https://course.acciojob.com/idle?question=1e4d8986-10d5-44e2-89dc-00c98b8fde3d

- MEDIUM
- Max Score: 40 Points
-

Priyanshu and Arithmetic Sequence

Priyanshu has an array of 'n' integers. He needs to determine whether it is possible to turn the above sequence into an Arithmetic Progression by rearranging the array members, and if so, display "Yes" otherwise print "No".

For Example: If ‘n’ = 5, ‘arr’ = {3, 5, 11, 9, 7} You can rearrange ‘ARR’ to now become {3, 5, 7, 9, 11} this is an arithmetic progression. Therefore we will print “Yes”.

Input Format

The first line consists of a single integer ‘n’, representing the number of elements in the array.

Then second line contains n space-seprated integers denoting the array elements.

Output Format

Print “Yes” if the given array can be rearranged to form an A.P., else print “No”.

Example 1

Input

```
5
3 5 11 9 7
```

Output

```
Yes
```

Explanation

We will print “Yes” because: Then given array can be rearranged as {3, 5, 7, 9, 11} which is an AP.

Example 2

Input

```
4
3 5 7 10
```

Output

```
No
```

Explanation

We will print “No” because: There is no way to rearrange the input array so that it forms an AP.

Constraints

3 ≤ n ≤ 100000
-10^9 ≤ arr[i] ≤ 10^9

Topic Tags

- **Hashing**
- **Sorting**

My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;
```

```
public class Main
{
	public static void main (String[] args) throws
java.lang.Exception
	{
		//your code here
		Scanner s=new Scanner(System.in);
		int n=s.nextInt();
		int arr[]=new int[n];
		for(int i=0;i<n;i++)
		arr[i]=s.nextInt();
		Arrays.sort(arr);
		int d=arr[1]-arr[0];
		int sum=arr[0]+d;
		int f=0;//flag
		for(int i=1;i<n;i++)
			{
				if(sum==arr[i]);
				else f=1;
				sum=d+sum;
			}
		if(f==0)
			System.out.print("Yes");
		else System.out.print("No");
	}
}
```