27 Digital Castellers

20 points

Introduction

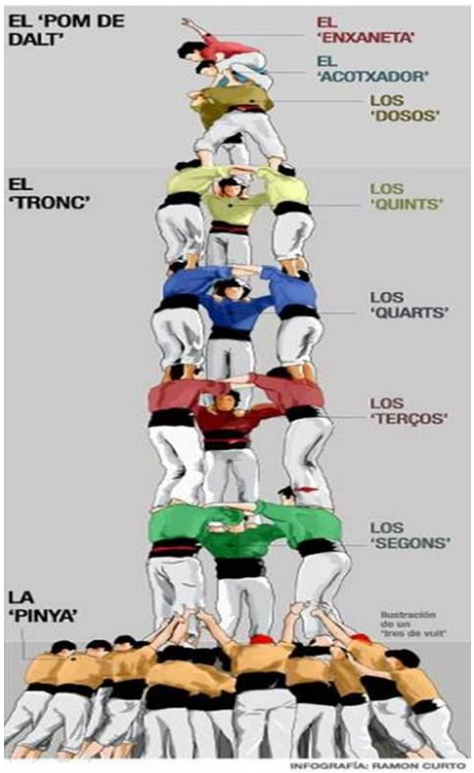
A *Castell* is a human tower built traditionally in festivals at many locations within Catalonia. People that forms part of a *Castell* are known as *castellers*.

So, in our a computer programming contest you are requested to build digital castellers.

There are three definite parts of a digital castle; the *pinya* , the *tronc* , and the *pom* de *dalt* or the crown of the castle.

The *pinya* is the base of the *Castell*, and it's composed by:

- The *soca*, in the first floor
- The *folre*, in the second floor. It's optional.
- The *manilles*, in the third floor. It's optional, and only allowed in top of a *folre*.



The *tronc* is the main visible structure of the *Castell*, and it's between the *pinya* and the *pom de dalt*. The number of *castellers* in each floor of the *tronc* is defined in the name of the *Castell*.

The *pom de dalt* is the top of the *Castell* and it's composed by:

- The *dosos*, two *castellers* just on top of the *tronc*.
- The *acotxador*, one *casteller* on top of the *dossos*.
- The *enxaneta*, who crowns the *Castell*, on top of the *acotxador*.

In addition, a *Castell* may have an *agulla*. This is a central tower in the centre of the *Castell*,with the same height as the *tronc*.

The most common nomenclature to describe a *Castell* is, in Catalan

N de M [amb X] [i Y] [i Z]

Where N, M, X, Y and Z are the variables that define the structure of the *Castell*.

- N is the number of *castellers* in each floor of the *tronc*, with 1 <=N <= 10
- M is the height of the *Castell* in *castellers*, with 3 <= M <= 10
- X, Y and Z are optional, and they may be, in that order
  - *folre*
  - *manilles*
  - *l'agulla*

N and M are expressed in catalan with the following nomenclature

- Only for N
  - 1 = *pilar*
  - 2 = *dos* or *torre*

- For N and M
  - 3 = tres
  - 4 = quatre
  - 5 = cinc
  - 6 = sis
  - 7 = set
  - 8 = vuit
  - 9 = nou
  - 10 = deu

The Castells constructed by a Pilar (N = 1) does not have the *dosos* nor the *acotxador*.

The problem consists on, given a Castell description, represent it graphically

- Each *casteller* is represetend with a # character
- The *Castell* has to be as symmetrical as possible
- If the total width of the *tronc* is odd, there will be a space between the *dosos*.
- If the total width of the *tronc* is even, the *acotxador* and *l'enxaneta* will be in the left.

Input

A string with the definition of the castell to draw.

Output

The digital castell

Example 1

Input

```
quatre de set amb folre
```

Output

```
   #
   #
   ##
  ####
  ####
 ######
########
```

Example 2

Input
```
tres de sis
```

Output

```
  #
  #
 # #
 ###
 ###
#####
```

Example 3

Input
```
cinc de nou amb folre i manilles
```

Output

```
     #
     #
    # #
   #####
   #####
   #####
  #######
 #########
###########
```