Thanks again for your interest in Medibank. Enclosed is a coding problem for you to solve. We are assessing a number of things including the design aspect of your solution and your object oriented programming skills.  
  
For the solution, we request that you use Java 7 / 8. You may not use any external libraries to solve this problem, but you may use Groovy and external libraries or tools for building or testing purposes. Specifically, you may use unit testing libraries or build tools available for your chosen language (e.g., Spoke, JUnit, Gradle, Maven etc.)

There must be a way to supply the application with the input data via text file. The application must run. You should provide sufficient evidence that your solution is complete by, as a minimum, indicating that it works correctly against the supplied test data. Please note that you will be assessed on your judgment as well as your execution.  
  
Please also include a brief explanation of your design and assumptions along with your code.

As a general rule, we allow three days from the date that you receive this problem to submit your code, but you may request more time from your recruiter if needed. If you have any questions about the code as it relates to your interview process, please contact your recruiter.  
  
Medibank would like the opportunity to offer you a challenging career with our dynamic team. We wish you luck and look forward to receiving your response.

**PROBLEM: FITBITS**  
A group of Medibank members are using Fitbits to train on a soccer pitch with a fitness coach. At the start of their session the trainees must navigate the pitch to calibrate their Fitbits.  
  
A trainee’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 pitch is divided up into a grid to simplify orientation. An example position might be 0, 0, N, which means the trainee is in the bottom left corner and facing North.  
  
In order to calibrate the Fitbits the fitness coach gets the trainees to move to various locations on the pitch using a simple string of letters. The possible letters are 'L', 'R' and 'M'. 'L' and 'R' tells the trainee to turn 90 degrees left or right respectively, without moving from their current spot. 'M' means move forward one grid position, and maintain the same heading.  
  
Assume that directly North from (x, y) is (x, y+1).  
  
INPUT:  
The first line of input is the upper-right coordinates of the pitch, the lower-left coordinates are assumed to be 0,0.  
  
The rest of the input is information pertaining to the trainees that are on the pitch. Each trainee has two lines of input from the coach. The first line gives the trainee’s position, and the second line is a series of instructions telling the trainee how to move on the pitch.  
  
The position is made up of two integers and a letter separated by spaces, corresponding to the x and y co-ordinates and the trainee’s orientation.  
  
Each trainee will be finished sequentially, which means that the second trainee won't start to move until the first one has finished the calibration.  
  
  
OUTPUT  
The output for each trainee should be their 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