CompSci 94
Random Numbers, Making Decisions with If statements
September 15, 2020

if ☐true☐ is true then

  drop statement here

else

 drop statement here
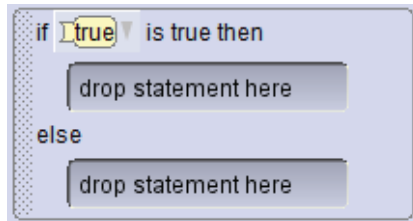
Prof. Susan Rodger

Announcements

- Exam 1 is Sept 29
- Assignment 3 due Sept 22
  - Have you started yet?
- QZ09 due Thursday – 10:15am

- Don't get behind, be sure to check your grades on Sakai for Classwork
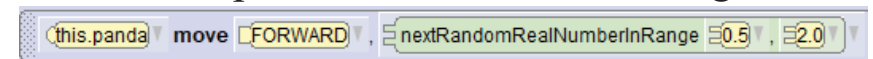

Constant Variable

- 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?

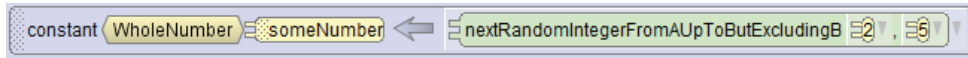- In Alice, how does one get a random number in an instruction?

this.panda move FORWARD , nextRandomRealNumberInRange 0.5 , 2.0
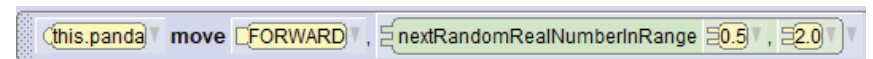
- Give examples of numbers in this range?

this.panda move FORWARD , nextRandomRealNumberInRange 0.5 , 2.0

Random Integers

- How many different integers are a possibility with this statement?
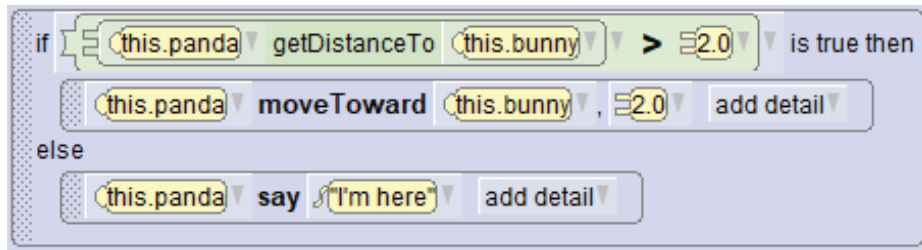
constant `WholeNumber` `someNumber` ⬅ `nextRandomIntegerFromAUpToButExcludingB` `2` , `5`

If statements

- What types can you compare in an if statement?

Panda distanceTo
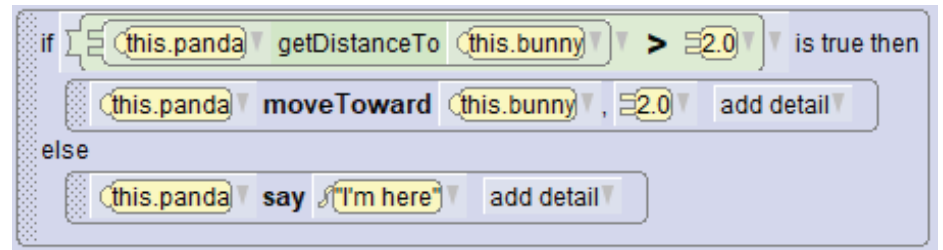
- What does this code do when it executes?

```
if   this.panda  getDistanceTo  this.bunny  >  2.0   is true then
        this.panda  moveToward  this.bunny ,  2.0    add detail
else
        this.panda  say  "I'm here"   add detail
```

Create line w/ Panda distanceTo
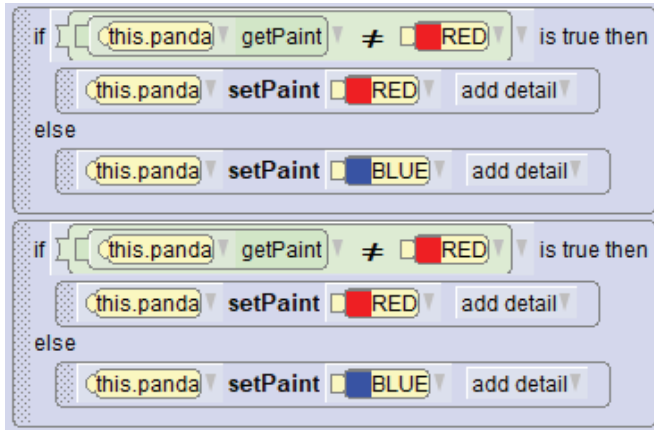
- How does one create **first line** of this code?

```
if   this.panda  getDistanceTo  this.bunny  >  2.0   is true then
        this.panda  moveToward  this.bunny ,  2.0    add detail
else
        this.panda  say  "I'm here"   add detail
```

Making decisions - If statement

- What happens when this code runs?

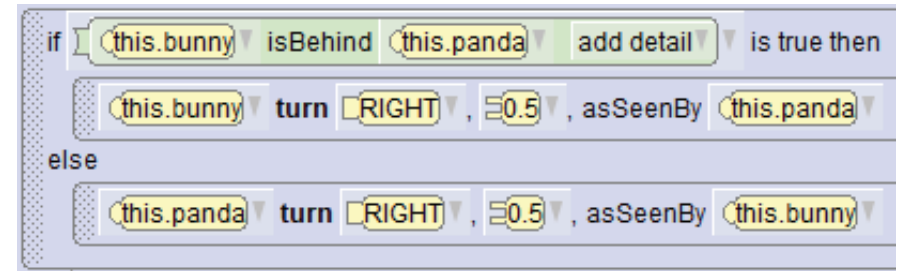# What happens when this If executes?

Execute a copy of the if again?
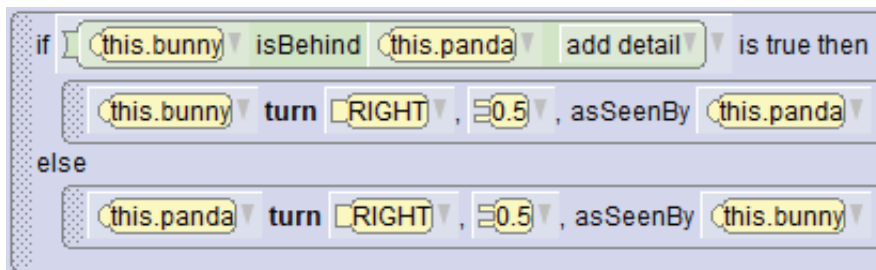
Execute a third copy of the if?
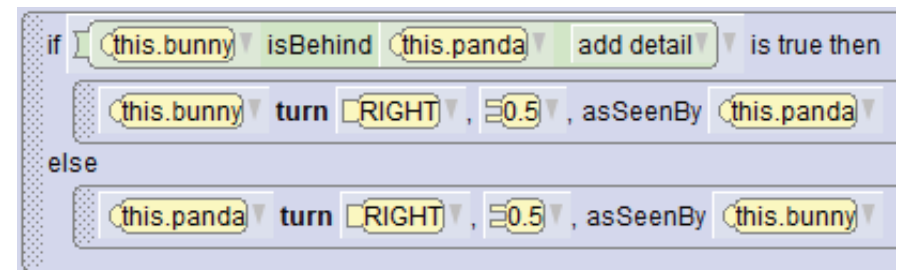
Class Today

- Working with random numbers and making decisions