Assignment 7

SuperBot

In this assignment you will create a class called SuperBot that extends the class Robot.

Part 1
SuperBots are very cautious; they like to avoid doing anything that might cause an error. Override the following UrRobot functions:

\[\text{move()} \quad \text{// make sure there isn't a wall in the way first!}\]
\[\text{putBeeper()} \quad \text{// make sure the robot has a beeper to put down!}\]
\[\text{pickBeeper()} \quad \text{// make sure there's a beeper on that corner!}\]

Add other functions to your SuperBot that you've found useful in the past, such as the ability to turn right.

Part 2
SuperBots should be able to do a lot of things. Add the following functionality to your Superbot:

\[\text{moveBack()} \quad \text{// moves backward one block}\]
\[\text{putAllBeepers()} \quad \text{// puts down all the beepers in the robot's bag}\]
\[\text{pickAllBeepers()} \quad \text{// picks up all the beepers on the corner that robot is standing on}\]
\[\text{moveToWall()} \quad \text{// moves forward until there is a wall in the way}\]
Intro to Computer Science :: Karel J Robot

faceNorth() // turns until the robot is facing North
function type: __________
assumptions: ________________________________

faceSouth() // turns until the robot is facing South
function type: __________
assumptions: ________________________________

faceEast() // turns until the robot is facing East
function type: __________
assumptions: ________________________________

faceWest() // turns until the robot is facing West
function type: __________
assumptions: ________________________________

wallOnRight() // determines if there is a wall on the robot's right side
function type: __________
assumptions: ________________________________

wallOnLeft() // determines if there is a wall on the robot's left side
function type: __________
assumptions: ________________________________

rightIsClear() // true if there is no wall on the robot's right side
function type: __________
assumptions: ________________________________

leftIsClear() // true if there is no wall on the robot's left side
function type: __________
assumptions: ________________________________