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Test Name:	**Mock Test**
Taken On:	13 Aug 2025 16:44:29 IST
Time Taken:	32 min 44 sec/ 90 min
Invited by:	Ankush
Invited on:	13 Aug 2025 16:43:33 IST
Skills Score:	
Tags Score:	Algorithms 280/280 Core CS 280/280 Data Structures 105/105 Easy 280/280 LCM 105/105 Least Common Multiple 105/105 Math 105/105 Problem Solving 105/105 Strings 175/175 gcd 105/105 greatest common divisor 105/105 problem-solving 280/280 sets 105/105

100%

280/280

scored in **Mock Test** in 32 min 44 sec on 13 Aug 2025 16:44:29 IST

Recruiter/Team Comments:

No Comments.

	Question Description	Time Taken	Score	Status
Q1	Palindrome Index > **Coding**	5 min 53 sec	105/ 105	✓
Q2	Between Two Sets > **Coding**	15 min 29 sec	105/ 105	✓
Q3	Anagram > **Coding**	3 min	70/ 70	✓

QUESTION 1

Correct Answer

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
$s = \text{"bcbc"}$

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**

```
#include <stdio.h>
```

```c
#include <string.h>

int pal(char *s, int l, int r) {
    while (l < r) {
        if (s[l] != s[r]) return 0;
        l++;
        r--;
    }
    return 1;
}

int main() {
    int q;
    scanf("%d", &q);
    while (q--) {
        char str[100005];
        scanf("%s", str);
        int i = 0, j = strlen(str) - 1, res = -1;
        while (i < j) {
            if (str[i] != str[j]) {
                if (pal(str, i + 1, j)) res = i;
                else if (pal(str, i, j - 1)) res = j;
                break;
            }
            i++;
            j--;
        }
        printf("%d\n", res);
    }
    return 0;
}

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0094 sec	7.38 KB
Testcase 2	Medium	Hidden case	Success	5	0.0093 sec	7.13 KB
Testcase 3	Medium	Hidden case	Success	5	0.0093 sec	7.25 KB
Testcase 4	Medium	Hidden case	Success	5	0.0069 sec	7.25 KB
Testcase 5	Medium	Hidden case	Success	5	0.0074 sec	7.13 KB
Testcase 6	Medium	Hidden case	Success	5	0.0164 sec	7.38 KB
Testcase 7	Medium	Hidden case	Success	5	0.0117 sec	7.25 KB
Testcase 8	Medium	Hidden case	Success	5	0.0112 sec	7.38 KB
Testcase 9	Hard	Hidden case	Success	10	0.0158 sec	7.13 KB
Testcase 10	Hard	Hidden case	Success	10	0.0176 sec	7.25 KB
Testcase 11	Hard	Hidden case	Success	10	0.0085 sec	7.38 KB
Testcase 12	Hard	Hidden case	Success	10	0.0093 sec	7.25 KB
Testcase 13	Hard	Hidden case	Success	10	0.0093 sec	7.38 KB
Testcase 14	Hard	Hidden case	Success	10	0.0114 sec	7.25 KB
Testcase 15	Hard	Hidden case	Success	10	0.01 sec	7.25 KB

No Comments

QUESTION 2

Correct Answer

Score 105

Between Two Sets › Coding

Math | Algorithms | Easy | gcd | Data Structures | LCM | sets | problem-solving | Core CS | greatest common divisor | Least Common Multiple

QUESTION DESCRIPTION

There will be two arrays of integers. Determine all integers that satisfy the following two conditions:

1. The elements of the first array are all factors of the integer being considered
2. The integer being considered is a factor of all elements of the second array

These numbers are referred to as being *between* the two arrays. Determine how many such numbers exist.

Example

$a = [2, 6]$
$b = [24, 36]$

There are two numbers between the arrays: 6 and 12.
$6\%2 = 0$, $6\%6 = 0$, $24\%6 = 0$ and $36\%6 = 0$ for the first value.
$12\%2 = 0$, $12\%6 = 0$ and $24\%12 = 0$, $36\%12 = 0$ for the second value. Return 2.

Function Description

Complete the *getTotalX* function in the editor below. It should return the number of integers that are betwen the sets.

getTotalX has the following parameter(s):

- *int a[n]*: an array of integers
- *int b[m]*: an array of integers

Returns

- *int:* the number of integers that are between the sets

Input Format

The first line contains two space-separated integers, n and m, the number of elements in arrays a and b.
The second line contains n distinct space-separated integers $a[i]$ where $0 \le i < n$.
The third line contains m distinct space-separated integers $b[j]$ where $0 \le j < m$.

Constraints

- $1 \le n, m \le 10$
- $1 \le a[i] \le 100$
- $1 \le b[j] \le 100$

Sample Input

```
2 3
2 4
16 32 96
```

Sample Output

```
3
```

Explanation

2 and 4 divide evenly into 4, 8, 12 and 16.
4, 8 and 16 divide evenly into 16, 32, 96.

4, 8 and 16 are the only three numbers for which each element of a is a factor and each is a factor of all elements of b.

CANDIDATE ANSWER

Language used: **C**

```c
#include <stdio.h>

int g(int a, int b) {
    while (b) {
        int t = b;
        b = a % b;
        a = t;
    }
    return a;
}

int l(int a, int b) {
    return a / g(a, b) * b;
}

int main() {
    int n, m;
    scanf("%d %d", &n, &m);
    int A[105], B[105];
    for (int i = 0; i < n; i++) scanf("%d", &A[i]);
    for (int i = 0; i < m; i++) scanf("%d", &B[i]);

    int L = A[0];
    for (int i = 1; i < n; i++) L = l(L, A[i]);

    int G = B[0];
    for (int i = 1; i < m; i++) G = g(G, B[i]);

    int cnt = 0;
    for (int x = L; x <= G; x += L) {
        if (G % x == 0) cnt++;
    }
    printf("%d\n", cnt);
    return 0;
}

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.0072 sec	7.25 KB
Testcase 2	Easy	Hidden case	Success	15	0.0071 sec	7.25 KB
Testcase 3	Easy	Hidden case	Success	15	0.007 sec	7.25 KB
Testcase 4	Easy	Hidden case	Success	15	0.0081 sec	7.25 KB
Testcase 5	Easy	Hidden case	Success	15	0.0088 sec	7.38 KB
Testcase 6	Easy	Hidden case	Success	15	0.0103 sec	7.25 KB
Testcase 7	Easy	Hidden case	Success	15	0.0118 sec	7.25 KB
Testcase 8	Easy	Hidden case	Success	15	0.0115 sec	6.88 KB
Testcase 9	Easy	Sample case	Success	0	0.0086 sec	7.25 KB

No Comments

QUESTION 3

Correct Answer

Score 70

Anagram › Coding

Strings | Algorithms | Easy | problem-solving | Core CS

QUESTION DESCRIPTION

Two words are *anagrams* of one another if their letters can be rearranged to form the other word.

Given a string, split it into two contiguous substrings of equal length. Determine the minimum number of characters to change to make the two substrings into anagrams of one another.

Example

$s = \text{abccde}$

Break s into two parts: 'abc' and 'cde'. Note that all letters have been used, the substrings are contiguous and their lengths are equal. Now you can change 'a' and 'b' in the first substring to 'd' and 'e' to have 'dec' and 'cde' which are anagrams. Two changes were necessary.

Function Description

Complete the *anagram* function in the editor below.

anagram has the following parameter(s):

- *string s:* a string

Returns

- *int:* the minimum number of characters to change or -1.

Input Format

The first line will contain an integer, q, the number of test cases.
Each test case will contain a string s.

Constraints

- $1 \leq q \leq 100$
- $1 \leq |s| \leq 10^4$
- s consists only of characters in the range ascii[a-z].

Sample Input

```
6
aaabbb
ab
abc
mnop
xyyx
xaxbbbxx
```

Sample Output

```
3
1
-1
2
0
1
```

Explanation

Test Case #01: We split s into two strings $S1$='aaa' and $S2$='bbb'. We have to replace all three characters from the first string with 'b' to make the strings anagrams.

Test Case #02: You have to replace 'a' with 'b', which will generate "bb".

Test Case #03: It is not possible for two strings of unequal length to be anagrams of one another.

Test Case #04: We have to replace both the characters of first string ("mn") to make it an anagram of the other one.

Test Case #05: $S1$ and $S2$ are already anagrams of one another.

Test Case #06: Here *S1 = "xaxb"* and *S2 = "bbxx"*. You must replace 'a' from *S1* with 'b' so that *S1 = "xbxb"*.

CANDIDATE ANSWER

Language used: **C**

```c
#include <stdio.h>
#include <string.h>

int main() {
    int t;
    scanf("%d", &t);
    while (t--) {
        char s[11000];
        scanf("%s", s);
        int len = strlen(s);
        if (len % 2) {
            printf("-1\n");
            continue;
        }
        int f[26] = {0}, h = len / 2, c = 0;
        for (int i = 0; i < h; i++) f[s[i] - 'a']++;
        int i = h;
        while (i < len) {
            f[s[i] - 'a']--;
            i++;
        }
        for (int k = 0; k < 26; k++) {
            if (f[k] > 0) c += f[k];
        }
        printf("%d\n", c);
    }
    return 0;
}

```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Hidden case	Success	5	0.007 sec	7 KB
Testcase 2	Easy	Hidden case	Success	5	0.0088 sec	7.13 KB
Testcase 3	Easy	Hidden case	Success	5	0.0132 sec	7.38 KB
Testcase 4	Easy	Hidden case	Success	5	0.007 sec	7.25 KB
Testcase 5	Easy	Hidden case	Success	5	0.0085 sec	7.38 KB
Testcase 6	Easy	Hidden case	Success	5	0.0176 sec	7.13 KB
Testcase 7	Easy	Hidden case	Success	5	0.017 sec	7.38 KB
Testcase 8	Easy	Hidden case	Success	5	0.0181 sec	7.25 KB
Testcase 9	Easy	Hidden case	Success	5	0.0094 sec	7 KB
Testcase 10	Easy	Hidden case	Success	5	0.0115 sec	7.13 KB
Testcase 11	Easy	Hidden case	Success	5	0.0116 sec	7.13 KB
Testcase 12	Easy	Hidden case	Success	5	0.0228 sec	7.25 KB

Testcase 13	Easy	Hidden case	Success	5	0.0164 sec	7.5 KB
Testcase 14	Easy	Hidden case	Success	5	0.016 sec	7.38 KB
Testcase 15	Easy	Sample case	Success	0	0.0138 sec	7.38 KB
Testcase 16	Easy	Sample case	Success	0	0.008 sec	7.13 KB

No Comments

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