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

Design and implement in Java to find a subset of a given set S = {Sl, S2,.....,Sn} 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

Rate This Challenge:

More

Java 7

```java
//224G1A0553
import java.util.Scanner;
public class Subset {
 static int w[],x[],flag,sum,n,total,i,s,k,r;
 public void sumOfSubset(int s,int k,int r) {
 x[k]=1;
 if(s+w[k]==sum) {
 System.out.println("The subset: ");
 for(i=1;i<=k;i++) {
 flag=1;
 if(x[i]==1) {
 System.out.println(w[i]);
 }
 }
 }
 else if(s+w[k]+w[k+1]<=sum) {
 sumOfSubset(s+w[k],k+1,r-w[k]);
 }
 if(s+r-w[k]>=sum && s+w[k+1]<=sum) {
 x[k]=0;
 sumOfSubset(s,k+1,r-w[k]);
 }
 }
 public static void main(String args[]) {
 Scanner s=new Scanner(System.in);
 //System.out.println("Enter the number of elements");
 n=s.nextInt();
 w=new int[n+1];
 x=new int[n+1];
 //System.out.println("Enter the elements");
 for(int i=1;i<=n;i++) {
 w[i]=s.nextInt();
 total=total+w[i];
 }
 //System.out.println("Enter the sum");
 sum=s.nextInt();
 if(total<sum) {
 System.out.println("subset is not possible"); System.exit(0);
 }
 Subset ss = new Subset();
 ss.sumOfSubset(0,1,total);
 if(flag==0) {
 System.out.println("Subset not possible");
 }
 }
}
```

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
```