

## Experiment 4

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**Branch: BE CSE**

**Semester: 6th**

**Subject Name: AP**

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**Section/Group: 901/A**

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**Subject Code: 22CSP-351**

### 1. Aim:

1. Given two strings *s* and *goal*, return true if and only if *s* can become *goal* after some number of shifts on *s*. A shift on *s* consists of moving the leftmost character of *s* to the rightmost position.
2. Given an array *nums* containing *n* distinct numbers in the range  $[0, n]$ , return the only number in the range that is missing from the array.

### 2. Objective:

**String Rotation Check:** To verify whether a string can be transformed into another string by repeatedly shifting its leftmost character to the rightmost position.

**Find Missing Number:** To identify the single missing number in a sequence of distinct integers ranging from 0 to *nnn* using computational methods.

### 3. Implementation/Code:

#### 1<sup>st</sup> Program

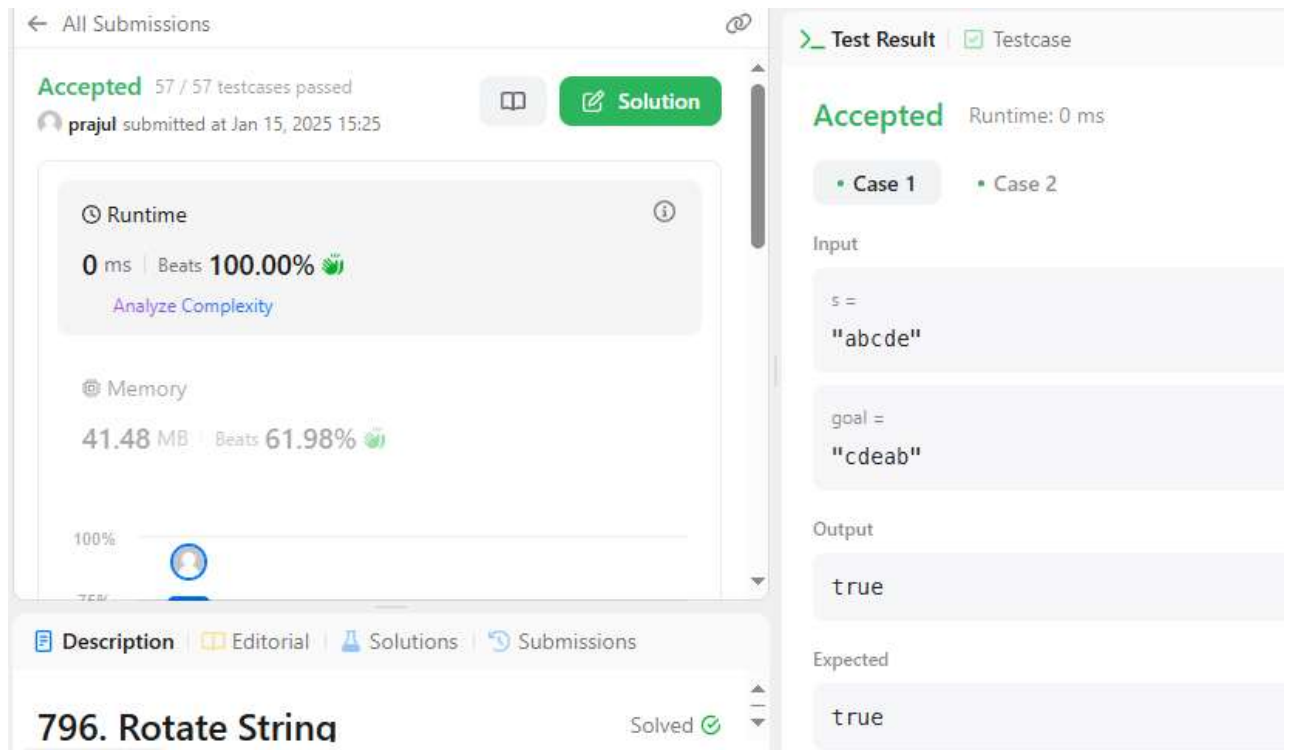
```
public class Solution {  
    public boolean rotateString(String s, String goal) {  
        if (s.length() != goal.length()) {  
            return false;  
        }  
        String doubledS = s + s;  
        return doubledS.contains(goal);  
    }  
}
```

#### 2<sup>nd</sup> Program:

```
public class Solution {  
    public int missingNumber(int[] nums) {  
        int n = nums.length;  
        int expectedSum = n * (n + 1) / 2;  
        int actualSum = 0;
```

```
for (int num : nums) {
    actualSum += num;
}
return expectedSum - actualSum;
}
```

#### 4. Output :



← All Submissions

**Accepted** 57 / 57 testcases passed

prajul submitted at Jan 15, 2025 15:25

**Runtime**  
0 ms | Beats 100.00%

**Memory**  
41.48 MB | Beats 61.98%

**796. Rotate String** Solved

**Test Result** Testcase

**Accepted** Runtime: 0 ms

Case 1 Case 2

Input

s =  
"abcde"

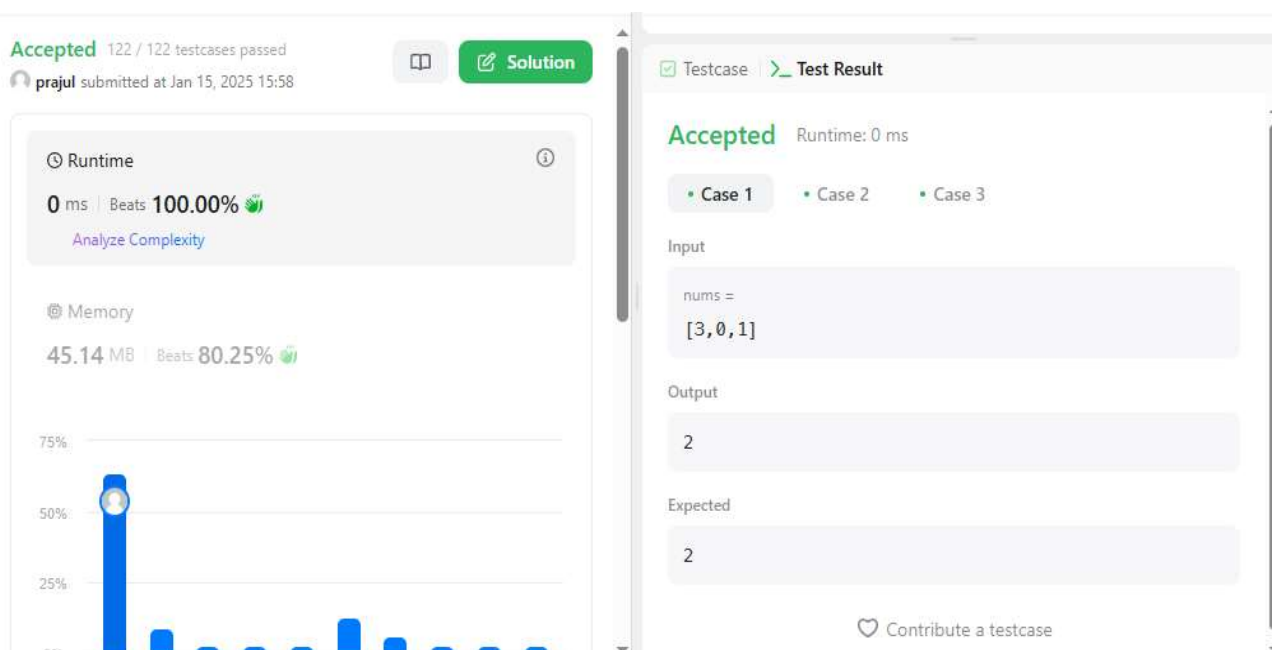
goal =  
"cdeab"

Output

true

Expected

true



**Accepted** 122 / 122 testcases passed

prajul submitted at Jan 15, 2025 15:58

**Runtime**  
0 ms | Beats 100.00%

**Memory**  
45.14 MB | Beats 80.25%

**796. Rotate String** Solved

Testcase Test Result

**Accepted** Runtime: 0 ms

Case 1 Case 2 Case 3

Input

nums =  
[3, 0, 1]

Output

2

Expected

2

Contribute a testcase

**5. Learning Outcomes:**

- Develop problem-solving skills by applying logical and mathematical approaches.
- Gain proficiency in string manipulation and array traversal techniques.
- Understand the use of algorithms to optimize performance in solving real-world problems.
- Improve the ability to handle edge cases and validate solutions effectively.
- Enhance programming skills through practical implementation of theoretical concepts.