Experiment No. - 6

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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: 11/04/2023
Subject Code: 20CSP-351

1. **Aim/Overview of the practical:**

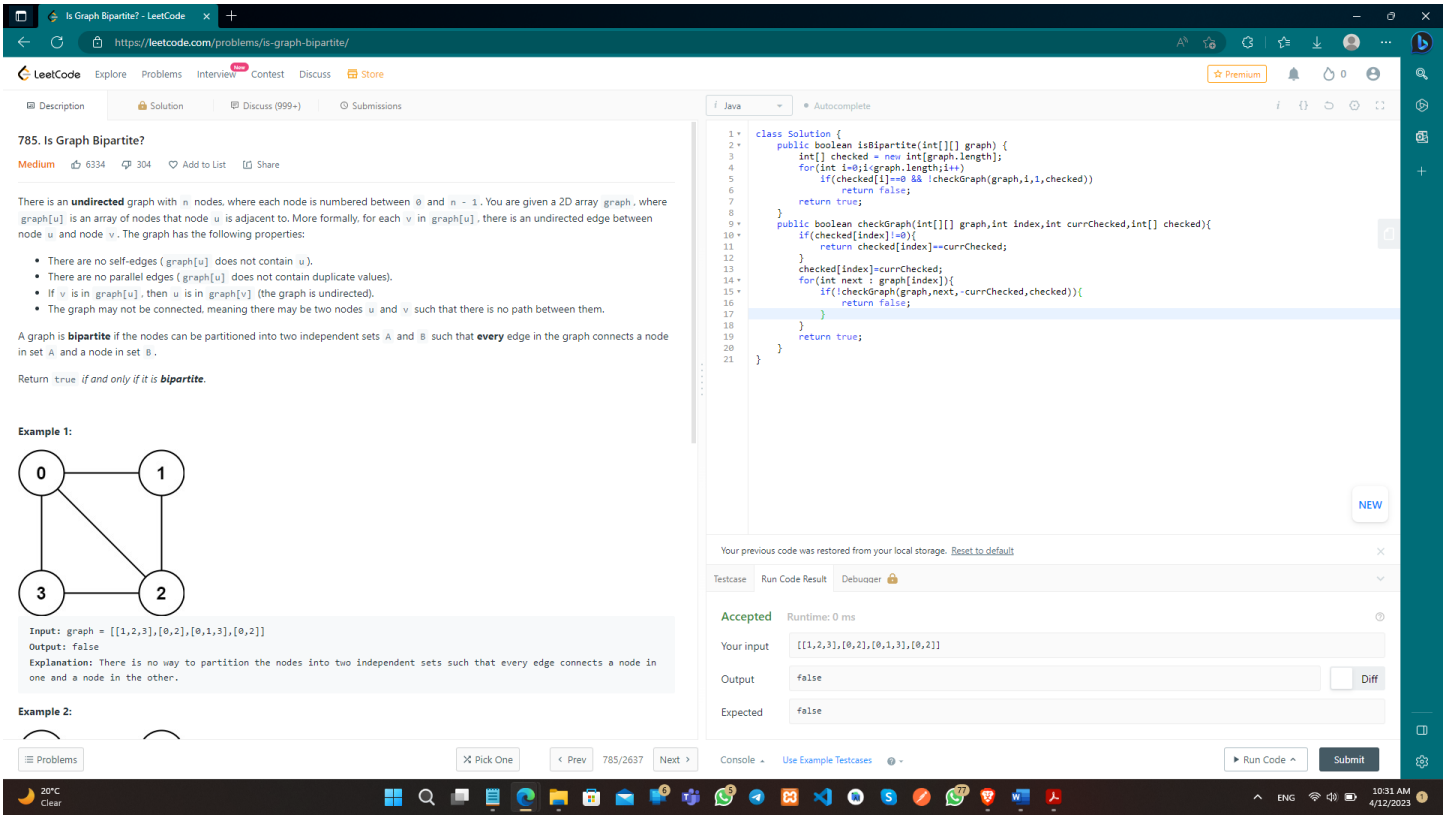
   Q.1 Is Graph Bipartite.

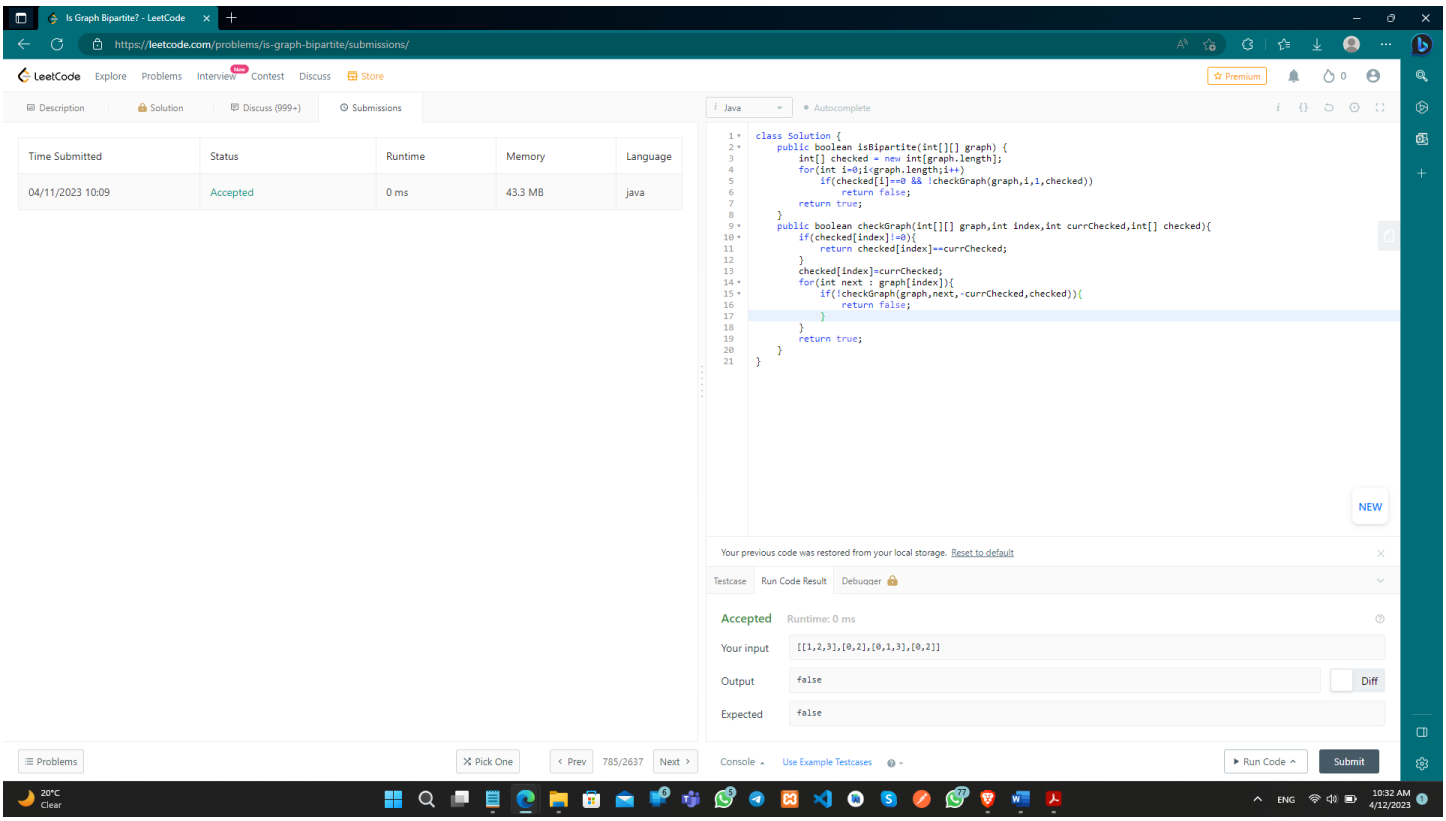
   https://leetcode.com/problems/is-graph-bipartite/

2. **Apparatus / Simulator Used:**
   - Windows 7 or above
   - Google Chrome
3. **Objective:**
   - To understand the concept of Graph
   - To implement the concept of Bipartite Graph.
4. **Code:**

```
class Solution {
    public boolean isBipartite(int[][] graph) {
        int[] checked = new int[graph.length];
        for(int i=0;i<graph.length;i++)
            if(checked[i]==0 && !checkGraph(graph,i,1,checked))
                return false;
        return true;
    }
    public boolean checkGraph(int[][] graph,int index,int currChecked,int[] checked){
        if(checked[index]!=0){
            return checked[index]==currChecked;
        }
        checked[index]=currChecked;
        for(int next : graph[index]){
            if(!checkGraph(graph,next,-currChecked,checked)){
                return false;
            }
        }
        return true;
    }
}
```

5. **Result/Output/Writing Summary:**



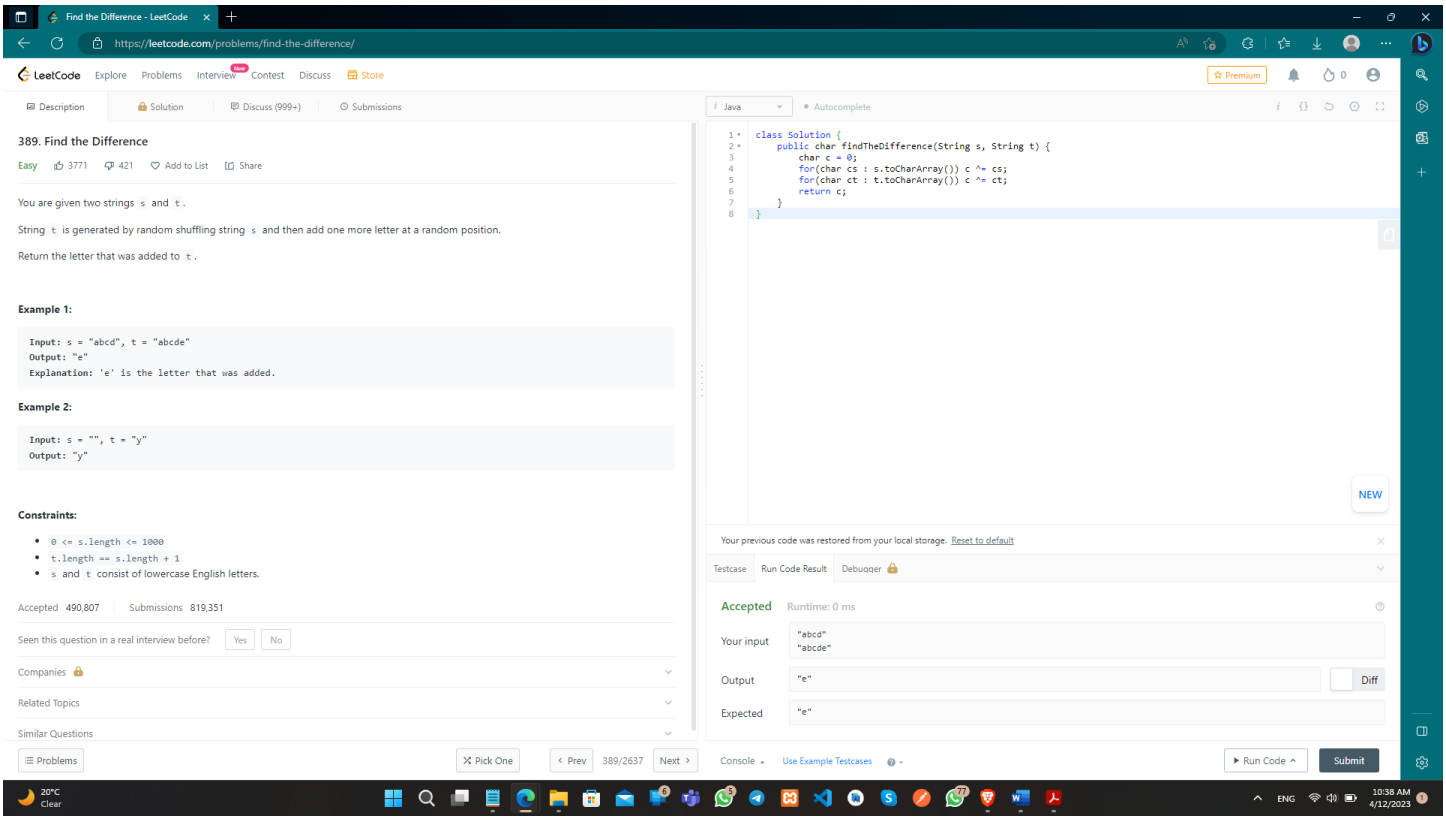


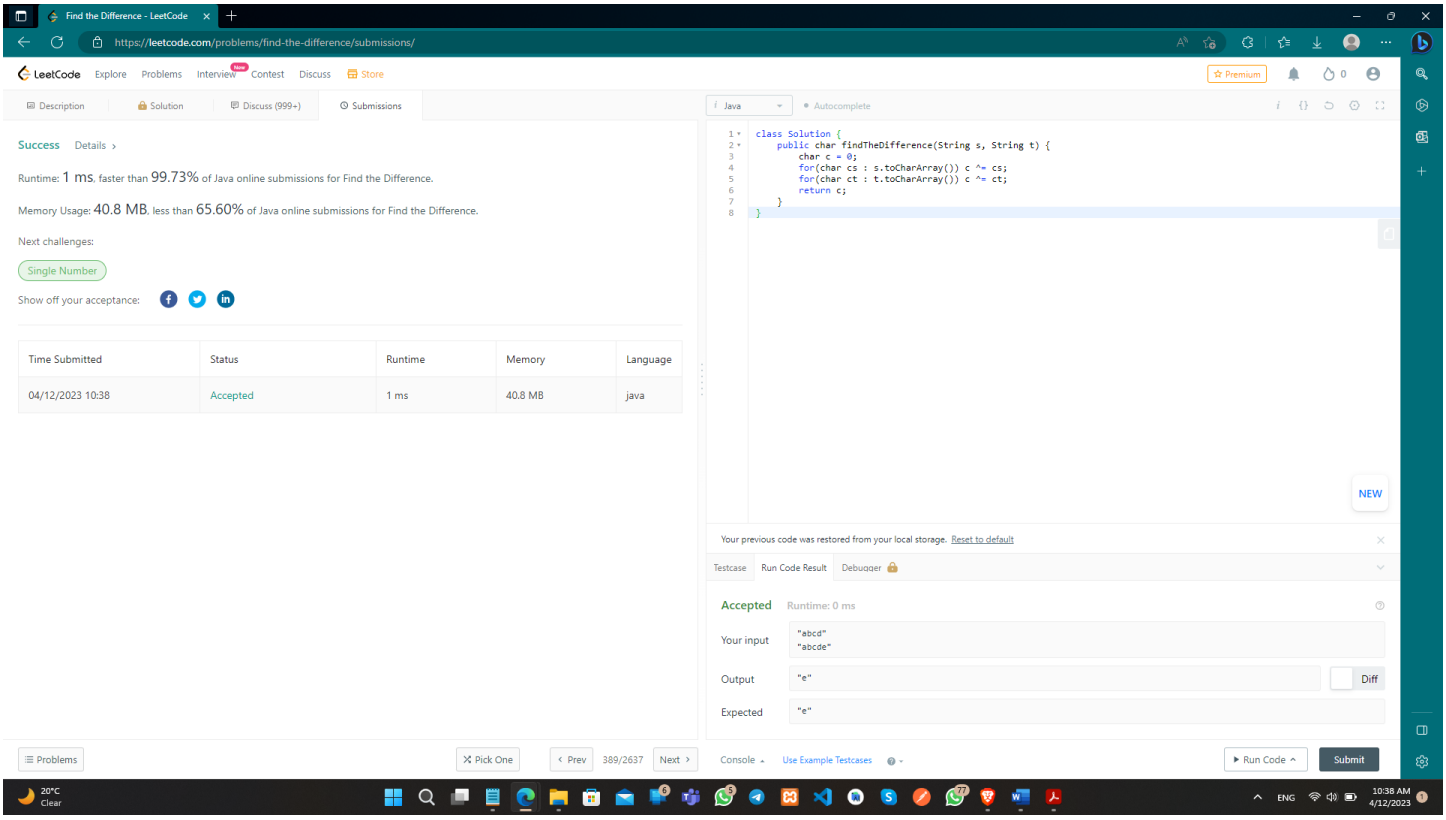
1. **Aim/Overview of the practical:**
   Q.2 Find The Difference
   https://leetcode.com/problems/find-the-difference/

2. **Apparatus / Simulator Used:**
   - Windows 7 or above
   - Google Chrome
3. **Objective:**
   - To understand the concept of String.
   - To implement the concept of XOR with String.
4. **Code:**

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

5. **Result/Output/Writing Summary:**





Learning outcomes (What I have learnt):

- Learned the concept of Bipartite Graph.
- Learnt about Tree and finding the Extra Character in String.