

X. Strange Addition

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Unfortunately, Vasya can only sum pairs of integers  $(a, b)$ , such that for any decimal place at least one number has digit 0 in this place. For example, Vasya can sum numbers 505 and 50, but he cannot sum 1 and 4.

Vasya has a set of  $k$  distinct non-negative integers  $d_1, d_2, ..., d_k$ .

Vasya wants to choose some integers from this set so that he could sum any two chosen numbers. What maximal number of integers can he choose in the required manner?

Input

The first input line contains integer  $k$  ( $1 \leq k \leq 100$ ) — the number of integers.

The second line contains  $k$  distinct space-separated integers  $d_1, d_2, ..., d_k$  ( $0 \leq d_i \leq 100$ ).

Output

In the first line print a single integer  $n$  the maximum number of the chosen integers. In the second line print  $n$  distinct non-negative integers — the required integers.

If there are multiple solutions, print any of them. You can print the numbers in any order.

Examples

input	Copy
4 100 10 1 0	
output	Copy
4 0 1 10 100	
input	Copy
3 2 70 3	
output	Copy
2 2 70	

→ Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

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Sheet #10 (General Hard)

Finished