

5237. Minimum Number of Moves to Make Palindrome

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You are given a string `s` consisting only of lowercase English letters.

In one **move**, you can select any two **adjacent** characters of `s` and swap them.

Return the **minimum number of moves** needed to make `s` a palindrome.

**Note** that the input will be generated such that `s` can always be converted to a palindrome.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Hard

Example 1:

**Input:** `s = "aabb"`  
**Output:** `2`  
**Explanation:**  
We can obtain two palindromes from `s`, "abba" and "baab".  
- We can obtain "abba" from `s` in 2 moves: "a**a**bb" -> "a**ab**b" -> "abba".  
- We can obtain "baab" from `s` in 2 moves: "a**a**bb" -> "**a**bab" -> "baab".  
Thus, the minimum number of moves needed to make `s` a palindrome is 2.




Example 2:

**Input:** `s = "letelt"`  
**Output:** `2`  
**Explanation:**  
One of the palindromes we can obtain from `s` in 2 moves is "lettel".  
One of the ways we can obtain it is "lete**l**t" -> "lete**t**l" -> "lettel".  
Other palindromes such as "tleelt" can also be obtained in 2 moves.  
It can be shown that it is not possible to obtain a palindrome in less than 2 moves.

Constraints:

- `1 <= s.length <= 2000`
- `s` consists only of lowercase English letters.
- `s` can be converted to a palindrome using a finite number of moves.

JavaScript



```
1 const minMovesToMakePalindrome = (s) => dfs(s);
2
3 const dfs = (s) => {
4   let n = s.length;
5   for (let i = 0; i < n; i++) {
6     let removed;
7     if (s[i] === s[n - 1]) { // remove rightmost
8       removed = s.slice(0, i) + s.slice(i + 1, -1);
9       return i + dfs(removed);
10    } else if (s[0] === s[n - 1 - i]) { // remove leftmost
11      removed = s.slice(1, n - 1 - i) + s.slice(n - i);
12      return i + dfs(removed);
13    }
14  }
15  return 0;
16 };
```

☐ Custom Testcase

Use Example Testcases

Run

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Submission Result: **Accepted** (/submissions/detail/653988945/) ?

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