Program 1:

Alex works at a clothing store. There is a large pile of socks that must be paired by color for sale. Given an array of integers representing the color of each sock, determine how many pairs of socks with matching colors there are.

For example, there are n=7 socks with colors ar = {1,2,1,2,1,3,2}. There is one pair of color 1 and one of color 2. There are three odd socks left, one of each color. The number of pairs is 2.

Function Description

Complete the sockMerchant function in the editor below. It must return an integer representing the number of matching pairs of socks that are available.

sockMerchant has the following parameter(s):

n: the number of socks in the pile

ar: the colors of each sock

Input Format

The first line contains an integer n, the number of socks represented in ar.

The second line contains n space-separated integers describing the colors ar[i] of the socks in the pile.

Constraints

1 <= n <= 100

1 <= ar[i] <= 100 & 0 <= i < n

Output Format

Return the total number of matching pairs of socks that Alex can sell.

Sample Input

9

10 20 20 10 10 30 50 10 20

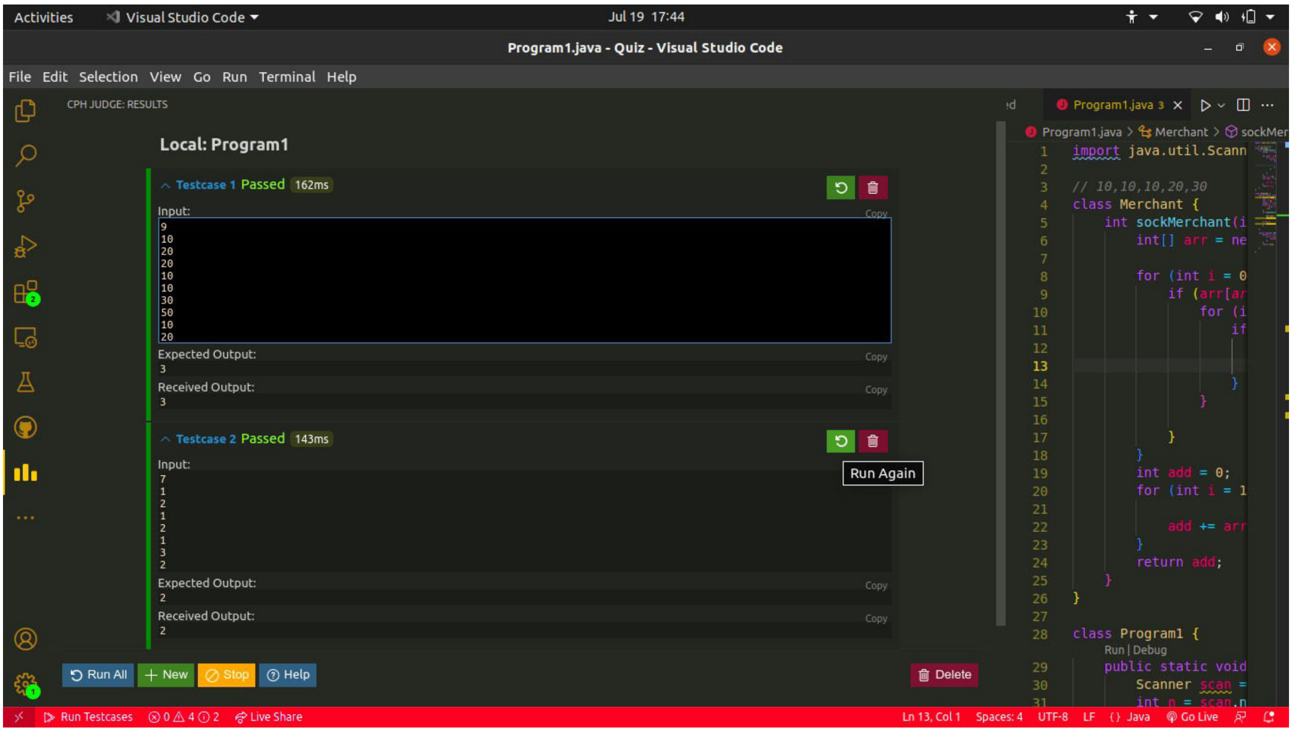
Sample Output

3

code

```
import java.util.Scanner;


class Merchant {
int sockMerchant(int n, int[] ar) {
int[] arr = new int[100];

for (int i = 0; i < n; i++) {
if (arr[ar[i]] == 0) {
for (int j = 0; j < n; j++) {
if (ar[i] == ar[j]) {
arr[ar[i]] += 1;

}
}

}
}
int add = 0;
for (int i = 1; i < arr.length; i++) {

add += arr[i] / 2;
}
return add;
}
}

class Program1 {
public static void main(String[] args) {
Scanner scan = new Scanner(System.in);
int n = scan.nextInt();
int i = 0;
int[] arr = new int[n];
while (i < n) {
arr[i] = scan.nextInt();
i++;
}
if (checkConstraints(n, arr, i)) {

Merchant mer = new Merchant();
System.out.println(mer.sockMerchant(n, arr));

} else {
System.out.println("Not match Constraints.");
}

}

static boolean checkConstraints(int n, int[] arr, int i) {
while (i < n) {
if (arr[i] <= 1 && (arr[i] >= 100) && !(1 <= n && n <= 100)) {
return false;
}
}
return true;

}

}
```

Testing -:



Activities
Visual Studio Code
Jul 19 17:44
Program1.java - Quiz - Visual Studio Code
File Edit Selection View Go Run Terminal Help
CPH JUDGE: RESULTS
Program1.java 3
Program1.java > Merchant > sockMer
Run All
New
Stop
Help
Delete
Run Again
Run Testcases
0 4 2
Live Share
Ln 13, Col 1 Spaces: 4 UTF-8 LF {} Java Go Live

Local: Program1

Testcase 1 Passed 162ms

Input:

```
9
10
20
20
10
10
30
50
10
20
```

Expected Output:

```
3
```

Received Output:

```
3
```

Testcase 2 Passed 143ms

Input:

```
7
1
2
1
2
1
3
2
```

Expected Output:

```
2
```

Received Output:

```
2
```

```java
import java.util.Scann

// 10,10,10,20,30
class Merchant {
    int sockMerchant(i
        int[] arr = ne

        for (int i = 0
            if (arr[ar
                for (i
                    if
                    
                    }
                }

            }
        }
        int add = 0;
        for (int i = 1

            add += arr
        }
        return add;
    }
}

class Program1 {
    Run | Debug
    public static void
        Scanner scan =
        int n = scan.n
```