



**DEPARTMENT OF**

**COMPUTER SCIENCE & ENGINEERING**

EXPERIMENT -3.1(8)

NAME- Jatin

UID- 20BCS5951

BRANCH- BE- CSE

SECTION- DM 605 B

SEMESTER- 6<sup>th</sup>

DATE- 01/05/2023

SUBJECT- CC Lab- 2

SUBJECT CODE- 20CSP-351

Q1. Remove Duplicate Letters

CODE:

```
class Solution {
    public String removeDuplicateLetters(String s) {
        int[] lastIndex = new int[26];
        for (int i = 0; i < s.length(); i++){
            lastIndex[s.charAt(i) - 'a'] = i; // track the lastIndex of character presence
        }

        boolean[] seen = new boolean[26]; // keep track seen
        Stack<Integer> st = new Stack();

        for (int i = 0; i < s.length(); i++) {
            int curr = s.charAt(i) - 'a';
            if (seen[curr]) continue; // if seen continue as we need to pick one char only
            while (!st.isEmpty() && st.peek() > curr && i < lastIndex[st.peek()]){
                seen[st.pop()] = false; // pop out and mark unseen
            }
            st.push(curr); // add into stack
            seen[curr] = true; // mark seen
        }

        StringBuilder sb = new StringBuilder();
        while (!st.isEmpty())
```



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```
        sb.append((char) (st.pop() + 'a'));  
    return sb.reverse().toString();  
}  
}
```

Output :

The screenshot shows a web browser displaying a LeetCode submission page. The URL is [leetcode.com/problems/remove-duplicate-letters/submissions/942668549/](https://leetcode.com/problems/remove-duplicate-letters/submissions/942668549/). The page is titled 'Remove Duplicate Letters - LeetCode'. The submission status is 'Accepted'. The runtime is 2 ms, memory is 41.5 MB, and it beats 98.78% of other submissions. The code is in Java and uses a stack to remove duplicate letters. The user's name is Jatin, and the submission was made on May 01, 2023, at 20:03.

## Q2 Assign Cookies

Code :

```
class Solution {  
    public int findContentChildren(int[] g, int[] s) {  
        Arrays.sort(g);  
        Arrays.sort(s);  
        int idx = 0, count = 0, len = Math.min(g.length, s.length);  
        for (int i = 0; i < len && idx < s.length; i++) count += s[idx++] >= g[i] ? 1 : (--i - i);  
        return count;  
    }  
}
```



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```
}  
}
```

Output :

The screenshot shows a web browser with multiple tabs. The active tab is 'leetcode.com/problems/assign-cookies/submissions/942668815/'. The page displays the 'Submissions' tab for the problem 'Assign Cookies'. The submission status is 'Accepted'. The user 'Jatin' submitted the solution on May 01, 2023, at 20:03, using the 'Java' language. The submission details show a runtime of 9 ms, beating 10.96% of other submissions, and a memory usage of 44.1 MB, beating 5.83% of other submissions. The code snippet for the solution is as follows:

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