# Problem 3 – Earthquake

You are given **N** – an integer. On the next **N** lines you will receive **sequences** of **integers**, which will represent seismic **activities**, and the seismic **waves** in them. The waves will hit the surface one by one, but they will also **neutralize** the **weaker** waves after them. The **integers** represent the waves’ **power**.

You must take the **first integer** from the **first activity** – that’s the **seismicity**. Then, you must start **comparing** it with the **other integers** from **the current activity**, by **order of input**. If the seismicity is **greater** **than** or **equal** to an **integer** (the wave), thatinteger must be **removed** from **the** **activity**. If the seismicity has **smaller** value than the integer, the **seismicity** should be **removed**.

When the current **seismicity** is **removed**, the **process** should **repeat** with the next **sequence** of **integers** in order. The **previous sequence** should go at the **back** of all **sequences** and should await its **next turn**.

When **all integers** from a **given activity** are **removed**, you should **remove** the **activity** itself.

Your task is to find how many seismic waves will hit the surface and their power are they. That means you must calculate how many **seismicities** you will find, before **all** **integers** and **activities** are **removed**.

### Input

* On the first line of input you will receive **N**.
* On the next **N** lines you will receive **sequences** of **integers**, separated by a **space**.

### Output

* As output you must print a single integer on the first line, indicating the amount of **seismicities** you’ve found.
* On the second line of output you must print the seismicities you found, by **order** of **entrance**.

### Constrains

* Each of the integers in the input will be in the range [0, 1000].
* The sequences of integers will consist of [0, 300] integers.
* **All data** must be processed **by order of input**.
* Allowed time/memory: 100ms/16MB.

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 2  4 1 5 6  2 3 | 5  4 2 5 3 6 |  |
| 3  3 2 3 5  2 2 6  1 4 | 6  3 2 1 5 6 4 |  |