# hash code

## More pizza

Hash Code practice problem

## Problem description

You are organizing a Hash Code hub and want to order pizza for your hub's participants. Luckily, there is a nearby pizzeria with really good pizza.

The pizzeria has different types of pizza, and to keep the food offering for your hub interesting, you can only order **at most one pizza of each type**. Fortunately, there are many types of pizza to choose from!

Each type of pizza has a specified size: the size is the number of slices in a pizza of this type.

You estimated the maximum number of pizza slices that you want to order for your hub based on the number of registered participants. In order to reduce food waste, your goal is to order **as many pizza slices as possible**, but **not more than the maximum number**.

## Input data set

### File format

Each input data set is provided in a plain text file containing exclusively ASCII characters with lines terminated with a single '\n' character (UNIX-style line endings). When a single line contains multiple elements, they are separated by single spaces.

The first line of the data set contains the following data:

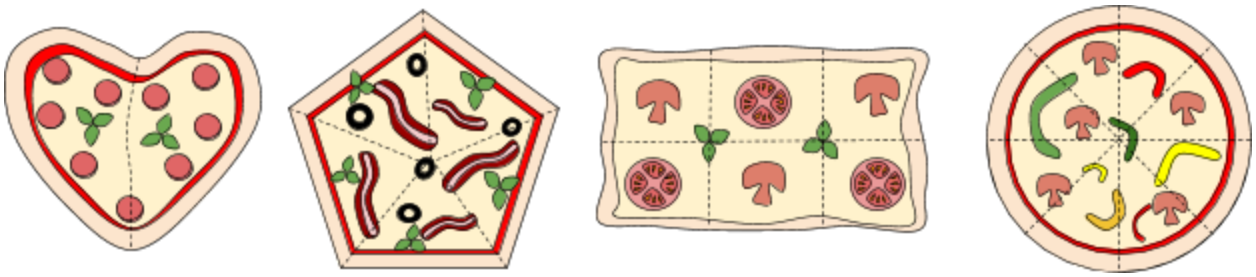
- an integer $M$ ($1 \le M \le 10^9$) – the maximum number of pizza slices to order
- an integer $N$ ($1 \le N \le 10^5$) – the number of different types of pizza

The second line contains N integers – the number of slices in each type of pizza, in non-decreasing order:

- $1 \le S_0 \le S_1 \le ... \le S_{N-1} <= \boldsymbol{M}$

## Example

| Input file | Description |
|---|---|
| 17 4<br>2 5 6 8 | **17** slices maximum, **4** different types of pizza<br>type **0** has **2** slices, type **1** has **5**, type **2** has **6**, and type **3** has **8** slices |



$S_0$ (2 slices) $S_1$ (5 slices) $S_2$ (6 slices) $S_3$ (8 slices)

# Submissions

## File format

The output should contain two lines:

- The first line should contain a single integer ***K*** ($0 \le \boldsymbol{K} \le \boldsymbol{N}$) – the number of different types of pizza to order.
- The second line should contain ***K*** numbers – the types of pizza to order (the types of pizza are numbered from 0 to ***N***-1 in the order they are listed in the input).

The total number of slices in the ordered pizzas must be less than or equal to ***M***.

## Example

| Submission file | Description |
|---|---|
| 3<br>0 2 3 | **3** types of pizza<br>ordering pizzas: $\mathbf{S_0}$, $\mathbf{S_2}$, and $\mathbf{S_3}$ |

# Scoring

The solution gets 1 point for each slice of pizza ordered.

For **example**, above we ordered 3 pizzas: $\mathbf{S_0}$, $\mathbf{S_2}$, and $\mathbf{S_3}$. We know that the pizza slices in each of these are 2, 6, and 8 respectively.

So the score is: 2+6+8 = **16 points**

**Note that there are multiple data sets representing separate instances of the problem. The final score for your team will be the sum of your best scores for the individual data sets.**