

Conditionals and Boolean Logic

2/2/2009

Opening Discussion

- Do you have any questions about the quiz?
- Has anyone looked at the Java Structure document?

Our Problem

- The walkToward method has a problem if dx or dy are zero. Specifically, we get a division by zero exception.
- We only want to do the division if the value is greater than zero.
- We might also want the person to do something when it gets where it is going.

Conditional Execution

- Methods execute by having the statements happen in order.
- Right now, all the statements in a method will happen any time that method is invoked.
- We need the ability to make it so that some things only happen some of the time. This is called conditional execution.
- The simplest conditional is the if statement.

Syntax of if

- We will normally write an if statement with the following syntax.
 - if(condition) {
 - statements
 - }
- The statements only execute if the condition is true.

Comparison Operators

- If you want to compare two numbers use the following.
 - == for equality. Note there are two of them.
 - != for inequality.
 - >, <, >=, <= for what they look like.
- With objects you generally want to call the equals method.
 - `if(v1.equals(v2)) ...`

Boolean Logic

- We only want the person to enter the house if both dx and dy are zero. To do this we use Boolean logic.
- Logic operators
 - || is inclusive or.
 - && is and.
 - ! is not.
- Let's look at truth tables for these.
- Use parentheses to group things.

Minute Essay

- Do you have any questions about conditionals or Boolean logic?