

Problem Solving in Greenfoot

9-1-2010

Opening Discussion

- Has everyone been able to get Greenfoot installed on your computer?
- What did we talk about last time?
- Minute Essays
 - What are classes?
 - Why did I count some spaces twice for the Wombat?
 - Will we be able to make the Wombat eat all the leaves automatically?

More Minute Essay Comments

- When will we learn to make the Wombat do more than turn left?
- Is it typical for students to follow in class and be completely lost at home?
- What is a shorter method to get the wombat to eat all the leaves?
- Should you reboot the computers when you leave?
- Can you make the Wombat “jump” squares?
- Problems with “shift adding”.

Even More Minute Essay Comments

- Would move(20) make the Wombat move 20 times?
- Greenfoot looks a lot like Visual Basic.
- Other commands with x and y in the Actor list.
- What are the odds of doing SQL?
- Is the association of numbers to directions always this way?

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?