n') { // checks each character until a newline character is encountered
30           if (isalpha(c)) { // checks if character is alphabetic character
31               *(occurrences + (toupper(c) - 'A')) += 1; // takes the index of the char in the array; increments the count for e
32           }
33       }
34   }
35
36   bool is_anagram(int *occurrences1, int *occurrences2) { // accepts 2 arrays as parameter
37       for (int i = 0; i < 26; i++) { // loop for each element of the arrays
38           if (*(occurrences1 + i) != *(occurrences2 + i)) { // if the count for each index are NOT the same for both arrays, th
39               return false;
40           }
41       }
42       return true;
43   }
44
```

```
● yvonnelin@Yvonnes-Air output % cd "/Users/yvonnelin/Downloads/CMSC21/Lecture5/output"
  ./"anagram3"
● yvonnelin@Yvonnes-Air output % ./"anagram3"
  Enter first word: smartest
  Enter second word: mattress
  The words are anagrams.
● yvonnelin@Yvonnes-Air output % cd "/Users/yvonnelin/Downloads/CMSC21/Lecture5/output"
  ./"anagram3"
● yvonnelin@Yvonnes-Air output % ./"anagram3"
  Enter first word: dumbest
  Enter second word: stumble
  The words are not anagrams.
○ yvonnelin@Yvonnes-Air output % □
```

https://github.com/linyvonnea/CMSC21/tree/main/Lecture11/Assigments