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Test Name: Mock Test  
Taken On: 27 Oct 2021 07:05:08 IST  
Time Taken: 2 min 42 sec/ 22 min  
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Invited by: Ankush  
Invited on: 27 Oct 2021 07:05:00 IST  
Skills Score:  
Tags Score:

- Algorithms 85/105
- Core CS 85/105
- Easy 85/105
- Problem Solving 85/105
- Strings 85/105
- problem-solving 85/105

81%

85/105

scored in **Mock Test** in 2 min 42 sec on 27 Oct 2021 07:05:08 IST

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	Palindrome Index > Coding	2 min 33 sec	85/ 105	✓

QUESTION 1

✓

Correct Answer

Score 85

Palindrome Index > Coding

Strings

Algorithms

Easy

problem-solving

Core CS

Problem Solving

QUESTION DESCRIPTION

Given a string of lowercase letters in the range `ascii[a-z]`, determine the index of a character that can be removed to make the string a **palindrome**. There may be more than one solution, but any will do. If the word is already a palindrome or there is no solution, return `-1`. Otherwise, return the index of a character to remove.

**Example**  
`s = "bcbcb"`

Either remove `'b'` at index **0** or `'c'` at index **3**.

**Function Description**

Complete the *palindromeIndex* function in the editor below.

*palindromeIndex* has the following parameter(s):

- *string s*: a string to analyze

#### Returns

- *int*: the index of the character to remove or **−1**

#### Input Format

The first line contains an integer *q*, the number of queries.

Each of the next *q* lines contains a query string *s*.

#### Constraints

- $1 \leq q \leq 20$
- $1 \leq \text{length of } s \leq 10^5 + 5$
- All characters are in the range `ascii[a-z]`.

#### Sample Input

STDIN	Function
-----	-----
3	q = 3
aaab	s = 'aaab' (first query)
baa	s = 'baa' (second query)
aaa	s = 'aaa' (third query)

#### Sample Output

```
3
0
-1
```

#### Explanation

*Query 1: "aaab"*

Removing 'b' at index **3** results in a palindrome, so return **3**.

*Query 2: "baa"*

Removing 'b' at index **0** results in a palindrome, so return **0**.

*Query 3: "aaa"*

This string is already a palindrome, so return **−1**. Removing any one of the characters would result in a palindrome, but this test comes first.

**Note:** The custom checker logic for this challenge is available [here](#).

#### CANDIDATE ANSWER

Language used: **C++**

```
1  /*
2   * Complete the 'palindromeIndex' function below.
3   *
4   * The function is expected to return an INTEGER.
5   * The function accepts STRING s as parameter.
6   */
7
8  #define IS_PALINDROME -1
9
10 int is_palindrome(string s){
11     int start(0), end(s.size()-1);
12     while(start <= end){
```

```

12     while(s[start] == s[end]){
13         if(s[start] != s[end]){
14             //cout << "return " << start << endl;
15             return start;
16         }
17         start++;
18         end--;
19     }
20     //cout << "return " << IS_PALINDROME << endl;
21     return IS_PALINDROME;
22 }
23
24 int palindromeIndex(string s) {
25     string s1;
26     int start;
27     if(s.size() == 0) return -1;
28     start = is_palindrome(s);
29     if(start == IS_PALINDROME){
30         return -1;
31     }
32     // otherwise, try to test by removing character pos start, or
33     // character position (s.size() - 1 - start)
34     s1 = s;
35     //cout << "s1 " << s1 << endl;
36     s1.erase(s1.begin() + start);
37     //cout << "check palindrome " << s1 << endl;
38     if(is_palindrome(s1) == IS_PALINDROME){
39         return start;
40     }
41     s1 = s;
42     //cout << "check palindrome " << s1 << endl;
43     s1.erase(s1.begin() + s.size() - 1 - start);
44     //cout << "check palindrome " << s1 << endl;
45     if(is_palindrome(s1) == IS_PALINDROME){
46         return s.size() - 1 - start;
47     }
48     return -1;
49 }
50
51

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✔ Success	0	0.0159 sec	9 KB
Testcase 2	Medium	Hidden case	✔ Success	5	0.0157 sec	8.85 KB
Testcase 3	Medium	Hidden case	✔ Success	5	0.0156 sec	9.08 KB
Testcase 4	Medium	Hidden case	✔ Success	5	0.0204 sec	8.95 KB
Testcase 5	Medium	Hidden case	✔ Success	5	0.0211 sec	8.95 KB
Testcase 6	Medium	Hidden case	✔ Success	5	0.0234 sec	9.09 KB
Testcase 7	Medium	Hidden case	✔ Success	5	0.0313 sec	9.07 KB
Testcase 8	Medium	Hidden case	✔ Success	5	0.0286 sec	9.08 KB
Testcase 9	Hard	Hidden case	✔ Success	10	0.0244 sec	8.96 KB
Testcase 10	Hard	Hidden case	✔ Success	10	0.0296 sec	9.07 KB
Testcase 11	Hard	Hidden case	✔ Success	10	0.0188 sec	9.29 KB
Testcase 12	Hard	Hidden case	✔ Success	10	0.0309 sec	8.95 KB
Testcase 13	Hard	Hidden case	✘ Wrong Answer	0	0.024 sec	8.93 KB
Testcase 14	Hard	Hidden case	✘ Wrong Answer	0	0.0231 sec	9.06 KB

Testcase 15	Hard	Hidden case	 Success	10	0.0309 sec	9 KB
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No Comments

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