CompSci 94
Making Decisions with If statements
September 30, 2021

Prof. Susan Rodger
Announcements

• Assignment 3 due tonight!
  – Don’t forget the reflect form

• Videos and QZ10 due Thursday, Oct 7 when class starts

• Don’t get behind, be sure to check your grades on Sakai for Classwork
If statements

• What types can you compare in an if statement?

![Image of an if statement with true and else branches]

Numbers
Directions
Paints
TextStrings
Objects
etc
If statements

- What types can you compare in an if statement?
  - Numbers
  - Directions
  - Paints
  - TextStrings
  - Objects
  - etc
Q1 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
```

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

• NO! only one
Q2. Create line w/ Panda distanceTo

• How does one create **first line** of this code?

```plaintext
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
```
Q3 Making decisions - If statement

- What happens when this code runs?

```plaintext
if (this.panda.getPaint != RED) then
  this.panda.setPaint(RED) and add detail
else
  this.panda.setPaint(BLUE) and add detail

if (this.panda.getPaint != RED) then
  this.panda.setPaint(RED) and add detail
else
  this.panda.setPaint(BLUE) and add detail
```
Q4 What happens when this If executes?

```plaintext
if this.bunny isBehind this.panda add detail is true then
  this.bunny turn RIGHT, 0.5, asSeenBy this.panda
else
  this.panda turn RIGHT, 0.5, asSeenBy this.bunny
```
Q5 Execute a copy of the if again?
(execute the same code a second time)
Q6 Execute a third copy of the if?
Class Today

• Working with making decisions