6 Word Worm
Input File: WordWormIn.txt

Walter, like other members of his Word Worm species, crawls around rectangular grids of text looking for hidden words. One such grid is shown below. He can crawl either straight to the right, left, up, or down, or along any of the four diagonal directions: up and to the right, down and to the right, up and to the left, or down and to the left. When he finds a word along one of these eight directions, he records the word in his journal, and then crawls along the letters of the word from its first letter to its last. As he does this, he also enters the row and column numbers of his path along the word into his journal.

```
Column number → 0 1 2 3 4 5 6 7 8 9
                0 R T W W I L N P Z C
                1 I E K X L M J E I O
                2 P Q T S N A G O L O
                3 V X P U F I W C V L
                4 T O P L P Q E R D S
                5 H I I I E M X S J H
                6 N O M W E Q O S U S
                7 M C P E U I C C P I
   Row number ↓
```

For example, as he crawled around the above grid, one of the entries he would make in his journal is PIE (4, 2) (5, 3) (6, 4). Your task is to produce the contents of Walters's journal, for a given rectangular grid of text.

Inputs:
The first line of input will be the number rectangular grids of text to consider, followed by one group of inputs for each grid. The first line in a group will contain the words to find, each separated by a space. The second line of will contain one integer that is the number of rows in the rectangular text grid, **r**. This will be followed by **r** lines that contain the letters in each row of the grid, with each letter on a line separated by a space.

Outputs:
There will be one line of output per word searched for. It will contain the word being searched for followed by the text: **Not Found** if the word is not found. Otherwise the word being searched for will be followed by the row and column location of the first letter of the word, followed by the row and column location of the second letter of the word, etc. The row and column numbers will be output as: (row, column) with each row and column number output separated by a space.

(Sample inputs and outputs are on the next page)

Sample Input

```
2
COMPUTER LOGAN EGG PIE HI COOL TO
8
R T W W I L N P Z C
I E K X L M J E I O
P Q T S N A G O L O
T X P U F I W C V L
T O P L P Q E R D S
H I I I E M X S J H
N O M W E Q O S U S
M C P E U I C C P I
HELP HEAD WALK
4
H O L W
H E A M
T L L C
K H A P
```

Sample Output

```
COMPUTER (7, 7) (6, 6) (5, 5) (4, 4) (3, 3) (2, 2) (1, 1) (0, 0)
LOGAN (2, 8) (2, 7) (2, 6) (2, 5) (2, 4)
EGG NOT FOUND
PIE (4, 2) (5, 3) (6, 4)
HI (5, 0) (5, 1)
COOL (0, 9) (1, 9) (2, 9) (3, 9)
TO (4, 0) (4, 1)
HELP (0, 0) (1, 1) (2, 2) (3, 3)
HEAD NOT FOUND
WALK (0, 3) (1, 2) (2, 1) (3, 0)
```