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 = {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
```

Java 7

```java
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: 1

⬆ Upload Code as File   ☐ Test against custom input

Run Code   Submit Code

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
```