



Experiment No. - 8

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Branch: BE-CSE(LEET)
Semester: 6th
Subject Name: Competitive coding - II

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Section/Group: 20BCS-ST-801/B
Date of Performance: 25/04/2023
Subject Code: 20CSP-351

1. Aim/Overview of the practical:

Q.1 Remove Duplicate Letter.

<https://leetcode.com/problems/remove-duplicate-letters/>

2. Apparatus / Simulator Used:

- Windows 7 or above
- Google Chrome

3. Objective:

- To understand the concept of Greedy Approach.
- To implement the concept of Remove Duplicate Letter from String.

4. Code:

```
class Solution {  
    public String removeDuplicateLetters(String S) {  
        Stack<Integer> stack = new Stack<>();  
        int[] last = new int[26], seen = new int[26];  
        for (int i = 0; i < S.length(); ++i)  
            last[S.charAt(i) - 'a'] = i;  
        for (int i = 0; i < S.length(); ++i) {  
            int c = S.charAt(i) - 'a';  
            if (seen[c]++ > 0) continue;  
            while (!stack.isEmpty() && stack.peek() > c && i < last[stack.peek()])  
                seen[stack.pop()] = 0;  
            stack.push(c);  
        }  
        StringBuilder sb = new StringBuilder();  
        for (int i : stack) sb.append((char)('a' + i));  
        return sb.toString();  
    }  
}
```



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5. Result/Output/Writing Summary:

Example 1:
Input: s = "bcabc"
Output: "abc"

Example 2:
Input: s = "cbacdcbc"
Output: "acdb"

Constraints:

- 1 <= s.length <= 10⁴
- s consists of lowercase English letters.

Note: This question is the same as 1081: <https://leetcode.com/problems/smallest-subsequence-of-distinct-characters/>

Accepted 228,140 | Submissions 505,809

Seen this question in a real interview before?

Companies

Related Topics

Similar Questions

Problems | Pick One | < Prev | 316/2654 | Next >

28°C Air: Moderate | 10:56 AM 4/26/2023

Success Details >

Runtime: 2 ms. faster than 98.92% of Java online submissions for Remove Duplicate Letters.

Memory Usage: 42.4 MB, less than 51.78% of Java online submissions for Remove Duplicate Letters.

Next challenges:

[Smallest K-Length Subsequence With Occurrences of a Letter](#)

Show off your acceptance:

Time Submitted	Status	Runtime	Memory	Language
04/26/2023 10:49	Accepted	2 ms	42.4 MB	java
04/26/2023 10:39	Accepted	3 ms	42.7 MB	java

Example Testcases | Run Code | Submit | Console | 10:56 AM 4/26/2023



1. Aim/Overview of the practical:

Q.2 Assign Cookies.

<https://leetcode.com/problems/assign-cookies/>

2. Apparatus / Simulator Used:

- Windows 7 or above
- Google Chrome

3. Objective:

- To understand the concept of Greedy Algorithm.
- To implement the concept of Assign Cookies.

4. Code:

```
class Solution {  
    public int findContentChildren(int[] g, int[] s) {  
        Arrays.sort(g);  
        Arrays.sort(s);  
        int i = 0;  
        for(int j=0;i<g.length && j<s.length;j++) {  
            if(g[i]<=s[j]) i++;  
        }  
        return i;  
    }  
}
```

5. Result/Output/Writing Summary:

The screenshot shows the LeetCode platform interface for problem 455. The Java code for the solution is pasted into the code editor. The constraints section lists the following requirements:

- $1 \leq g.length \leq 3 * 10^4$
- $0 \leq s.length \leq 3 * 10^4$
- $1 \leq g[i], s[j] \leq 2^{31} - 1$

The test case section shows the following input and output:

Your input: [1,2,3]
[1,1]
Output: 1

Accepted Runtime: 0 ms

Console Use Example Testcases

28°C Sunny



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Runtime: 8 ms. faster than 97.19% of Java online submissions for Assign Cookies.

Memory Usage: 43.4 MB, less than 80.90% of Java online submissions for Assign Cookies.

Next challenges:

- Design Circular Deque
- Count Number of Nice Subarrays
- Delete the Middle Node of a Linked List

Show off your acceptance: [f](#) [t](#) [in](#)

Time Submitted	Status	Runtime	Memory	Language
04/26/2023 11:04	Accepted	8 ms	43.4 MB	java
04/26/2023 11:03	Accepted	9 ms	43.5 MB	java

Your previous code was restored from your local storage. [Reset to default](#)

Testcase Run Code Result Debugger

Accepted Runtime: 0 ms

Your input: [1,2,3]
[1,1]

Output: 1

Expected: 1

Run Code Submit

Learning outcomes (What I have learnt):

- Learned the concept of Greedy Algorithm.
- Learnt about Remove Duplicate Letter & Assign Cookies problems.