1 Poultry Problems

Problem Description

Mrs. Fox is very suspicious of the chicken in the refridgerator. Where did it come from? Surely Mr. Fox didn't steal it from the local farms, he promised to never steal from the farms again. But these price tags sure do look like his handwriting...

Input Description

The first line of input contains a single integer, n, representing the number of poultry carcasses.

The next n lines of input will contain a string, possibly with spaces, followed by a price, with two decimal points.

Output Description

For each type of poultry, list the name of the poultry, followed by the total price of that type of poultry, with exactly two decimal points and a dollar sign.

List the types in alphabetical order.

Sample Input

```
6
Cornish Hen $5.00
Squab $3.00
Broad Breasted White Turkey $7.11
Cornish Hen $8.00
Squab $2.50
Squab $3.00
```

Sample Output

```
Broad Breasted White Turkey $7.11
Cornish Hen $13.00
Squab $8.50
```

2 Beautiful Brushes

Problem Description

Edward is a bit strange, but nobody can resist his beatiful topiaries. It takes a lot of practice, but maybe you can re-create some of his more simple designs?

Input Description

The first line of the input contains a single integer n, representing the number of test cases.

The next n lines contain a series of integers. Each line begins with two integers integers k and w, representing the rows and width of the topiary, followed by k space separated integers, labeled s_i.

Every w and s_i will be odd.

Output Description

For each test case, output k rows of text. The ith row should contain s_i #'s, centered, surrounded by enough .'s to make each line exactly k characters long.

Place a newline between each test case.

Sample Input

```
2
3 5 1 3 5
4 3 3 1 1 3
```

Sample Output

```
..#..
.###.
#####

###
.#.
.#.
###
```

3 The Golden Dagger

Problem Description

Ofelia, in her quest to prove herself worthy to be Queen of the Underworld, must retrieve a golden dagger from deep within a magical maze. Ofelia must enter the maze, retrieve the dagger, and escape the way she came before the enchanted hourglass runs out of sand.

Input Description

The frist line will contain a single integer, n, representing the number of test cases.

Each test case will begin with three integers, r, c, and t, representing the number of rows and columns of the maze, and the number of steps Ofelia has time to take, respectively.

The next r lines of contain c characters each:

- `.` represents an empty space

- `#` represents a wall

- `S` represents where Ofelia begins the maze

- `G` represents the golden dagger

Output Description

For each test case, output either "`Ofelia completes the task!`" or "`Ofelia can not complete the task.`".

Sample Input

```
2
4 4 20
S.#.
.#D.
.##.
....
6 8 15
...D....
.######.
.#.S#.#.
.#.#..#.
.....#..
.#.#....
```

Sample Output

```
Ofelia completes the task!
Ofelia can not complete the task.
```

Sample Explanation

In the first example, Ofelia takes 9 steps from the start to the dagger and 9 steps from the dagger to the start, a total of 18 steps. She can escape with two steps to spare.

In the second example, Ofelia can get to the dagger in no fewer than 12 steps, but can not make it back to the start in 3 steps.

4 Word Search Sleuth

Problem Description

The Batman is at the scene of a gruesome crime and has come across a not-so-subtly placed newspaper, turned to the daily word search. Could a clue to Riddler's next victim be hidden in someone in this puzzle? In this word search, words may appear forwards, backwards, upwards, downwards, or along either diagonal.

Input Description

The first line contains two space-separated integers, r and c, representing the rows and columns of the crossword. The next r lines contain c characters each.

Next, there will be an integer n, representing the number of words to find. The next n lines contain a single string without spaces.

Output Description

For each word, output `x y`, representing the column and row of the first letter of the word. The upper-left most letter is position `1 1`.

Sample Input

```
10 10
goldhgfihu
wplkfphhrc
mcykpbpiew
zwttshulej
yfcyhikdwp
dxtteoogqw
wfovicnahp
njbxvlwcip
ezquotdbij
htnkmaulbo
4
gold
code
python
movie
```

Sample Output

```
1 1
6 7
2 2
5 10
```