



Experiment-3.1

Student Name: Nabha Varshney

UID: 20BCS4995

Branch: CSE

Section/Group: 20BCS-DM-704 (A)

Semester: 6th

Date of Performance: 18th Apr 2023

Subject Name: Competitive Coding II

Subject Code: 20CSP- 351

Aim – To demonstrate the concept of greedy approach

Objective-

- The objective is to build problem solving capability and to learn the basic concepts of data structures.
- The implementation of Find the difference which shows and brushes up the concept of Divide and Conquer can be solved through various approaches.
- The implementation of Assign Cookies using greedy Approach

1) Remove Duplicate Letters

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

Code –

```
class Solution {
public:
    string removeDuplicateLetters(string s){
        vector<int>last(26);
        vector<bool>vis(26);
        string ans = "";
        int n = s.size();
        for(int i = 0; i < n; i++) last[s[i]-'a'] = i;
        for(int i = 0; i < n; i++){
            if(vis[s[i] - 'a']) continue;
            while(!ans.empty() && ans.back() > s[i] &&
                last[ans.back()-'a'] > i){
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
vis[ans.back() - 'a'] = false;
ans.pop_back();
}
ans.push_back(s[i]);
vis[s[i] - 'a'] = true;
}
return ans;
}};
```

Output -

The screenshot shows the LeetCode interface for problem 317, "Shortest Distance from All Buildings". The submission status is "Accepted". The performance metrics are: Runtime 0 ms, Beats 100%, Memory 6.6 MB, and Beats 74.65%. The code is in C++ and implements a solution for finding the shortest distance from all buildings.

2) Assign Cookies

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

Code -

```
class Solution {
public:
    int findContentChildren(int[] g, int[] s) {
        int n = g.length; int m = s.length;
        Arrays.sort(g);
        Arrays.sort(s);
        int c = 0;
        for(int i = 0; i < n; i++){
            if(s[c] >= g[i] && c < m){
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
C++;  
}  
}  
return c;}}
```

Output –

LeetCode

Problem List

Premium

Accepted

Next question

456. 132 Pattern

More challenges

892. Surface Area of 3D Shapes

2116. Check if a Parentheses String Can Be Valid

1637. Widest Vertical Area Between Two Points Containing No Points

All statuses

All languages

Accepted

in a few seconds

C++

Runtime Error

a few seconds ago

Java

Runtime Error

a few seconds ago

Java

DEATHTRADER

May 04, 2023 18:29

Details

+ Solution

C++

Runtime 23 ms

Beats 95.32%

Memory 17.5 MB

Beats 80.84%

Click the distribution chart to view more details

Notes

Write your notes here

Related Tags

Select tags

0/5

```
class Solution {  
public:  
    int findContentChildren(vector<int>& g, vector<int>& s);  
};  
/*****  
int Solution::findContentChildren(vector<int>& g, vector<int>& s) {  
    sort(g.begin(), g.end());  
    sort(s.begin(), s.end());  
    int sizeG = g.size(), sizeS = s.size(), i, j, lastJ=0, count=0, found;  
    for (i = 0; i < sizeG; i++) {  
        for (j = lastJ; j < sizeS; j++) {  
            if (s[j] > g[i]) {  
                count++;  
                lastJ = j + 1;  
                break;  
            }  
        }  
    }  
    return count;  
}
```

Console

Run

Submit