

```
1 //
2 // Created by hfwei on 2023/10/12.
3 //
4
5 #include <stdio.h>
6 #include <string.h>
7 #include <stdbool.h>
8
9 #define LEN 21
10 char string[LEN] = "";
11
12 int main() {
13     // example: nolemon,nomelon
14     printf("Input a string containing at most 20 characters.\n");
15     scanf("%20s", string);
16
17     // int len = 0;
18     // while (string[len] != '\0') {
19     //     len++;
20     // }
21     int len = strlen(string);
22     printf("The length of \"%s\" is %d.\n", string, len);
23
24     // TODO: test palindrome
25
26     // TODO: the for version
27     // bool is_palindrome = true;
28     // for (int i = 0, j = len - 1; i < j; i++, j--) {
29     //     if (string[i] != string[j]) {
30     //         is_palindrome = false;
31     //         break;
32     //     }
33     // }
34
35     // TODO: the while version
36     bool is_palindrome = true;
37
38     int i = 0;
39     int j = len - 1;
40     while (i < j) {
41         if (string[i] != string[j]) {
42             is_palindrome = false;
43             break;
44         }
45         i++;
46         j--;
47     }
48
49     printf("\"%s\" is %s a palindrome.\n", string,
50           is_palindrome ? "" : "not");
51
52     return 0;
53 }
```