



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment 2.2

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Branch: BE-CSE

Semester: 6th

Subject Name: Competitive Coding-II

UID: 20BCS1682

Section/Group: 701/A

Date of Performance: 11/04/2023

Subject Code: 20CSP-351

Aim: To demonstrate the concept of Graphs

1. Predict The Winner

```
class Solution {
public:
    int rec(vector<int> &nums,int i,int j,vector<vector<int>> &dp){
        if(i > j) return 0;
        if(dp[i][j] != -1) return dp[i][j];
        int ans1 = nums[i] + min(rec(nums,i+1,j-1,dp),rec(nums,i+2,j,dp));
        int ans2 = nums[j] + min(rec(nums,i+1,j-1,dp),rec(nums,i,j-2,dp));
        dp[i][j] = max(ans1,ans2);
        return dp[i][j];
    }
    bool PredictTheWinner(vector<int>& nums) {
        int n = nums.size();
        vector<vector<int>> dp(n,vector<int>(n,-1));
        int ans = rec(nums,0,n-1,dp);
        int sum = 0;
        for(auto i:nums) sum += i;
        cout<<"Saumyamani Bhardwaz_20BCS1682"<<endl;
        return (ans >= sum - ans);
    }
};
```

Output:

486. Predict the Winner

Medium



3.8K



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Companies

You are given an integer array `nums`. Two players are playing a game with this array: player 1 and player 2.

Player 1 and player 2 take turns, with player 1 starting first. Both players start the game with a score of 0. At each turn, the player takes one of the numbers from either end of the array (i.e., `nums[0]` or `nums[nums.length - 1]`) which reduces the size

Testcase Result

Accepted Runtime: 0 ms

Case 1

Case 2

Input

nums =
[1,5,2]

Stdout

Saumyamani Bhardwaz_20BCS1682

Output

false

Expected



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2. Find the Difference

```
class Solution {  
public:  
    char findTheDifference(string s, string t) {  
        for(int i=0;i<s.size();i++)  
            t[i+1]+=t[i]-s[i];  
  
        cout<<"Saumyamani Bhardwaz_20BCS1682"<<endl;  
        return t[t.size()-1];  
    }  
};
```

Output:

389. Find the Difference

Easy



3.8K

421



Companies

You are given two strings `s` and `t`.

String `t` is generated by random shuffling string `s` and then add one more letter at a random position.

Testcase

Result

Accepted Runtime: 4 ms

Case 1

Case 2

Input

s =
"abcd"

t =
"abcde"

Stdout

Saumyamani Bhardwaz_20BCS1682

Output

"e"