Problem 5: RandomWalkRobot Class

iRobot is testing out a new robot design. The proposed new robots differ in that they change direction randomly **after every time step**, rather than just when they run into walls. You have been asked to design a simulation to determine what effect, if any, this change has on room cleaning times.

Write a new class RandomWalkRobot that inherits from Robot (like StandardRobot) but implements the new movement strategy. RandomWalkRobot should have the same interface as StandardRobot.

Test out your new class. Perform a single trial with the StandardRobot implementation and watch the visualization to make sure it is doing the right thing. Once you are satisfied, you can call runSimulation again, passing RandomWalkRobot instead of StandardRobot.

Enter your code for classes Robot and RandomWalkRobot below.