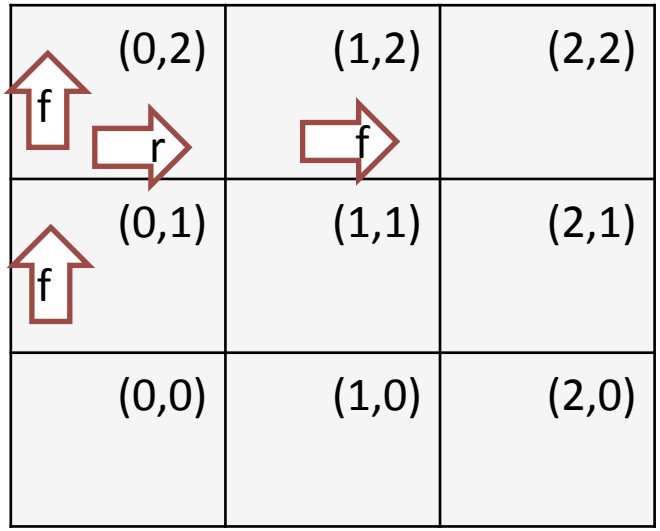
MarsRover API

The API manages a rover that moves on a planet (/squared grid) of arbitrary size (x,y). The rover starts the movement at position (0,0). The direction of the movement can be N (north), S (south), E (east) and W (west). The rover starts facing North.

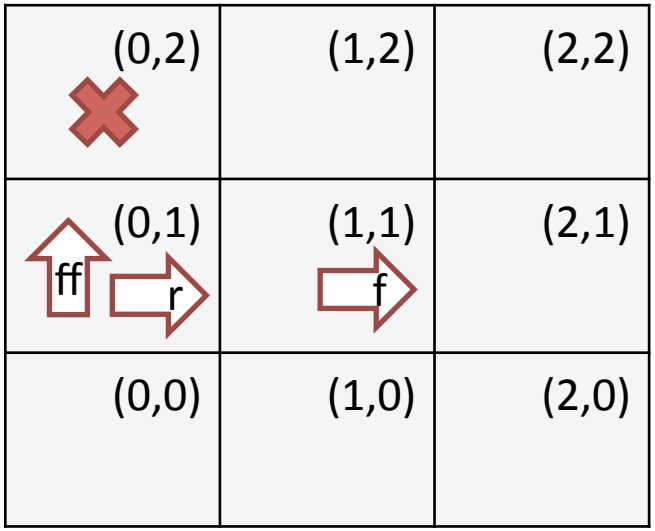
The rover receives one string of commands: l (left), r (right), f (forward) and b (backward). l and r change the rover's direction counter- and clockwise, respectively, but not the position. f and b move the rover 1 position on the grid towards the direction it is facing or away from it, respectively. The facing does not change. When the rover moves over the edges of the planet, it spawns on the opposite side.

The planet (/grid) may contain obstacles. Obstacles are defined as a list of coordinates `"(obs1X,obs1Y)(obs2X,obs2Y)…"` . When the rover finds an obstacle during a tour, it skips the current command (i.e.: does not move to the cell where the obstacle is located) and continue executing the remaining commands.

Upon processing the string of commands, the rover returns its position and facing in the format "(posX,posY,facing)". If obstacles are found, the output will be `"(posX,posY,facing)(obs1X,obs1Y)(obs2X,obs2Y)…"` The same obstacle shall be reported only once. Obstacles are reported in the order they are found.



Example of a rover's tour on a 3x3 planet in response to the command "ffrf". The starting position is (0,0) facing N. After the 1st f (forward) command, the rover moves to position (0,1) facing north. Subsequent commands keep the rover moving. The expected output is (1,2,E). With two more f's, the rover would spawn over the right edge to the final position (0,2,E).



Example of a rover's tour on a 3x3 planet in response to the command "ffrf", with one obstacle in position (0,2). After the 1st f (forward) command, the rover moves to position (0,1) facing north. The 2nd f command does not change the rover's position, because there is an obstacle in (0,2). This second f command is thus skipped. The expected output is (1,1,E)(0,2).