 KLVijaywada Y19 23 - CSIP - PHASE - 2 (/course/view/6176ab92d6037e0e0aed7c90)  
 / [KLU-23-P2] Two Pointers Technique (/classes/61ba9ecacf468c464f231a0b)  
 / Has Pair Sum - Two Arrays

## Has Pair Sum - Two Arrays



(author: Sandeep)

[Score: 20]

|                          |   |
|--------------------------|---|
| <b>PROBLEM STATEMENT</b> | Given 2 arrays A and B of size N and M respectively. Given an integer X, check if there is any pair of elements $A[i] + B[j]$ such that their sum is X.   |
| <b>INPUT FORMAT</b>      | First line of input is integer T - number of test cases<br>Each test case line 1 has integers N M X. N - size of array A, size of array B and X - Desired Sum.<br>Second line of each test case has N space separated numbers of array A.<br>Third line of each test case has M space separated numbers of array B. |
| <b>OUTPUT FORMAT</b>     | For a given test case, print YES or NO based on if any pair with sum X exists.  |
| <b>CONSTRAINTS</b>       | $1 \leq T \leq 100$<br>$1 \leq N, M \leq 10000$   |
| <b>COMPLEXITIES</b>      | Expected Time Complexity: <b>O(N)</b><br>Allowed Space Complexity: <b>O(N)</b>  |

| SAMPLE INPUT  | SAMPLE OUTPUT | EXPLANATION  |
|---|---------------|--|
| 2<br>6 5 16<br>1 3 9 8 -30 21<br>4 2 7 9 6<br>5 9 11<br>1 2 4 3 6<br>1 1 1 1 1 1 2 2 2 2<br>2 | YES<br>NO     | In first test case we have a pair (9,7) with sum 16 we print YES.<br>Next test case don't have any pair with sum 11 so we print NO |

### Test Cases Results

| TestCaseID | Result | Expected  | Your Output   | Exception |
|------------|--------|---|---|-----------|
| 1          | true   | YES<br>NO   | YES<br>NO   |           |
| 2          | true   |  |  |           |

## Example Input - Output

[Refer Description](#)

## Code

**Language:**JAVA 

```
1 //ALGORITHM
2 //STEP1: KEEP ALL THE ELEMENTS OF SECOND ARRAY IN
  HASHSET
3 //STEP2: TRAVERSE THE 1ST ARRAY AND CHECK WHETHER
  TARGET-THE ELEMENT IS PRESENT IN THE HASHSET OR NOT
  IF PRESENT THEN PRINT YES IF DO NOT PRESENT THEN
  PRINT NO
4 import java.util.*;
5
6 public class Test
7 {
8     public static void main(String[] args)
9     {
10         Scanner sc=new Scanner(System.in);
11         int t;
12         t=sc.nextInt();
13         while(t-->0)
14         {
15             int arr[]=new int[3];
16             for(int i=0;i<3;i++)
17             {
18                 arr[i]=sc.nextInt();
19             }
20             int n=arr[0];
21             int m=arr[1];
22             int x=arr[2];
23             int a1[]=new int[n];
24             int a2[]=new int[m];
25             int flag=0;
26             for(int i=0;i<n;i++)
27             {
28                 a1[i]=sc.nextInt();
29             }
30             for(int j=0;j<m;j++)
31             {
32                 a2[j]=sc.nextInt();
33             }
34         }
```

```
35         HashSet<Integer>hp=new HashSet<Integer>
36         ();
37         for(int i=0;i<m;i++)
38         {
39             hp.add(a2[i]);
40         }
41         for(int k=0;k<n;k++)
42         {
43             int l=x-a1[k];
44             if(hp.contains(l))
45             {
46                 System.out.println("YES");
47                 flag=1;
48                 break;
49             }
50         }
51         if(flag==0)
52             System.out.println("NO");
53     }
54 }
55 }
56 }
```

☒ Test against custom input

Run Code

Submit Code

```
6 5 16
1 3 9 8 -30 21
4 2 7 9 6
5 9 11
1 2 4 3 6
1 1 1 1 1 2 2 2 2
```

## Discussion

0 Comments

Sort by Oldest



Add a comment...

[Facebook Comments Plugin](#)Like Share 11K people like this. [Sign Up](#) to see what your friends like.[Contact Us \(/contact-us\)](#)

© Being Zero 2014-2018