Full Name:	Đào Nguyễn Huy Hoàng
Email:	hoang.dnh210380@sis.hust.edu.vn
Test Name:	**Mock Test**
Taken On:	13 Apr 2023 22:18:07 IST
Time Taken:	3 min 11 sec/ 30 min
Invited by:	Ankush
Invited on:	13 Apr 2023 22:17:58 IST
Skills Score:	
Tags Score:	

100%

105/105

scored in **Mock Test** in 3 min 11 sec on 13 Apr 2023 22:18:07 IST

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

Recruiter/Team Comments:

No Comments.

Plagiarism flagged

We have marked questions with suspected plagiarism below. Please review.

	Question Description	Time Taken	Score	Status
Q1	**Palindrome Index** > **Coding**	2 min 28 sec	105/ 105	⚠

QUESTION 1

⚠

Needs Review

Score 105

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 = $ "bcbc"

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**

```c
1  // palindrome-index
2  #include <stdio.h>
3  #include <string.h>
4  int main()
5  {
6      int i, j, k, t, n, flag;
7      char str[100010];
```

```c
 8        scanf("%d", &t);
 9        while (t--)
10        {
11            flag = 0;
12            scanf("%s", str);
13            n = strlen(str);
14            i = 0;
15            j = n - 1;
16            while (i < j)
17            {
18                if (str[i] != str[j])
19                {
20                    if (str[i] == str[j - 1] && str[i + 1] != str[j])
21                    {
22                        printf("%d\n", j);
23                        flag = 1;
24                        break;
25                    }
26                    else if (str[i] == str[j - 1] && str[i + 1] == str[j - 2])
27                    {
28                        printf("%d\n", j);
29                        flag = 1;
30                        break;
31                    }
32                    else if (str[i] == str[j - 1] && str[i + 1] == str[j])
33                    {
34                        printf("%d\n", i);
35                        flag = 1;
36                        break;
37                    }
38                    else
39                    {
40                        printf("%d\n", i);
41                        flag = 1;
42                        break;
43                    }
44                }
45                i++;
46                j--;
47            }
48            if (flag == 0)
49                printf("-1\n");
50        }
51        return 0;
52 }
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✓ Success	0	0.032 sec	7.4 KB
Testcase 2	Medium	Hidden case	✓ Success	5	0.055 sec	7.39 KB
Testcase 3	Medium	Hidden case	✓ Success	5	0.0311 sec	7.4 KB
Testcase 4	Medium	Hidden case	✓ Success	5	0.0235 sec	7.25 KB
Testcase 5	Medium	Hidden case	✓ Success	5	0.0244 sec	7.35 KB
Testcase 6	Medium	Hidden case	✓ Success	5	0.0333 sec	7.45 KB
Testcase 7	Medium	Hidden case	✓ Success	5	0.0579 sec	7.1 KB
Testcase 8	Medium	Hidden case	✓ Success	5	0.0387 sec	7.48 KB
Testcase 9	Hard	Hidden case	✓ Success	10	0.0354 sec	6.92 KB
Testcase 10	Hard	Hidden case	✓ Success	10	0.0286 sec	7.41 KB

Testcase 11	Hard	Hidden case	✓ Success	10	0.0475 sec	7.58 KB
Testcase 12	Hard	Hidden case	✓ Success	10	0.0246 sec	7.52 KB
Testcase 13	Hard	Hidden case	✓ Success	10	0.0536 sec	7.61 KB
Testcase 14	Hard	Hidden case	✓ Success	10	0.0268 sec	7.57 KB
Testcase 15	Hard	Hidden case	✓ Success	10	0.0263 sec	7.39 KB

No Comments