

<https://course.acciojob.com/idle?question=e0b796ef-2562-4a35-a728-c23b93d988c1>

MEDIUM

Max Score: 40 Points

Find Split Point

Write a program to Partition an array into two subarrays with the same sum. Take input of size of array and the array elements then find if it is possible to split the array in two subarrays (without reordering the elements), such that the sum of the two subarrays is the same.

Input Format

Input consists of two lines.

First line contains an integer N denoting size of array

Second line contains N integers denoting the array elements separated by single space

Output Format

Print the two partitioned subarray in two lines. Print "Not Possible" if it is not possible to partition the array into subarrays of equal sum.

Note:- Print left subarray in first line and right subarray in second line.

Example 1

Input

```
5
6 -4 3 2 -3
```

Output

```
6 -4
3 2 -3
```

Explanation Sum of $6+(-4)$ is equal to Sum of $3+2+(-3)$

Example 2

Input

```
4
4 3 2 1
```

Output

```
Not Possible
```

Explanation No partition of the array will make the left and right sum equal

Constraints

```
1<= arr.size() <= 10000
```

Topic Tags

Loops

Arrays

My code

// in 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];
        int sum=0;
        for(int i=0;i<n;i++)
        {
            arr[i]=s.nextInt();
            sum=sum+arr[i];
        }
        int s2=0;
        int position=-1;
        for(int i=0;i<n;i++)
        {
            s2=s2+arr[i];
            if(sum/2==s2)
            {
                position=i;
                break;
            }
        }
        if(position== -1)
            System.out.print("Not Possible");
        else //
        {

```

```
        for(int i=0;i<=position;i++)
            System.out.print(arr[i]+" ");
        System.out.println("");
        for(int i=position+1;i<n;i++)
            System.out.print(arr[i]+" ");
    }
}
}
```