Opening Discussion

• Do you have any questions about the quiz?
• How is the reading going? Please suggest changes or let me know when you find errors/typos.
• Minute Essays
  – Loops are next week
  – Basic Java environments: BlueJ.
  – Doing unrelated things is distracting to others.
  – Answers of ICPs.
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
  } [ else {
    - statements
  } ]
- The statements only execute if the condition is true.
- Else is optional executes if condition is false.
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?
• The next round of interclass problems will be this coming Monday.