



Experiment1.2

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Branch: CSE

Section/Group: 701_A

Semester: 6TH

Date of Performance:

Subject Name: Competitive Programming

Subject Code: 20CSP_351

1. Aim:

To understand the concept of string matching.

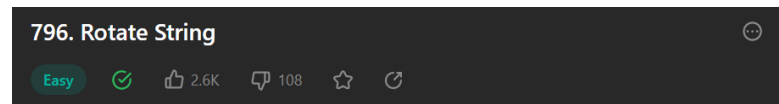
2. Objective:

1.Rotate String

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.

For example, if *s* = "abcde", then it will be "bcdea" after one shift.

Question:



3. Code:

```
class Solution {
public:
    bool rotateString(string s, string goal) { if(s.size() != goal.size()) return false;
    if(s.size() == 0) return true;vector<int> candidateA;
    for(int i = 0; i < s.size(); i++){if(s[i] == goal[0]){
    candidateA.push_back(i);
    }
    }
}
```



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```
for(int start : candidateA){bool isRotate = true;
for(int i = 0; i < s.size(); i++){ if(s[(start+i)%s.size()] != goal[i]){
isRotate = false;break;
}
}
if(isRotate){
cout<<"Saumyamani Bhardwaz_20BCS1682";
return true;
}
}
cout<<"Saumyamani Bhardwaz_20BCS1682";
return false;
}
};
```

4. Output:

The screenshot shows a code execution interface with a dark theme. At the top, there are tabs for 'Testcase' and 'Result', with 'Result' being the active tab. Below the tabs, the status 'Accepted' is displayed in green, followed by 'Runtime: 6 ms'. There are two test cases listed: 'Case 1' (selected) and 'Case 2'. Under 'Case 1', the 'Input' section shows 's =' followed by 'abcde' and 'goal =' followed by 'cdeab'. The 'Output' section shows 'true'. The 'Expected' section also shows 'true'. At the bottom, the 'Stdout' section shows 'Saumyamani Bhardwaz_20BCS1682'.



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Objective:

Given two strings needle and haystack, return the index of the first occurrence of needle in haystack, or -1 if needle is not part of haystack.

Question:

2.Find the Index of the First Occurrence in a String

Code:

```
class Solution {
public:
    int strStr(string haystack, string needle)
    {
        int index=INT_MAX, j=0;
        for(int i=0;i<haystack.length() && j<needle.length();i++)
        {
            if(haystack[i]==needle[j])
            {
                index=min(index,i);
                j++;
            } else {
                if(index!=INT_MAX) i=index;
                index=INT_MAX;
                j=0;
            }
        }
        cout<<"Saumyamani Bhardwaz_20BCS1682";
        if(j==needle.length()) return index;
        return -1;
    }
};
```



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Output:

Testcase

Result

Accepted Runtime: 2 ms

Case 1

Case 2

Input

haystack =
"sadbutsad"

needle =
"sad"

Output

0

Expected

0

Stdout

Saumyaman1 Bhardwaz_20BCS1682