



# Conditionals in Java

3/14/2008





# Opening Discussion

- Let's look at solutions to the interclass problem.
- What do variable declarations look like in Java?
- What is the purpose of conditionals?
- What conditional construct did we use in Alice?  
How did it work?





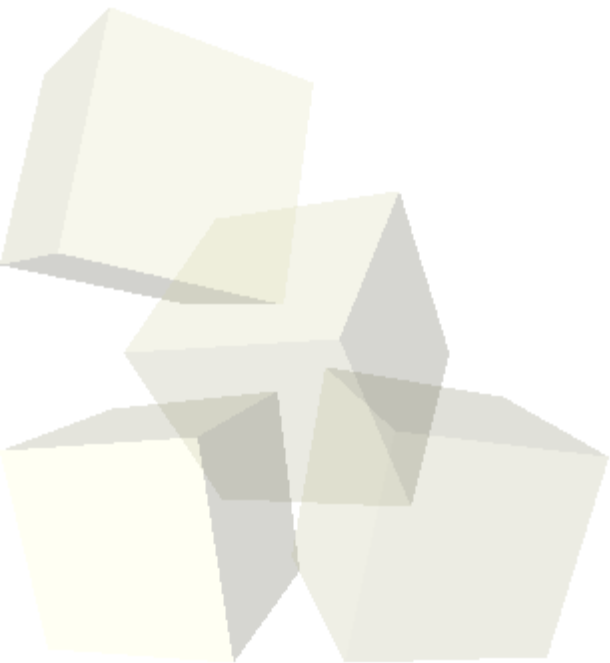
# The if Statement

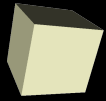
- Just like in Alice, to really get flexibility in our code in Java we need conditional execution.
- As with Alice, we can get this through an if statement. The syntax is basically the same.
  - ◆ `if(booleanExpression) {`
    - statements
  - ◆ `} else {`
    - statements
  - ◆ `}`
- The else is optional.
- If you only have one statement the `{}` is optional.
- You can string them together by putting another if right after the else.



# Problems in our Code

- Let's fix the problems that we have in our bank account code that need conditionals.
  - ♦ The formatted string for balance is wrong is we have 0-9 cents.
  - ♦ You could call deposit or withdraw with negative values.





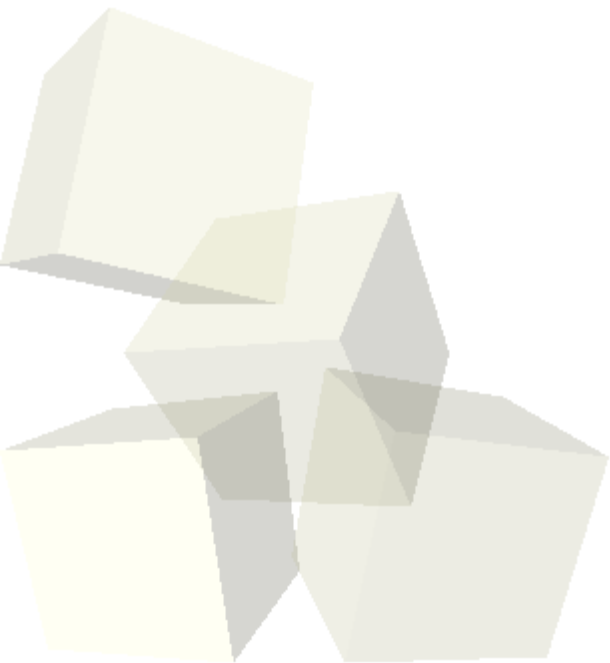
# The switch Statement

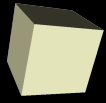
- For selecting between multiple options Java also has a switch statement.
  - ◆ `switch(integerExpression) {`
    - `case val1:`
      - `break;`
    - `case val2:`
      - `break;`
    - ...
    - `default:`
  - ◆ `}`
- The argument and cases must be integer types. Note that char counts.
- The `break` just exits the switch. Leaving one out lets control fall through to next case.



# The toString Method

- When you print an object or concatenate it to a String it calls the toString method of the object.
- This can be helpful in many situations.
- We can write our own toString method in our classes so that they provide useful information or just a nicely formatted String.
  - ◆ `public String toString() { ... }`





- I'm also unhappy with our way of keeping track of who the account belongs to. If one person has more than one account with our bank we run into some odd situations.





- What will you do doing for Spring Break?
- Interclass Problem – Problem 10.3.

