

04 : 16 : 03 : 17  
DAY HRS MIN SEC

## June Circuits '18

LIVE

Jun 16, 2018, 09:00 PM IST - Jun 25, 2018, 09:00 PM IST

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LIVE EVENTS

INSTRUCTIONS

PROBLEMS

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## Find the subset

Max. Marks: 100

Define the ugliness of a **set**  $T$  as the number of unordered pairs  $(x, y)$  such that  $x, y \in T$  and  $x + y > D$ . Given a set  $S$  of length  $M$ , find the lexicographic minimal subset of  $S$  of length  $N$  such that the ugliness of this subset is minimal.

Suppose we have two different sets  $A$  and  $B$  of length  $K$  with elements  $a_1 < a_2 < \dots < a_K$  and  $b_1 < b_2 < \dots < b_K$  respectively. We say that  $A$  is lexicographically smaller than  $B$  if there exist  $i$  such that  $a_j = b_j$  for  $1 \leq j < i$  and  $a_i < b_i$ .

## Input

The first line contains three integers  $N, M, D$  ( $1 \leq N \leq M \leq 10^5, 1 \leq D \leq 10^9$ ).

The second line contains  $M$  **distinct** integers representing the set  $S$ . All elements of  $S$  are between 1 and  $10^9$  (inclusive).

## Output

Output the subset of minimal ugliness in the order given in input. Because all elements are distinct there will always be only one way of printing them.

## SAMPLE INPUT



```
4 5 2
1 4 5 3 2
```

## SAMPLE OUTPUT



```
1 4 3 2
```

?

## Explanation

The ugliness of this subset is equal to **9**, the pairs are **(2, 3), (3, 4), (2, 4), (2, 2), (3, 3), (4, 4), (1, 2), (1, 3), (1, 4)**.

**Time Limit:** 2.0 sec(s) for each input file.

**Memory Limit:** 256 MB

**Source Limit:** 1024 KB

**Marking Scheme:** Marks are awarded if any testcase passes.

**Allowed Languages:** C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, Visual Basic

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LIVE EVENTS

## CODE EDITOR

Enter your code or [Upload your code](#) as file.

Save

Java 8 (oracle 1.8.0\_131)



```

1 import java.io.BufferedReader;
2 import java.io.IOException;
3 import java.io.InputStreamReader;
4 import java.util.ArrayList;
5 import java.util.Collections;
6
7 public class Set1 {
8
9     public static void main(String[] args) throws IOException {
10
11         BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
12         String yyy = br.readLine();
13
14         String data [] = yyy.trim().split("\\s{1,}");
15
16         if(data.length==3) {
17
18             int N = Integer.parseInt(data[0]); // output array length
19             int M = Integer.parseInt(data[1]); // input array length
20             int D = Integer.parseInt(data[2]); // sum
21
22             //(x,y) E T
23             // x + y > D
24             String xxxx [] = br.readLine().trim().split("\\s{1,}");
25
26             ArrayList<Integer> inputArray = new ArrayList<>();
27
28             for(int iCount = 0; iCount<xxxx.length;iCount++) {
29                 if(xxxx[iCount].trim().length()!=0) {
30                     inputArray.add(Integer.parseInt(xxxx[iCount].trim()));

```

?

```
31         }
32     }
33
34     if(M >=N && inputArray.size() == M) {
35         int max = Collections.max(inputArray);
36         int diff = M-N;
37
38         for(int x=0; x<diff; x++) {
39             inputArray.remove(inputArray.indexOf(max));
40         }
```

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LIVE EVENTS

☒ Provide custom input

COMPILE &amp; TEST

SUBMIT

 **Tip:** You can submit any number of times you want. Your best submission is considered for computing total score.

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