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## Palindrome queries

Attempted by: 519 / Accuracy: 78% / Maximum Score: 30 / ★★★★★ 7 Votes

Tag(s): Algorithms, String Algorithms, String Searching

**PROBLEM****EDITORIAL****MY SUBMISSIONS**

You are given a string  $S$  that contains  $n$  lowercase alphabets. There are  $Q$  queries of the form  $[L, R]$ . Your task is to determine if every character in the range  $[L, R]$  can be arranged in such a manner that a palindromic substring for that range can be formed. If it is possible to create the palindrome substring in the provided interval, then print **Possible**. Otherwise, print **Impossible**.

**Note:** The original string is not changed in the process.

**Input format**

- First line:  $Q$  denotes the number of queries
- Second lines: String  $S$  of  $n$  lowercase English letters
- Third line: Number of queries of the  $[L, R]$  format

**Output format**

Print  $Q$  lines for each query. Print **Possible** if a palindrome substring is formed in the provided interval. Otherwise, print **Impossible**.

**Constraints**

$$|s| \leq 10^5$$

$$|Q| \leq 10^5$$

$$|s| \leq 10^5$$

$$1 \leq L \leq R \leq n$$

**SAMPLE INPUT**

```
4
abccab
1 3
2 3
3 3
3 5
```

**SAMPLE OUTPUT**

```
Impossible
Impossible
Possible
Possible
```

**Explanation**

In this case We can't make string palindrome if the interval is between  $[1, 3]$ ,  $[2, 3]$ . But we could make palindrome for the individual characters so it's **possible** for  $[3, 3]$ .

Also for the case  $[3, 5]$  it's possible by shuffling the substring **cca** as **cac** so it can be formed as a palindrome.

**Time Limit:** 1.0 sec(s) for each input file.

**Memory Limit:** 256 MB

**Source Limit:** 1024 KB

**Marking Scheme:** Marks are awarded when all the testcases pass.



**Allowed Languages:** Bash, C, C++, C++14, C++17, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, TypeScript, Visual Basic

## CODE EDITOR

Enter your code or [Upload your code](#) as file.

Save

Python 3 (python 3.5.2)



```
14     if len(L)==0:
15         return False
16     else:
17         if L==L[::-1]:
18             return True
19         else:
20             temp=permutations(L)
21             for i in list(temp):
22                 if i ==i[::-1]:
23                     return True
24             return False
25 Q=int(input())
26 S=str(input())
27 while (Q!=0) :
28     a=input()
29     b=a.split()
30     Li=list(int(i) for i in b)
31     Li[0]-=1
32     Lo=S[Li[0]:Li[1]]
33     Res=ispallin(Lo)
34     if Res is True:
35         print("Possible")
36     else:
37         print("Impossible")
38     Q-=1
39
```

37:20 vscode

☒ Provide custom input

COMPILE &amp; TEST

SUBMIT

Log ID: 116988975 / Apr 19, 2020 12:50 PM IST

**RESULT:** Sample Test Cases Passed ?

Time (sec)	Memory (KiB)	Language
0.102977	64	Python 3

## Input

```
4
abccab
1 3
2 3
3 3
3 5
```

## Your Code's Output

```
Impossible
Impossible
Possible
Possible
```

## Expected Correct Output

?

4/19/2020

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Impossible  
Impossible  
Possible  
Possible

**Compilation Log**  
Compiled successfully.

**Execution Log**  
No execution log!

11  
LIVE EVENTS

[Need a hint?](#)

Your Rating: ★★★★★

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**Missing String**  
Attempted By: 209 / Accuracy: 19  
★★★★☆ 2 Votes

**Predict The Road Sign - Here**  
Attempted By: 921 / Accuracy: 86  
★★★★☆ 1 Vote

**Count Words In Given String**  
Attempted By: 94 / Accuracy: 42  
★★★★★ 1 Vote

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