Problem-Solving with Karel
Announcements

• Programming Assignment #1 Out:
  • Karel the Robot: Due Friday, January 18 at 3:15 PM
  • Email: Due Sunday, January 20 at 11:59PM
• Sign up for section!
  
  http://cs198.stanford.edu/section

Signups close this Sunday at 5PM.
Friday Four Square

- Good snacks!
- Good company!
- Good game!
- Good fun!
- Today at 4:15 in front of Gates.

Don’t be this guy!
Revisiting HurdleJumpingKarel
RowSweepingKarel
Before
After
Let's Code it Up!
Karel has to take six steps...
Karel has to take six steps...

...but has to sweep seven corners.
A More Elaborate Problem
RoombaKarel
The Problem

• Setup:
  • Karel begins at (1, 1) facing East.
  • Karel's world has no walls in it.
  • Each corner has zero or one beepers.

• Goal:
  • Karel's world is free of beepers.
  • Karel's location does not matter.
Algorithms

- An **algorithm** is a process for solving some problem.
- Named for 9th-century Persian mathematician محمد بن موسى الخوارزمي, (Muhammad ibn Musa al-Khwarizmi).
- There are many algorithms for solving each problem; each offers tradeoffs.
Watching Karel at Work