

## Talent Battle 100 Days Coding Series

Alice and Bob went to a pet store. There are  $N$  animals in the store where the  $i$ th animal is of type  $A_i$ .

Alice decides to buy some of these  $N$  animals. Bob decides that he will buy **all** the animals **left** in the store after Alice has made the purchase.

Find out whether it is possible that Alice and Bob end up with **exactly same multiset** of animals.

### Input Format

- The first line of input will contain a single integer  $T$ , denoting the number of test cases.
- Each test case consists of multiple lines of input.
  - The first line of each test case contains an integer  $N$  — the number of animals in the store.
  - The next line contains  $N$  space separated integers, denoting the type of each animal.

### Output Format

For each test case, output on a new line, YES, if it is possible that Alice and Bob end up with **exactly same** multiset of animals and NO otherwise.

You may print each character in uppercase or lowercase. For example, the strings YES, yes, Yes, and yES are considered identical.

### Sample Input

```
4
3
4 4 4
4
2 3 3 2
4
1 2 2 3
6
5 5 1 5 1 5
```

### Sample Output

```
NO
YES
```

NO

YES

**C**

```
#include <stdio.h>
```

```
int main(void) {
```

```
    int t;
```

```
    scanf("%d",&t);
```

```
    while(t--)
```

```
    {
```

```
        int n,i,p=0;
```

```
        scanf("%d",&n);
```

```
        int A[n];
```

```
        int ans[101];
```

```
        for(i=0;i<n;i++)
```

```
        {
```

```
            scanf("%d",&A[i]);
```

```
        }
```

```
        for(i=0;i<101;i++)
```

```
        {
```

```
            ans[i]=0;
```

```
        }
```

```
        if(n%2==0)
```

```
        {
```

```
            for(i=0;i<n;i++)
```

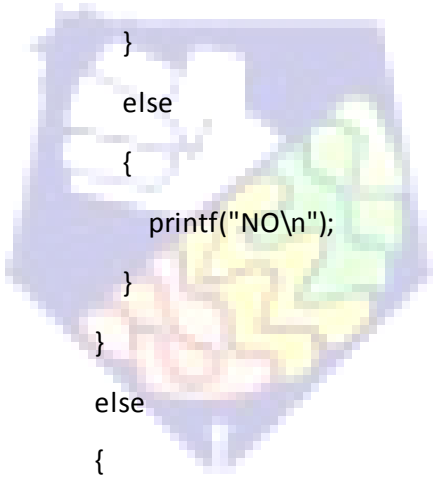
```
            {
```

```
                ans[A[i]]++;
```

```
            }
```

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```
for(i=0;i<101;i++)
{
    if(ans[i]%2!=0)
    {
        p=1;
        break;
    }
}
if(p==0)
{
    printf("YES\n");
}
else
{
    printf("NO\n");
}
}
else
{
    printf("NO\n");
}
}
return 0;
}
```



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**C++**

```
#include<bits/stdc++.h>

using namespace std;

using ll = long long ;

#define endl "\n"

int main(){

ios_base::sync_with_stdio(false);

cin.tie(NULL);

int T=1; cin>>T;

while(T--){

ll n; cin>>n;

ll a[n]; map<ll,ll>mp; set<ll>s;

bool ok = true;

for(int i = 0 ; i < n ; i++){

    cin>>a[i];

    mp[a[i]]++;

    s.insert(a[i]);

}

for(auto it = s.begin(); it!=s.end(); it++){

    ll temp = mp[*it];

    if(temp%2){ok=false;}

}

if(ok){cout<<"YES"<<endl;}

else{cout<<"NO"<<endl;}

}

return 0;

}
```

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### Java

```
import java.util.*;

import java.util.ArrayList;

import java.io.*;

class TestClass {

    static class FastReader {

        BufferedReader br;

        StringTokenizer st;

        public FastReader() {

            br = new BufferedReader(new InputStreamReader(System.in));

        }

        String next() {

            while (st == null || !st.hasMoreElements()) {

                try {

                    st = new StringTokenizer(br.readLine());

                } catch (IOException e) {

                    e.printStackTrace();

                }

            }

            return st.nextToken();

        }

        int nextInt() {

            return Integer.parseInt(next());

        }

    }

}
```



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```
long nextLong() {  
    return Long.parseLong(next());  
}
```

```
double nextDouble() {  
    return Double.parseDouble(next());  
}
```

```
double nextFloat() {  
    return Float.parseFloat(next());  
}
```

```
String nextLine() {  
    String str = "";  
    try {  
        str = br.readLine();  
    } catch (IOException e) {  
        e.printStackTrace();  
    }  
    return str;  
}
```

```
}
```

```
public static void main(String[] sadf) {  
    FastReader fr = new FastReader();  
    int t = fr.nextInt();  
    while (t-- > 0) {  
        solve(fr);  
    }  
}
```

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```
    }  
}  
  
public static void solve(FastReader fr) {  
    int n = fr.nextInt();  
    HashMap<Integer, Integer> map = new HashMap<Integer, Integer>();  
    for (int i = 0; i < n; i++) {  
        int num = fr.nextInt();  
        map.put(num, map.getDefault(num, 0) + 1);  
    }  
    for (Map.Entry<Integer, Integer> e : map.entrySet()) {  
        if (e.getValue() % 2 != 0) {  
            System.out.println("NO");  
            return;  
        }  
    }  
    System.out.println("YES");  
}  
private static int log(int N) {  
    return 31 - Integer.numberOfLeadingZeros(N);  
}  
  
}
```

### Python

```
from collections import Counter  
t = int(input())  
for _ in range(t):  
    n = int(input())
```

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```
nums = [int(x) for x in input().split()]  
b = Counter(nums)  
c = True  
for i in b:  
    if b[i]%2==1:  
        c = False  
if c:  
    print("YES")  
else:  
    print("NO")
```



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