

Keyboard Input

2-3-2010

Opening Discussion

- What did we talk about last class?
- Minute Essay responses
 - Which is generally better, logic or math tricks?
 - Why can't the person remove themselves from the world?
 - Is the if statement used often in programming?
 - Is there a limit on the complexity of boolean expressions?
 - Is there a limit on how many if statements you can use?

More

- Can you combine simple math with boolean logic in the same line of code?
- How should you prepare for quizzes?
- Rotating the person to make it look like they are walking in a particular direction.
- Examples in book vs. lecture.
- Speed of class.

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.