



Subset of a given Set whose elements sum is equal to given number

Problem

Submissions

Leaderboard

Discussions

Design and implement in Java to find a subset of a given set $S = \{S_1, S_2, \dots, S_n\}$ of n positive integers whose SUM is equal to a given positive integer d . For example, if $S = \{1, 2, 5, 6, 8\}$ and $d = 9$, there are two solutions $\{1, 2, 6\}$ and $\{1, 8\}$. Display a suitable message, if the given problem instance doesn't have a solution.

Input Format

7 1 2 3 4 5 6 7 8

Constraints

No Constraints

Output Format

The subset: 1 2 5 The subset: 1 3 4 The subset: 1 7 The subset: 2 6 The subset: 3 5

Sample Input 0

```
7
1 2 3 4 5 6 7
8
```

Sample Output 0

```
The subset:
1
2
5
The subset:
1
3
4
The subset:
1
7
The subset:
2
6
The subset:
3
5
```

Contest ends in 2 months

Submissions: 57

Max Score: 10

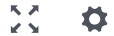
Difficulty: Medium

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[More](#)

Java 7



```
1 //224G1A0553
2 import java.util.Scanner;
3 public class Subset {
4     static int w[],x[],flag,sum,n,total,i,s,k,r;
5     public void sumOfSubset(int s,int k,int r) {
6         x[k]=1;
7         if(s+w[k]==sum) {
8             System.out.println("The subset: ");
9             for(i=1;i<=k;i++) {
10                 flag=1;
11                 if(x[i]==1) {
12                     System.out.println(w[i]);
13                 }
14             }
15         }
16         else if(s+w[k]+w[k+1]<=sum) {
17             sumOfSubset(s+w[k],k+1,r-w[k]);
18         }
19         if(s+r-w[k]>=sum && s+w[k+1]<=sum) {
20             x[k]=0;
21             sumOfSubset(s,k+1,r-w[k]);
22         }
23     }
24     public static void main(String args[]) {
25         Scanner s=new Scanner(System.in);
26         //System.out.println("Enter the number of elements");
27         n=s.nextInt();
28         w=new int[n+1];
29         x=new int[n+1];
30         //System.out.println("Enter the elements");
31         for(int i=1;i<=n;i++) {
32             w[i]=s.nextInt();
33             total=total+w[i];
34         }
35         //System.out.println("Enter the sum");
36         sum=s.nextInt();
37         if(total<sum) {
38             System.out.println("subset is not possible"); System.exit(0);
39         }
40         Subset ss = new Subset();
41         ss.sumOfSubset(0,1,total);
42         if(flag==0) {
43             System.out.println("Subset not possible");
44         }
45     }
46 }
```

Line: 1 Col: 13

[Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code

Testcase 0 **Congratulations, you passed the sample test case.**

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
7
1 2 3 4 5 6 7
8
```

Your Output (stdout)

```
The subset:
1
2
5
The subset:
1
3
4
The subset:
1
7
The subset:
2
6
The subset:
3
5
```

Expected Output

```
The subset:
1
2
5
The subset:
1
3
4
The subset:
1
7
The subset:
2
6
The subset:
3
5
```