Shri Vile Parle Kelavani Mandal's

INSTITUTE OF TECHNOLOGY

DHULE (M.S.)

DEPARMENT OF COMPUTER ENGINEERING

Subject: Competitive Programming Lab (BTCOL606)

Name : Mohammad Anas Aarif Baig Mirza **Roll No. :** 31

Class : T.Y Comp **Batch : T2** **Division: T**

Expt. No. :03 **Date :**

Title : Problem 2: Sales By Match

Remark

Signature

Code:

```
// MOHAMMAD ANAS Student_31
#include <iostream>
#include <vector>
using namespace std;
void countPairs(const vector<int>& arr, int& paired, int& unpaired) {
    int n = arr.size();
    vector<int> visited(n, 0);
    paired = 0;
    unpaired = 0;
    for (int i = 0; i < n; i++) {
        if (visited[i] != 0) continue;
        for (int j = i + 1; j < n; j++) {
            if (arr[i] == arr[j] && visited[j] == 0) {
                paired += 1;
                visited[i] = visited[j] = -1;
                break;
            }
        }
        if (visited[i] == 0) {
            unpaired++;
            visited[i] = 1;
        }
    }
}
int main() {
```

```
    int n;
    cout << "Enter the size of color code array: ";
    cin >> n;
    vector<int> arr(n);
    cout << "Enter element of color code array:  ";
    for (int i = 0; i < n; i++) {
        cin >> arr[i];
    }
    int paired, unpaired;
    countPairs(arr, paired, unpaired);
    cout << "Paired socks: " << paired << endl;
    cout << "Unpaired socks: " << unpaired << endl;
    return 0;
}
```

Output: