

# Keyboard Input

9/18/2009

# Opening Discussion

- What did we talk about last class?
- Minute Essay responses
  - Did this quiz reflect other quizzes and tests?  
(Checking grades)
  - “) expected” error probably means you left out a close parentheses. Likely happens before where indicated.
  - Are there other logical operators?
  - Can you control other programs with a Java program?

# More

- Why did we use dx and dy instead of x and y?
- Removing things using the intersects method.
- Logical && and || are short circuit. Single & and | do bitwise manipulations. The | is called a pipe. It is above the enter key.

# Goal for the Day

- Today I want to add another Actor to our city and make it so that it is controlled with the arrow keys.
- How should we go about doing this?

# Keyboard Input

- If you look in the API you will find that the Greenfoot class has a method called `getKey()` and another called `isKeyDown()`.
- What are the return types of these methods? What does the API say the value of this return will be?

# Strings

- A string is a sequence of characters. Words and sentences are strings.
- The type of strings in Java is String. Note it starts with a capital letter.
- We write string literals in Java by putting whatever we want in quotes.
- The web page has a link to the API page for String.

# Key Methods of String

- `equals(String s)` - This was mentioned last class as the proper way to compare object types.
- `length()` - Returns the number of characters in the string.
- `indexOf(...)` - Many options for arguments. Returns the location in the string where first found.
- `+` - Not really a method. The plus sign is overloaded in Java to do String concatenation.

# Printing

- Sometimes you need more information than what is being displayed on the world to figure out what a program is doing.
- You can print and whatever you print will appear in the console.
- To do this use the `System.out.println()` method. You can pass it one argument of basically any type.



# Writing the Code

- Now we can make it so that the person moves based on keyboard input.
- Where should this code go?
- What should it look like?

# Minute Essay

- Do you have any questions about what was covered today? Is it clear how to use keyboard input in Greenfoot?
- Feel free to do multiple interclass problems. Practice is key to learning this.