



Full Name: Remi Chartier

Email: remipr.chartier@gmail.com

Test Name: **Mock Test**

Taken On: 27 Dec 2021 21:34:00 IST

Time Taken: 13 min 21 sec/ 30 min

Contact Number: +14084751573

Linkedin: <http://www.linkedin.com/in/remichartier>

Invited by: Ankush

Invited on: 27 Dec 2021 21:33:51 IST

Skills Score:

Tags Score:

81%

85/105

scored in **Mock Test** in 13 min
21 sec on 27 Dec 2021 21:34:00
IST

Algorithms 85/105

Core CS 85/105

Easy 85/105

Problem Solving 85/105

Strings 85/105

problem-solving 85/105

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	Palindrome Index > Coding	13 min 9 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 = "bcbc"`

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

Function Description

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: **Python 3**

```
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
9 def isPalindrome(s):
10     '''
11         length = 5 5/2 = 2.5 -> 0 to 4 check 0 to 2 --> ok
```

```

11     length = 5 // 2 = 2.5 : 0 to 4, check 0 to 2 > OK
12     if length odd, check until (length/2)
13     length = 5, 4/2 = 2 : 0 to 3, will check 0 to 1
14     if length even, check until 0 to (length/2 -1)
15     '''
16     l = len(s)
17     mx = int(l/2) if len(s) % 2 == 0 else (int(l/2) -1)
18     i = 0
19     while i <= mx:
20         if s[i] != s[l - 1 - i]:
21             return False
22         i += 1
23     return True
24
25 def palindromeIndex(s):
26     # Write your code here
27     print(f's = {s}')
28     # if the word is already a palindrome, or there is no solution, return
29     -1
30     if isPalindrome(s):
31         return -1
32     # check for the word, if any char different from a normal palindrome
33     word,
34     # check if removing the char makes it a palindrome.
35     # if yes, return the index.
36     # if not, return -1
37     l = len(s)
38     mx = int(l/2) if len(s) % 2 == 0 else (int(l/2) -1)
39     i = 0
40     while i <= mx:
41         if s[i] != s[l - 1 - i]:
42             if isPalindrome(s[0:i] + s[i+1:]):
43                 return i
44             if isPalindrome(s[0:l - 1 - i] + s[l - 1 - i + 1:]):
45                 return l - 1 - i
46
47         i += 1
48     return -1
49

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	✔ Success	0	0.0505 sec	9.34 KB
Testcase 2	Medium	Hidden case	✔ Success	5	0.0515 sec	9.55 KB
Testcase 3	Medium	Hidden case	✔ Success	5	0.0538 sec	9.5 KB
Testcase 4	Medium	Hidden case	✔ Success	5	0.0489 sec	9.34 KB
Testcase 5	Medium	Hidden case	✔ Success	5	0.0534 sec	9.43 KB
Testcase 6	Medium	Hidden case	✔ Success	5	0.1169 sec	9.78 KB
Testcase 7	Medium	Hidden case	✔ Success	5	0.0729 sec	9.74 KB
Testcase 8	Medium	Hidden case	✔ Success	5	0.1361 sec	9.68 KB
Testcase 9	Hard	Hidden case	✔ Success	10	0.0801 sec	9.78 KB
Testcase 10	Hard	Hidden case	✔ Success	10	0.093 sec	9.76 KB
Testcase 11	Hard	Hidden case	✔ Success	10	0.1338 sec	9.75 KB
Testcase 12	Hard	Hidden case	✔ Success	10	0.0518 sec	9.43 KB
Testcase 13	Hard	Hidden case	✘ Wrong Answer	0	0.0825 sec	9.75 KB
Testcase 14	Hard	Hidden case	✘ Wrong Answer	0	0.0719 sec	9.68 KB

Testcase 15	Hard	Hidden case	 Success	10	0.1259 sec	9.65 KB
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No Comments

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