

Start position: (1, 0)

Goal position: (3, 2)

Obstacle positions: (0, 0), (1, 1), (3, 0)

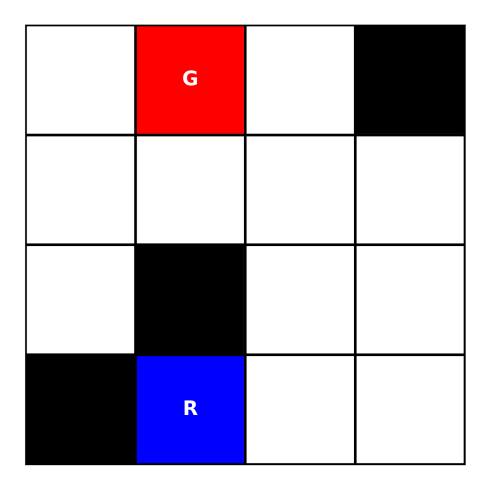
# Solution:

(MOVE-DOWN-FROM-TO ROBOT1 (1,0) (2,1))

(MOVE-RIGHT-FROM-TO ROBOT1 (2,0) (2,1))

(MOVE-RIGHT-FROM-TO ROBOT1 (2,1) (2,2))

(MOVE-DOWN-FROM-TO ROBOT1 (2,2) (3,2))



Start position: (3, 1)

Goal position: (0, 1)

Obstacle positions: (3, 0), (2, 1), (0, 3)

### Solution:

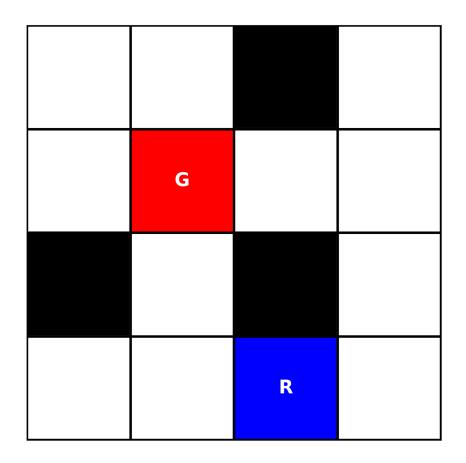
(MOVE-RIGHT-FROM-TO ROBOT1 (3,1) (3,2))

(MOVE-UP-FROM-TO ROBOT1 (3,2) (2,2))

(MOVE-RIGHT-FROM-TO ROBOT1 (2,2) (1,2))

(MOVE-DOWN-FROM-TO ROBOT1 (1,2) (0,2))

(MOVE-LEFT-FROM-TO ROBOT1 (0,2) (0,1))



Start position: (3, 2)

Goal position: (1, 1)

Obstacle positions: (2, 2), (0, 2), (2, 0)

### Solution:

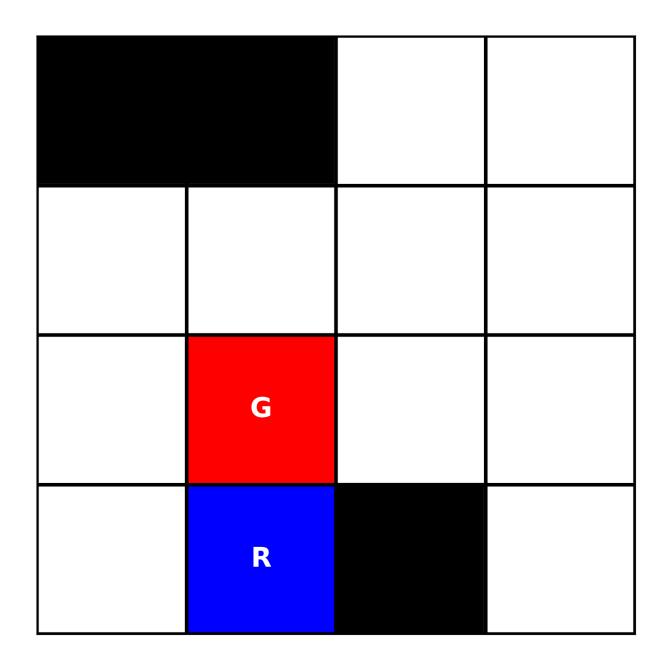
(MOVE-RIGHT-FROM-TO ROBOT1 (3,2) (3,3))

(MOVE-UP-FROM-TO ROBOT1 (3,3) (2,3))

(MOVE-UP-FROM-TO ROBOT1 (2,3) (1,3))

(MOVE-LEFT-FROM-TO ROBOT1 (1,3) (1,2))

(MOVE-LEFT-FROM-TO ROBOT1 (1,2) (1,1))



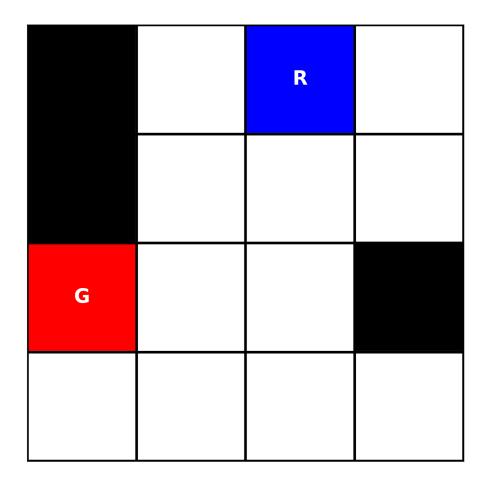
Start position: (3, 1)

Goal position: (2, 1)

Obstacle positions: (3, 2), (0, 1), (0,0)

Solution:

(MOVE-UP-FROM-TO ROBOT1 (3,1) (2,1))



Start position: (0, 2)

Goal position: (2, 0)

Obstacle positions: (0, 0), (1, 0), (2, 3)

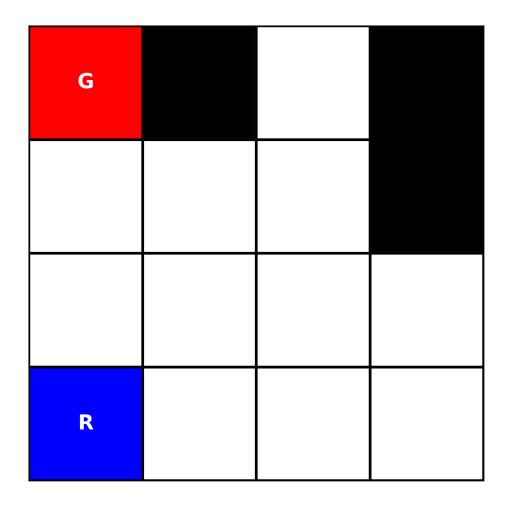
### Solution:

(MOVE-DOWN-FROM-TO ROBOT1 (0,2) (1,2))

(MOVE-UP-FROM-TO ROBOT1 (1,2) (2,2))

(MOVE-LEFT-FROM-TO ROBOT1 (2,2) (2,1))

(MOVE-LEFT-FROM-TO ROBOT1 (2,1) (2,0))



Start position: (3, 0)

Goal position: (0, 0)

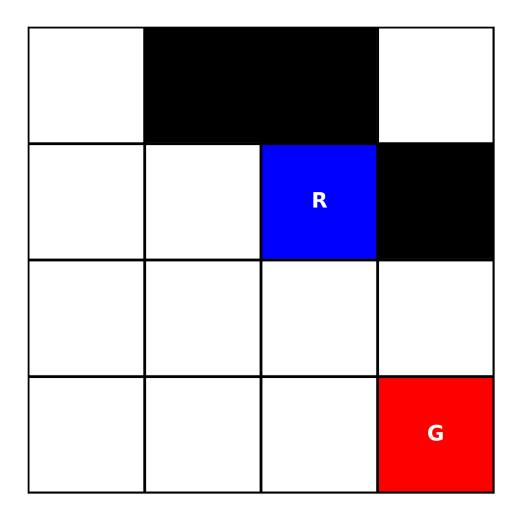
Obstacle positions: (0, 3), (1, 3), (0, 1)

## Solution:

(MOVE-UP-FROM-TO ROBOT1 (3,0) (2,0))

(MOVE-UP-FROM-TO ROBOT1 (2,0) (1,0))

(MOVE-UP-FROM-TO ROBOT1 (1,0) (0,0))



Start position: (1, 2)

Goal position: (3, 3)

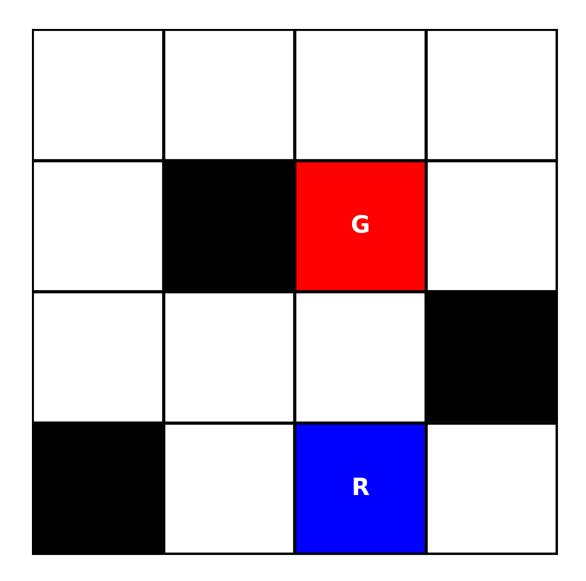
Obstacle positions: (0, 1), (0, 2), (1, 3)

Solution:

(MOVE-DOWN-FROM-TO ROBOT1 (1,2) (2,2))

(MOVE-DOWN-FROM-TO ROBOT1 (2,2) (3,2))

(MOVE-RIGHT-FROM-TO ROBOT1 (3,2) (3,3))



Start position: (3, 2)

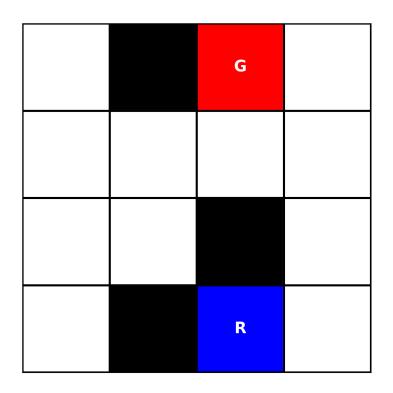
Goal position: (1, 2)

Obstacle positions: (1, 1), (2, 3), (3, 0)

Solution:

(MOVE-UP-FROM-TO ROBOT1 (3,2) (2,2))

(MOVE-UP-FROM-TO ROBOT1 (2,2) (1,2))



Start position: (3, 2)

Goal position: (0, 2)

Obstacle positions: (0, 1), (2, 2), (3, 1)

## Solution:

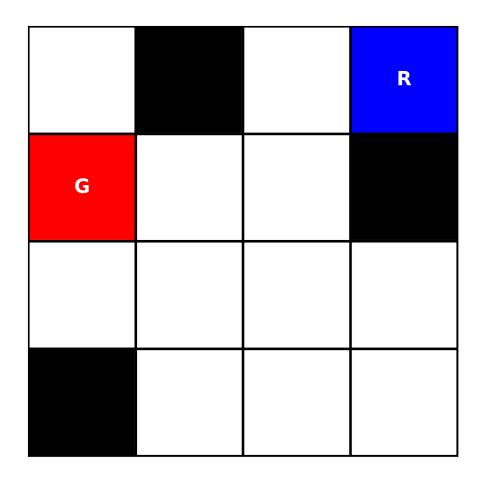
(MOVE-RIGHT-FROM-TO ROBOT1 (3,2) (3,3))

(MOVE-UP-FROM-TO ROBOT1 (3,3) (2,3))

(MOVE-UP-FROM-TO ROBOT1 (2,3) (1,3))

(MOVE-UP-FROM-TO ROBOT1 (1,3) (0,3))

(MOVE-LEFT-FROM-TO ROBOT1 (0,3) (0,2))



Start position: (0, 3)

Goal position: (1, 0)

Obstacle positions: (0, 1), (1, 3), (3, 0)

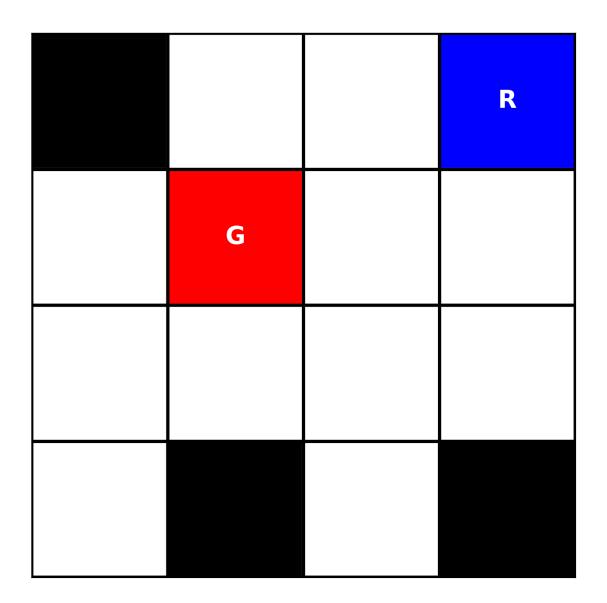
### Solution:

(MOVE-LEFT-FROM-TO ROBOT1 (0,3) (0,2))

(MOVE-DOWN-FROM-TO ROBOT1 (0,2) (1,2))

(MOVE-LEFT-FROM-TO ROBOT1 (1,2) (1,1))

(MOVE-LEFT-FROM-TO ROBOT1 (1,1) (1,0))



Start position: (0, 3)

Goal position: (1, 1)

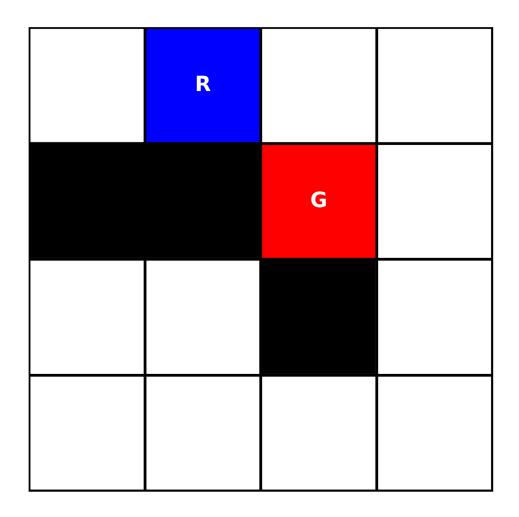
Obstacle positions: (0, 0), (3, 1), (3, 3)

Solution:

(MOVE-DOWN-FROM-TO ROBOT1 (0,3) (1,3))

(MOVE-LEFT-FROM-TO ROBOT1 (1,3) (1,2))

(MOVE-LEFT-FROM-TO ROBOT1 (1,2) (1,1))



Start position: (3, 2)

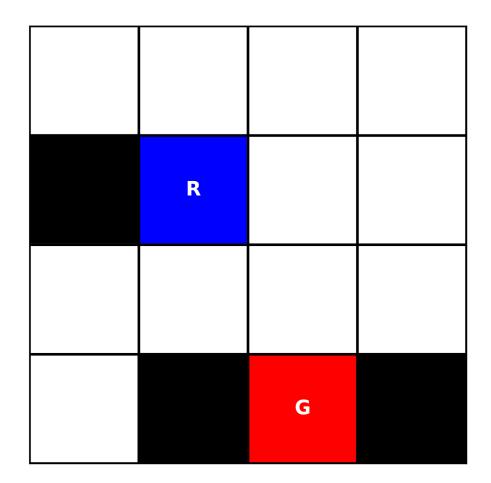
Goal position: (3, 1)

Obstacle positions: (2, 2), (1, 1), (0, 1), (0, 2)

Solution:

 $(\mathsf{MOVE}\text{-}\mathsf{RIGHT}\text{-}\mathsf{FROM}\text{-}\mathsf{TO}\;\mathsf{ROBOT1}\;(0,1)\;(0,2))$ 

(MOVE-DOWN-FROM-TO ROBOT1 (0,2) (1,2))



Start position: (1, 1)

Goal position: (3, 2)

Obstacle positions: (1, 0), (3, 1), (3, 3)

# Solution:

(MOVE-DOWN-FROM-TO ROBOT1 (1,1) (2,1))

(MOVE-RIGHT-FROM-TO ROBOT1 (2,1) (2,2))

(MOVE-DOWN-FROM-TO ROBOT1 (2,2) (3,2))