



GridWorld

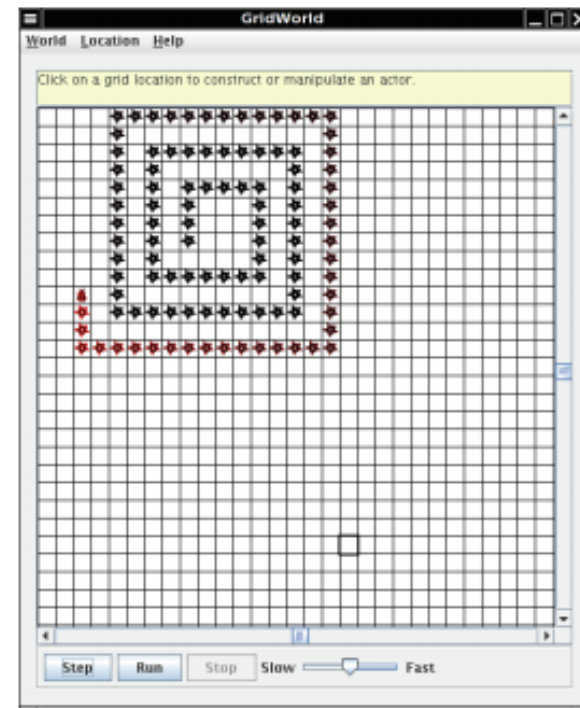
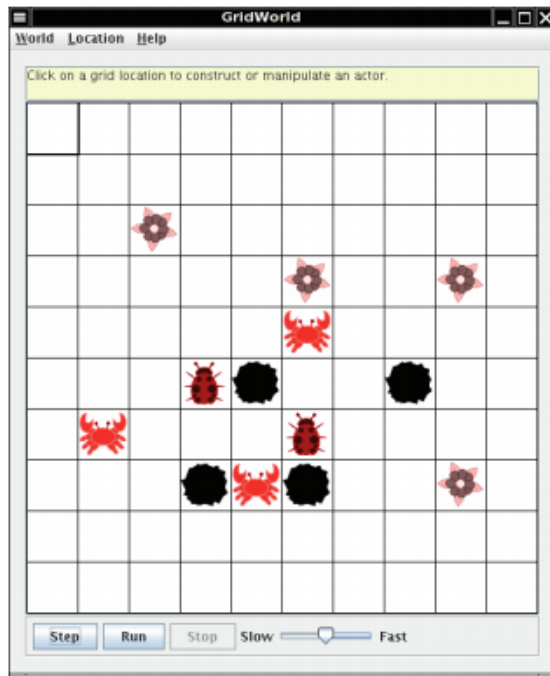
(the AP CS Case Study)

An Introduction

GridWorld Case Study

- Fairly large framework
- Exemplifies several principles of good object-oriented design
- Allows us to build interesting thing quickly
- Case Study Details:

http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/151155.html



Running GridWorld

- Follow our Set up/Getting Started instructions:
<http://www.garfieldcs.com/2012/03/getting-started-in-gridworld/>
- Download zip from the website (don't use Explorer):
<http://apcentral.collegeboard.com/apc/public/repository/GridWorldCode.zip>
- Unzip it into your class folder – will contain several subfolders
- GridWorld packages and classes are stored in a JAR
 - Way to distribute multiple files as one
- Add the JAR to your path so the compiler can look at it
- You can consider switching to Eclipse (note: class lessons will be in jGrasp)
 - Warning: Harder to manage files
 - Auto-completion is handy but can make you lazy
 - Make sure to read instructions on how to set up
- Open and run any of the examples with a main (in projects/)

GridWorld Actors

- common properties:
 - location
 - color
- common behavior:
 - give back location
 - give back direction
- each also has specific properties/behavior:
 - leave flowers behind
 - turn when hit wall

Separating Behavior

- Why not represent each actor completely separately?
- Advantages of grouping shared behavior/state
 - maintenance: only one common place to update
 - locality: quickly look up what a bug does (vs. a rock)
- Key ideas
 - General rules are useful to keep together (code reuse)
 - Specific rules may override the general one

Resources

- GridWorld Case Study Page (Manuals & Support materials):
http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/151155.html
- Our Set up/Getting Started instructions:
<http://www.garfieldcs.com/2012/03/getting-started-in-gridworld/>
- Inheritance & Super Presentation:
<http://www.garfieldcs.com/wordpress/wordpress/wp-content/uploads/2012/03/2012-03-20-Inheritance-Super.pdf>