Art Academy

Time limit: 2.0s   **Memory limit:** 64M

Welcome to **hewmatt10**'s ~~Basement~~ Art Academy!

Today, we will be learning how to draw mountains. You will draw N mountains, the ith of which has a height of h_i.

Mountains consist only of ⌐^⌐ , which are separated by spaces.

An example of a mountain would be:

```
    ^
  ^   ^
^   ^   ^
```

When drawing **multiple** mountains, you should separate them by a space.

```
    ^
  ^   ^       ^
^   ^   ^   ^   ^
```

In the example shown above, there is a mountain of $h_i = 3$ next to a mountain of $h_i = 2$.

Impress **hewmatt10** with your artistic abilities!

Input Specification

The first line of input will contain N, the number of mountains to draw. The next line will contain N space separated integers, $h_1, \ldots, h_N$.

Constraints

For all subtasks:

$1 \le N \le 20$

$1 \le h_i \le 200$

Subtask 1 [10%]

$N = 1$

Subtask 2 [90%]

No additional constraints.

Output Specification

Output **exactly** $\max(h_1, \ldots, h_N)$ lines, following correct formatting. **Trailing white spaces will be accepted.**

Sample Input

```
2
3  2
```

Sample Output

```
  ^
 ^ ^    ^
^ ^ ^ ^ ^
```