التصفيات الإقليمية الخامسة للدول العربية وشمال أفريقيا

الجامعة الأمريكية بالقاهرة، ٢٠٠٢

[B] Crossing the Words

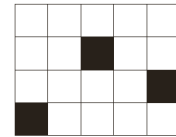|	
Program:	crossword.(c|cpp|java)
Input:	crossword.in
Output:	crossword.out

Description

Yasmeen loves solving crossword puzzles. A crossword puzzle is a puzzle in which words are filled into a pattern of numbered squares (the grid) in answer to correspondingly numbered clues and in such a way that the words read across (left to right,) and down.

Yasmeen normally solves a puzzle by writing the answers on a separate sheet of paper rather than on the puzzle itself. Once the puzzle is solved, she then neatly copies the solution on the grid.

But today Yasmeen has a problem, she lost the page of the clues (which describes where the words go on the puzzle.) All what she has is the puzzle grid and the list of words that constitutes the answers to the clues. She needs your help in reconstructing the solution to the puzzle.

he stood no
ones else so
she tell do lost

Input Format

The first line of the input file is an integer D representing the number of test cases in the input file.

The first line of each test case specifies three integers: R, C, and W. R is the number of rows in the grid, C is the number of columns in the grid, and W is the number of words. Note that $0 < R < 50$ and $0 < C < 50$ and $0 < W < 1000$.

Starting at the second line of each test case are R lines describing the grid. The grid is described using two characters: A '.' indicates a square that should be eventually filled with a letter, while a '#' means the corresponding square "is blocked" (it doesn't receive any letter.)

The list of words appears on the last line of each test case. Words are separated by exactly one space character. All words are small letters and there are no duplicates.

The sample input describes two test cases: The first is a 4x5 grid with 10 words. The second test case starts at line #8 and describes a 7x7 grid with 15 words.

Output Format

For each test case, print the grid with the solution filled in. There should be a blank line after each grid.

Sample Input

```
──────── crossword.in ────────
2
4 5 10
.....
..#..
....#
#....
he stood no ones else so she tell do lost
7 7 15
..#....
.#....#
.#.###.
.......
.#.#.#.
##.....
.......
egypt arab africa pyramid cairo dr ad nb ri ia ed maid addon ding aladdin
```

Sample Output

```
──────── crossword.out ────────
stood
he#no
else#
#lost

ed#ding
g#arab#
y#f###a
pyramid
t#i#a#d
##cairo
aladdin
```

Sample CrossWord #2