

<https://course.acciojob.com/idle?question=c90a618d-eec4-4a30-8d6a-2db091389d50>

● EASY

● Max Score: 30 Points

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Count pairs with given Sum

Given an array `arr` of size `N` and an integer `K`, find all the possible pairs of elements in the array whose sum is `K`.

Input Format

First line of input contains a single integer `N`, the size of array.

Second line of input contains `N` space separated integers representing the elements of the array `A`.

Third line of input contains `K`.

Output Format

Find the total number of pairs whose sum is equal to `K`.

Example 1

Input

```
4
1 5 7 1
6
```

Output

```
2
```

Explanation

$\text{arr}[0] + \text{arr}[1] = 1 + 5 = 6$ and $\text{arr}[1] + \text{arr}[3] = 5 + 1 = 6..$

Example 2

Input

```
5
1 1 1 1 1
3
```

Output

```
0
```

Explanation

No pairs have sum equal to 3.

Constraints

$1 \leq N \leq 10^5$

$-10^6 \leq \text{arr}[i] \leq 10^6$

$1 \leq K \leq 10^7$

Topic Tags

- Hashing
- Arrays

My code

```
// n java
import java.io.*;
import java.util.*;
public class Main {
    public static void main(String args[]) throws IOException {
        Scanner sc = new Scanner(System.in);

        int n=sc.nextInt();
        int arr[]=new int[n];
        for(int i=0;i<n;i++)
            arr[i]=sc.nextInt();

        int k=sc.nextInt();

        Solution A=new Solution();
        int ans=A.countPairs(arr,n,k);

        System.out.println(ans);
    }
}
```

```
class Solution {
    int countPairs(int arr[], int n, int k)
    {
        // Your code here
        HashMap<Integer,Integer>hm=new HashMap<>();
        int ans=0;
        for(int i=0;i<n;i++)
        {
            if(hm.containsKey(k-arr[i]))
                ans=ans+hm.get(k-arr[i]);
            hm.put(arr[i],hm.getDefault(arr[i],0)+1);
        }
        return ans;
    }
}
```