CompSci 94
Writing Class Procedures
Built-in Functions, Math, Properties
September 16, 2021

Prof. Susan Rodger
Announcements

• Assignment 3 due Sept. 23.
• Note: Exam 1 is Tuesday, Sept 28
  – Old exams are on the course website under resources tab
  – We will review for the exam on Sept 23
  – If you get accommodations for exams, you should have had your letter sent to Prof. Rodger, and she would have contacted you.
Q1. Built-in Functions

• Where can you use the cow getHeight function in this instruction?

```plaintext
this.cow move FORWARD, 1.0, duration 2.0 add detail
```
Q1. Built-in Functions

• Where can you use the cow `getHeight` function in this instruction?
  – Over the 1.0 or the 2.0
  – `getHeight`’s value is of type decimal, so you can use it anywhere there is a decimal number

• Functions calculate a value of a certain type
  – Use the value wherever that type is in an instruction
Q2. getDistanceTo

• What happens when this executes?
Q2. `getDistanceTo`

- What happens when this executes?

- Moves to center of cow

![Diagram showing a poodle moving towards a cow's center](image)
Lots of built-in functions to use
Q3. Use math to adjust

- How do we stop poodle before the cow?
Q3. Use math to adjust

• How do we stop poodle before the cow?
  – Use math
  – How does one add the math?
    • On down arrow beside number
Q4. How do I get the flamingo to circle around the ostrich?

![Image of flamingo and ostrich]
Q4. How do I get the flamingo to circle around the ostrich?

- Use turn with as seen by

```
this.flamingo turn LEFT, 1.0, asSeenBy this.ostrich
```

- Which direction do you pick to go forward?
  - The ostrich is to the flamingo’s left, so turn left
Q5. Properties

- What can you do with the paint property?

- What does painting an object with white paint do?

- What can you do with opacity property?

- What can you do with the vehicle property?
Q5. Properties

• What can you do with the paint property?
  – Paint an object that color

• What does painting an object with white paint do?
  – Means no color, the original colors show through

• What can you do with opacity property?
  – Make something see through or invisible

• What can you do with the vehicle property?
  – Make an object move when another object moves
Q6. More on properties

• Where does one change a property instantly when not running code?

• What instructions do you get to use with properties?
Q6. More on properties

• Where does one change a property instantly when not running code?
  • In setup scene under properties

• Which instructions do you get to use with properties?
  – A set procedure
  – A get built-in function
Q7. Vehicle Property

- Consider

- What happens if the bluebird moves forward?

- What happens if the flamingo moves forward?
Q7. Vehicle Property

- Consider

- What happens if the bluebird moves forward?
  - Only the bluebird moves.

- What happens if the flamingo moves forward?
  - The bluebird moves forward with it.
Q8. How does one create their own camera marker (not use the ones provided in Alice)?
Q8. How does one create their own camera marker (not use the ones provided in Alice) ?

• Use any object.
• Change its name to cameraViewSOMETHING
• Have it moveAndOrientTo camera
• Make it invisible
STOP HERE
What is the best object to use to make your own Camera marker

• Use a small quadruped
• It's small and you will see its legs so you know it is on the camera.
What is the best object to use to make your own Camera marker

• Use a small quadruped

• It’s small and you will see its legs so you know it is on the camera.
Create Poodle as Camera Marker

• Rename the object to the camera view it will be
Poodle moveAndOrientTo camera

Then make the poodle invisible
Class Today

• Using properties, built-in functions and math
• Creating class procedures