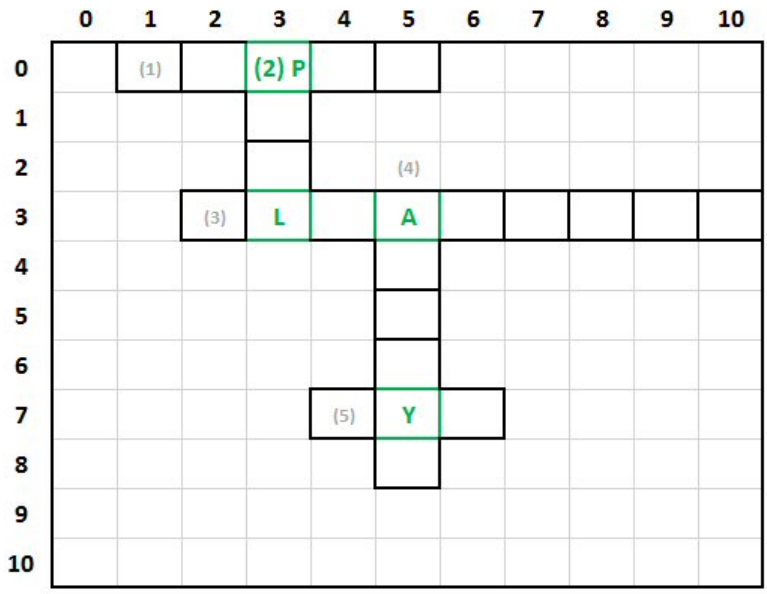
Crossword

problem 24

10 points

The regional crossword puzzler competition is coming up, and your team is in training. In order to practice for the competition, your team is making their own puzzles. The puzzle grid is always a 11x11 grid, with (0,0) in the upper left corner. As the only programmer on your team, it falls to you to sanity check the puzzles to make sure everything fits.



Input

You will receive a 3-part dataset separated by 6 hyphens on a line alone "------". The first section is the list of spaces for the puzzle in the format of: N V #1 #2 #3 where:

```
N = the number of the word (from the
puzzle)
V = orientation (H: horizontal, V:
vertical)
#1 = Length of the space
#2 = X coordinate of start of space
#3 = Y coordinate of start of space
```

The second section lists the coordinates of given letters in the puzzle in the format of: #1 #2 C where:

```
#1 = X coordinate of the letter
#2 = Y coordinate of the letter
C = the letter
```

The third section lists all possible words for the puzzle. Here is an example of a complete dataset:

Example

```
1 H 5 1 0
2 V 4 3 0
3 H 9 2 3
4 V 6 5 3
5 H 3 4 7
-------
3 0 P
3 3 L
5 3 A
5 7 Y
-------
PICKLE
APPLE
WALRUS
PEEL
ALMAMATER
COLLEGE
ALWAYS
AYE
```

Output

Your program should output the number of the puzzle space, and the word that fits in the space both by length and which matches the given known letters from section 2 of the dataset. List the output in ascending (smallest to largest from the top) order. List all space numbers with a leading zero if they are not 2 digits long

```
01 is APPLE
02 is PEEL
03 is ALMAMATER
04 is ALWAYS
05 is AYE
```