CompSci 94
Random Numbers, Making Decisions with If statements
February 7, 2019

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Constant Variable

• What is a constant variable?

• How do you create a constant variable in Alice?

• How do you use a constant variable?
Random Numbers

• What is a random number?

• In Alice, how does one get a random number in an instruction?

• Give examples of numbers in this range?
Random Integers

• How many different integers are a possibility with this statement?

```plaintext
constant WholeNumber = someNumber ← nextRandomIntegerFromAUpToButExcludingB 2, 5
```
If statements

• What types can you compare in an if statement?
Panda distanceTo

• What does this code do when it executes?

- If the panda is more than two units from the bunny, the panda moves two units towards the bunny.
- Otherwise the panda says "I'm here".

• If the panda is 3 units from the bunny, can both the panda move and say "I'm here" happen?

• No! Only one.
Panda distanceTo

• How does one create this code?

```
if this.panda.getDistanceTo(this.bunny) > 2.0
    this.panda.moveToward(this.bunny, 2.0)
else
    this.panda.say("I'm here")
```
Making decisions - If statement

- What happens when this code runs?

```java
if (this.panda.getPaint != RED) {
    this.panda.setPaint(RED); // add detail
} else {
    this.panda.setPaint(BLUE); // add detail
}
```
Announcements

• Exam 1 is Feb 19
• Assignment 4 due Feb. 12
• RQ 9 due Feb 12
Class Today

- Working with random numbers and making decisions