Experiment 3

Student Name: ISHITA NISHANT **UID: 23BCS11354**
Branch: BE CSE **Section/Group: KRG-2A**
Semester: 5 **DateofPerformance:10/8/2025**
Subject Name: DAA **Subject Code:23CSH-301**

1. **Aim: Given an array of positive integers which may contain duplicate elements, return frequency of each distinct element**

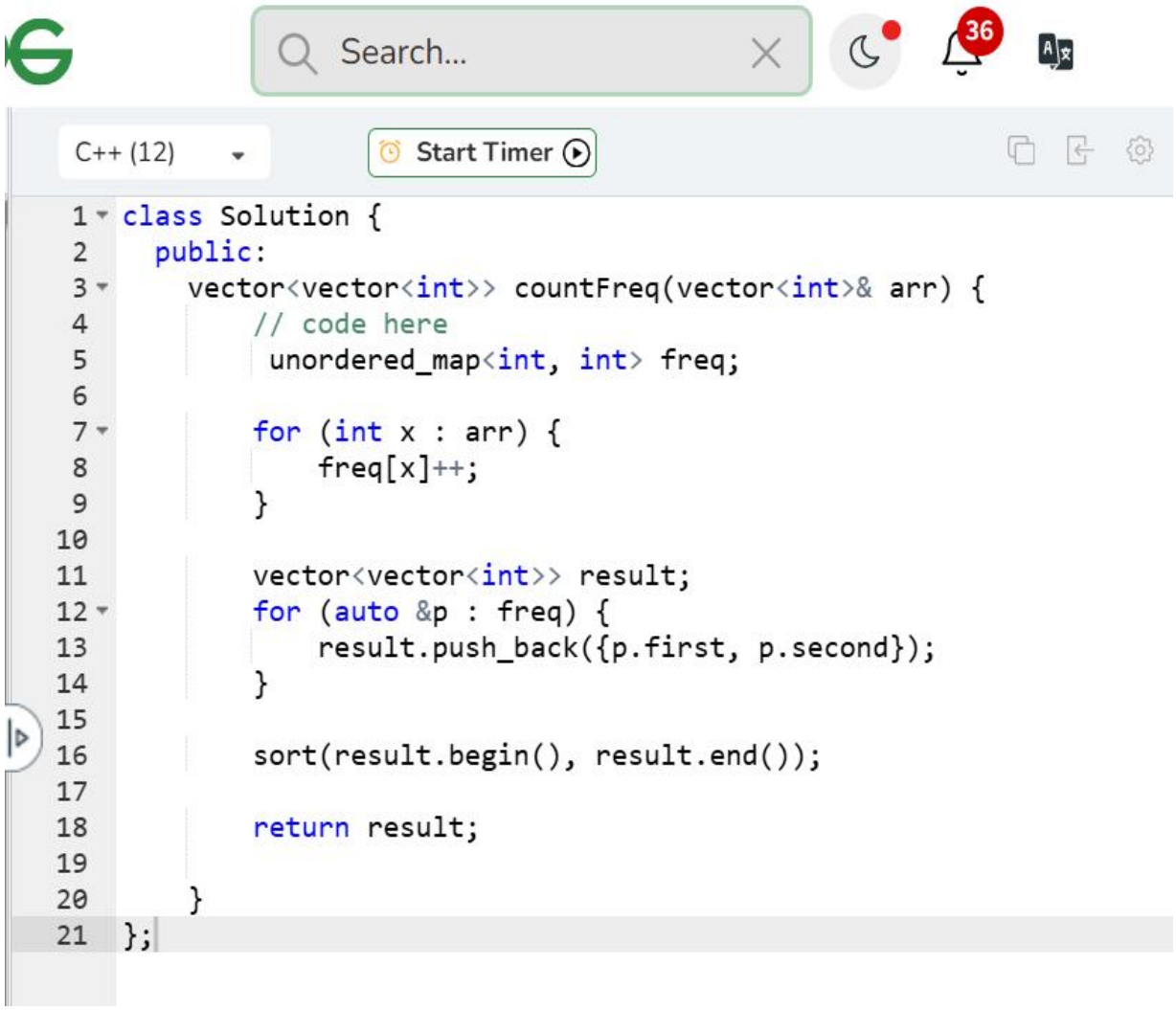
2. **Objective:** To count the number of times each distinct element appears in the array.

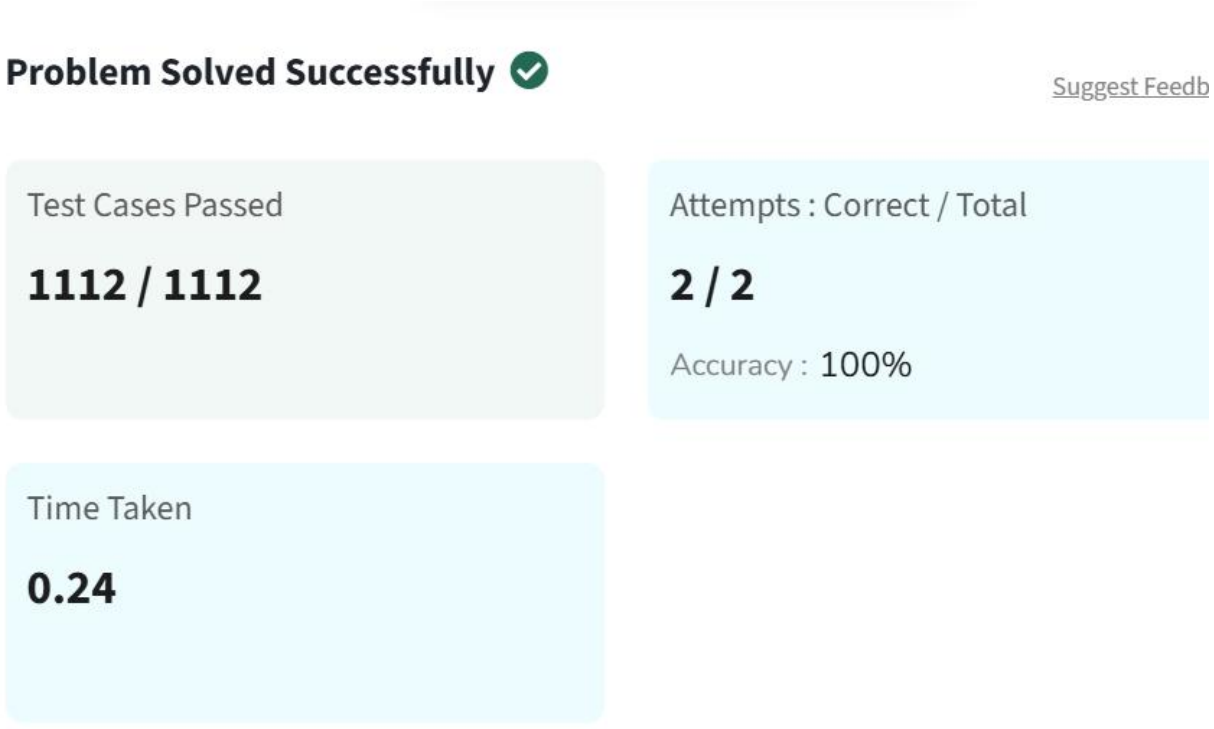
3. **Implementation/Code:**

```
class Solution {
  public:
    vector<vector<int>> countFreq(vector<int>& arr) {
        // code here
         unordered_map<int, int> freq;

        for (int x : arr) {
            freq[x]++;
        }

        vector<vector<int>> result;
        for (auto &p : freq) {
            result.push_back({p.first, p.second});
        }

        sort(result.begin(), result.end());

        return result;

    }
```

};

4. Output


Search...
36
C++ (12)
Start Timer
class Solution {
public:
vector<vector<int>> countFreq(vector<int>& arr) {
// code here
unordered_map<int, int> freq;
for (int x : arr) {
freq[x]++;
}
vector<vector<int>> result;
for (auto &p : freq) {
result.push_back({p.first, p.second});
}
sort(result.begin(), result.end());
return result;
}
};



5. Learning Outcome

1. **Understanding of frequency counting** – Learn how to calculate the occurrence of each element in an array.

2. **Efficient use of data structures** – Gain hands-on practice with hash maps/dictionaries or arrays to store frequencies.

3. **Handling duplicates in arrays** – Develop the ability to process arrays containing repeated elements without redundancy.