Problem Solving in Greenfoot

9/2/2009

Opening Discussion

- Has everyon been able to get Greenfoot installed on your computer?
- What did we talk about last time?
- Minute Essays
  - Can we make the Wombat attracted to leaves/go to nearest one?
  - Will we be building “World level classes?”
  - Are we going to create our own actions?
  - Optimality with many wombats.

More Minute Essay Comments

- Book assumes I will have a central website. Right now it is the course website.
- How do Greenfoot objects, like Wombats, compare to the more abstract objects of normal programming?
- Making the wombat change directions.
- Random walk to eat all leaves.
- Memorable optimization problem.
- I grew up in Austin.

Algorithms

- An algorithm is a systematic description of how to solve a problem. Programming is basically putting algorithms into a language a computer can understand.
- You can view the computer as being very simple minded. It only understands simple instructions, not complex ones.
- Blowing up a balloon example.

Let's Play a Game

- Go to the course web site and next to today's lecture you will find a link to a zip file that has three scenarios for today.
- Extract the files in your personal space then open the first scenario in Greenfoot.
- This is a puzzle game that should be fairly intuitive. Click run and play it some.

Steps in the Game

- Now I want you to open the second scenario.
- For this one you can't use run. Instead, you will move the selector around manually and use a right click on the selector and the world to “play” the game.
- What steps do you have to do in order to make the game work?

Last Case

- Now open the third scenario and try to play the game.
- What has changed?
- How does this change the steps we wrote down?

Minute Essay

- Recipes are a standard, yet simple example of something algorithmic that everyone can identify with. What do you see as a significant difference between recipes and what we looked at today?