

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

## G. Ranges Every Where

time limit per test: 2 seconds  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

Given an array  $A$  that contains  $N$  distinct integers  $A_1, A_2, ..., A_N$ .

A range is a finite set of consecutive integers. Formally, for any two positive integers,  $a \leq b$  the range  $[a, b]$  is defined to be the set of all integers that lies between  $a$  and  $b$  inclusive. For example,  $[3, 3] = \{3\}$  and  $[4, 7] = \{4, 5, 6, 7\}$ .

We want to represent the given array  $A$  as a union of some ranges. Print the minimum number of ranges you need to represent the array  $A$ .

### Input

The first line will contain one integer  $N$  ( $1 \leq N \leq 10^6$ ) – the size of the array.

Second line will contain  $N$  distinct integers ( $1 \leq A_i \leq 10^9$ ) – the values of the array.

### Output

Print the minimum number of ranges you need to represent the given array  $A$ .

### Examples

|                            |      |
|----------------------------|------|
| input                      | Copy |
| 10<br>1 2 3 4 5 6 7 8 9 10 |      |
| output                     | Copy |
| 1                          |      |

|                               |      |
|-------------------------------|------|
| input                         | Copy |
| 10<br>2 4 5 6 8 9 10 11 12 15 |      |
| output                        | Copy |
| 4                             |      |

### Note

Second test case:

This set of integers can be represented as a union of these four ranges:  $[2, 2]$ ,  $[4, 6]$ ,  $[8, 12]$ , and  $[15, 15]$ .

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Practice

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Start virtual contest

→ Submit?

Language: GNU G++20 11.2.0 (64 bit, w

Choose file: Choose File No file chosen

Submit

| Submission                | Time              | Verdict  |
|---------------------------|-------------------|----------|
| <a href="#">214678467</a> | Jul/21/2023 03:15 | Accepted |