Printing a tree   P19127_en

Write a program that reads a binary tree of words, and that prints it following the format of the instance.

Input

Input consists of the description of a tree as is explained at the exercise : "". You can suppose that the given words have less than ten letters.

Output

Your program must print the tree following the format of the instance. Notice that each level of the tree is printed using ten characters.

Sample input

```
10
va tenir sis -1 polls -1 -1 xics -1 -1 pics
pellarics -1 -1 camatorts i -1 becarics -1 -1 -1
```

Sample output

```
                camatorts
                                        becarics
                                  i
          pics
                pellarics
     va
                      xics
          tenir
                            polls
                sis
```

Problem information

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