

**Problem 2**

Task Description

You will be given an n x m ASCII representation of a solved crossword puzzle.  Each single character represents a square of the crossword puzzle.  Blank spaces will be denoted by an asterisk (\*).  Your job is to construct the list of words that make up the crossword answers.  Words must consist of at least two (2) letters and can run across from left to right or they may run down from top to bottom.   Each word should be printed along with its corresponding number.  A word’s number refers to the number of the square that contains the first letter of the word.  Squares should be numbered from left-to-right first, then top-to-bottom starting with number 1.  Only squares that start a word get a number.

Program Input

The first line of input file (a.in) will be two integers n and m separated by a single space denoting the number of rows and columns, respectively, in the crossword puzzle.  The next n lines contain m characters each and represent the solved crossword puzzle:

15 15  
\*t\*s\*o\*e\*f\*g\*m\*  
serendip\*atonal  
\*n\*r\*y\*s\*g\*i\*g\*  
derbyshire\*nero  
\*t\*\*\*s\*l\*n\*g\*i\*  
ashore\*obdurate  
\*\*\*d\*u\*n\*\*\*o\*t\*  
yiddish\*accused  
\*a\*f\*\*\*s\*o\*n\*\*\*  
amnesiac\*nodose  
\*b\*l\*b\*h\*t\*\*\*t\*  
curl\*icebreaker  
\*s\*o\*d\*m\*a\*s\*a\*  
peewee\*escapade  
\*s\*s\*m\*s\*t\*s\*y\*

Program Output

Your program should output the word “Across” on it’s own line followed by a line for each “across” number and word to a.out.  You should repeat the same pattern for the “down” words:

Across  
8.      serendip  
9.      atonal  
10.     derbyshire  
11.     nero  
12.     ashore  
14.     obdurate  
15.     yiddish  
17.     accused  
20.     amnesiac  
22.     nodose  
24.     curl  
25.     icebreaker  
27.     peewee  
28.     escapade  
Down  
1.      tenets  
2.      serb  
3.      odysseus  
4.      epsilon  
5.      fagend  
6.      goinground  
7.      magritte  
13.     oddfellows  
16.     iambuses  
18.     contract  
19.     schemes  
21.     ibidem  
23.     steady  
26.     asps