I2F03. Level order traversal of a binary tree   P99488_en
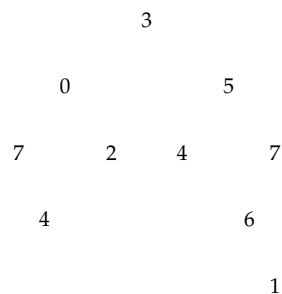
Your task is to write a program that reads a non empty binary tree of natural numbers, and prints its level order traversal (that is, from top to bottom and from left to right), with a line for each level.

For instance,

```
level 1: 3
level 2: 0 5
level 3: 7 2 4 7
level 4: 4 6
level 5: 1
```

is the level order traversal of the tree

```
                                3

                   0                    5

              7         2          4          7

                   4                      6

                                      1
```

Input

The input consists of the description of non empty a binary tree of natural numbers as it is explained at the exercise **REREC** of the subject collection.

Output

Your program must print as many lines as levels, with the level order traversal of the tree. Follow the format of the instances.

Sample input 1

```
10
3 0 7 -1 4 -1 -1 2 -1 -1 5
4 -1 -1 7 6 -1 1 -1 -1 -1
```

Sample output 1

```
level 1: 3
level 2: 0 5
level 3: 7 2 4 7
level 4: 4 6
level 5: 1
```

Sample input 2

```
1
7 -1 -1
```

Sample output 2

```
level 1: 7
```

Sample input 3

```
4
9 -1 8 7 -1 6 -1 -1 -1
```

Sample output 3

```
level 1: 9
level 2: 8
level 3: 7
level 4: 6
```

Problem information

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