According to our hiring policy we have a practical test for all new candidates. It is important to us to see that the candidate has the fundamental coding skills in order for them to understand and contribute to our object oriented design. So take your time complete the assignment and to show us the best quality code you can deliver.
Let me know when I can expect your solution.

Of course we would prefer if you use objective Perl (this is what we use for our software) to complete the assignment but any of the following languages is ok too: java, C#,
C++. The important thing here is that you demonstrate strong OOP
skills, abstraction, inheritance and all that. Additionally, please add documentation (comments and a stand alone document) describing your design. Again, proper OOP design is most important, we would forgive trivial coding mistakes. Last but not least we'd like to see how you tested your solution (unit tests & documentation).

The problem below requires some kind of input. You are free to implement any mechanism for feeding input into your solution (for example, using hard coded data within a unit test). You should provide sufficient evidence and documentation that your solution is complete by, as a minimum, indicating that it works correctly against the supplied test data.

MARS ROVERS

A squad of robotic rovers are to be landed by NASA on a plateau on Mars. This plateau, which is curiously rectangular, must be navigated by the rovers so that their on-board cameras can get a complete view of the surrounding terrain to send back to Earth.

A rover's position and location is represented by a combination of x and y co-ordinates and a letter representing one of the four cardinal compass points. The plateau is divided up into a grid to simplify navigation. An example position might be 0, 0, N, which means the rover is in the bottom left corner and facing North.

In order to control a rover, NASA sends a simple string of letters.
The possible letters are 'L', 'R' and 'M'. 'L' and 'R' makes the rover spin 90 degrees left or right respectively, without moving from its current spot. 'M' means move forward one grid point, and maintain the same heading.

Assume that the square directly North from (x, y) is (x, y+1).

INPUT:
The first line of input is the upper-right coordinates of the plateau, the lower-left coordinates are assumed to be 0,0.

The rest of the input is information pertaining to the rovers that have been deployed. Each rover has two lines of input. The first line gives the rover's position, and the second line is a series of instructions telling the rover how to explore the plateau.

The position is made up of two integers and a letter separated by spaces, corresponding to the x and y co-ordinates and the rover's orientation.

Each rover will be finished sequentially, which means that the second rover won't start to move until the first one has finished moving.

OUTPUT

The output for each rover should be its final co-ordinates and heading.

INPUT AND OUTPUT

Test Input:

```
5 5
1 2 N
LMLMLMLMM
3 3 E
MMRMMRMRRM
```

Expected Output:

```
1 3 N
5 1 E
```