Experiment-2.2

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Subject Name: Competitive Coding-II **Subject Code: 20CSP-351**

1. Aim:

To implement the concept of Graph.

2. Objective:

- The objective is to build problem solving capability and to learn the basic concepts of Graph in data structures.
- The implementation of Graphs problem on LeetCode.
- To acquire proficiency in developing and implementing efficient solutions of given problems by using different approaches and achieve desirable results

3. LeetCode code and output:

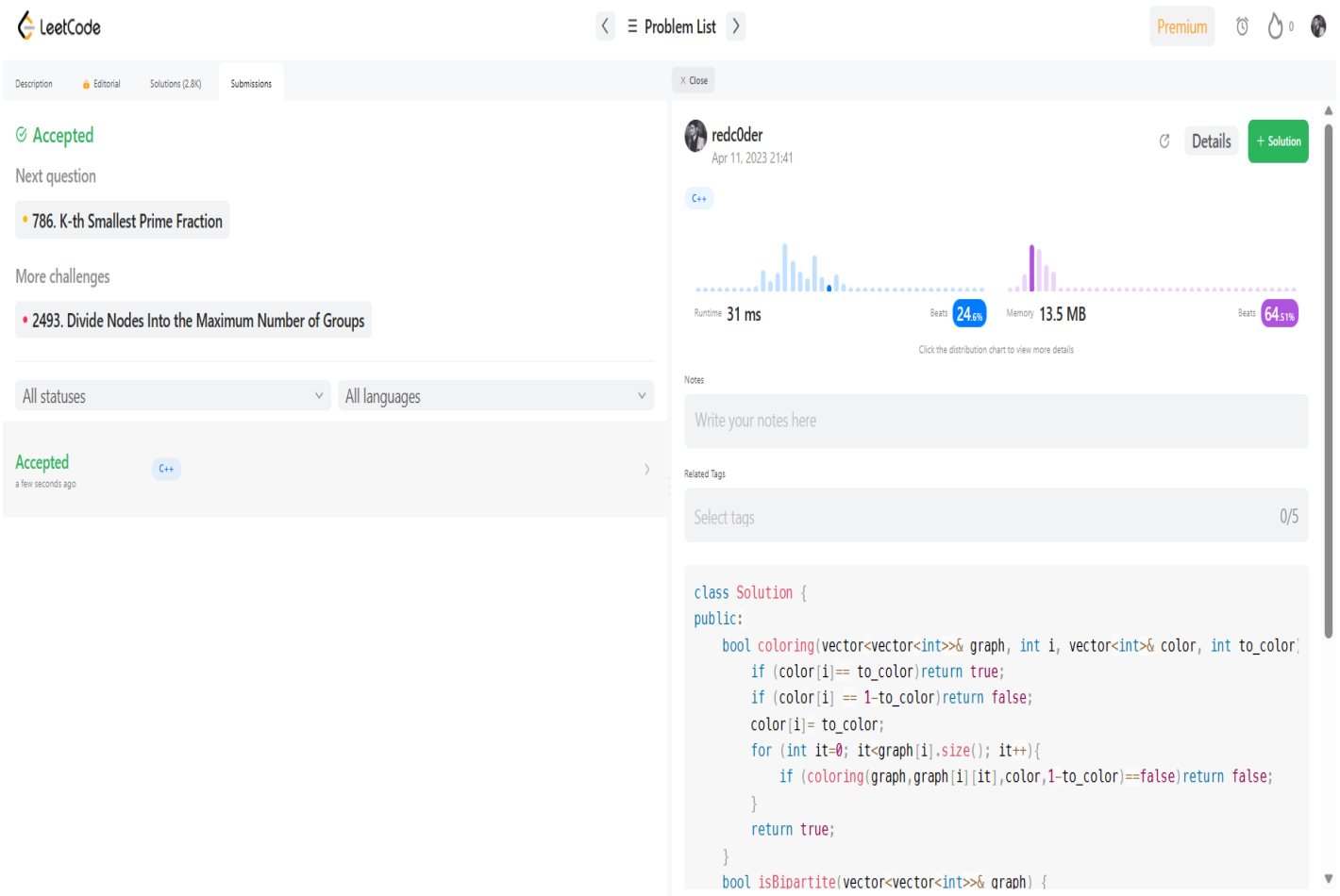
- ## Is Graph Bipartite

CODE:-

```
class Solution {
public:
    bool coloring(vector<vector<int>>& graph, int i, vector<int>& color, int
to_color){
        if (color[i]== to_color)return true;
        if (color[i] == 1-to_color)return false;
        color[i]= to_color;
        for (int it=0; it<graph[i].size(); it++){
            if (coloring(graph,graph[i][it],color,1-to_color)==false)return false;
        }
        return true;
    }
    bool isBipartite(vector<vector<int>>& graph) {
        int v= graph.size();
```

```
        vector<int> color(v,-1);
        for (int i=0; i<v; i++){
            if (color[i]==-1){
                if(coloring(graph,i,color,0)==false)return false;
            }
        }
        return true;
    }
};
```

OUTPUT : -



- **Find the Difference**

CODE:-

```
class Solution {
public:
    char findTheDifference(string s, string t) {
        char c = 0;
        for(char cs: s) c ^= cs;
        for(char ct: t) c ^= ct;
        return c;
    }
};
```

OUTPUT:-