

Rovers have been sent to Mars to survey the terrain and you have been charged with creating their navigation system. The specifications of the challenge are listed below.

- Mars's surface can be thought of as a zone that is itself a two-dimensional grid of square areas.
- The zones have been very carefully surveyed ahead of time and are deemed safe for exploration within the landing terrain bounds, as represented by a single cartesian coordinate - for example: (5, 5).
- The rover understands the cardinal points and can face either East (E), West (W), North (N) or South (S) at any given time.
- The rover understands three commands:
 - M - Move one space forward in the direction it is facing
 - R - rotate 90 degrees to the right
 - L - rotate 90 degrees to the left
- Due to the transmission delay in communicating with the rover on Mars, you are only able to send the rover a single list of commands.
- These commands will be executed by the rover and its resulting location sent back to HQ. This is an example of the list of commands sent to the rover:

```
8 10
12 E
MMLMRMMRRMML
```

- This is how the rover will interpret the above commands:
 - The first line describes how big the current zone is. This zone's boundary is at the Cartesian coordinate of 8,10 and the zone comprises 80 blocks.
 - The second line describes the rover's starting location and orientation.
 - This rover would start at position 1 on the horizontal axis, position 2 on the vertical axis and would be facing East (E). The third line is the list of commands (movements and rotations) to be executed by the rover.
 - As a result of following these commands, a rover starting at 1 2 E in this zone would land up at 3 3 S.

You are to design a program which takes a text in the format as described above and then displays its resulting rover location to the console. Be sure to include:

- A README with clear instructions on how to use your program. Also include a brief description of the design decisions made in your program as well as how you have ensured your code's correctness.
- The input to your program (as described above) as well as any additional inputs.