CompSci 94
Making Procedures Flexible, Camera Controls
January 31, 2019

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Parameters

• What is the difference between a parameter and an argument?

• Can you send different arguments when you use a procedure?

• Does the type of the argument matter?
Parameters

• What is the difference between a parameter and an argument?
  – A parameter is a placeholder for a value
  – An argument is a value that can be used in place of a parameter

• Can you send different arguments when you use a procedure?
  – Yes!

• Does the type of the argument matter?
  – Yes, it must be the same type as the parameter
Parameters/Arguments

- Consider:

- What are the parameters in it?

- What are the arguments in it?
Parameters/Arguments

- Consider:

- What are the parameters in it?
  - Direction and amount

- What are the arguments in it?
  - Right, 2.0
Parameters/arguments

• What can you say about this call and its parts?
Parameters/arguments

• What can you say about this call and its parts?

  – Mystery is a bunny procedure
  – Phrase is a textString parameter
  – Animal is an object parameter
  – Forward is a direction parameter
  – “Welcome”, hare, and FORWARD are arguments
Camera Views

• How do I line up the animals in the front in a line? How do I make sure the animal behind the ogre is directly behind it?
Use 2D sideview for both

- Line up animals
- Move marchHare close to Ogre
Setup Scene

• What other views can you use beside Starting Camera View?
Setup Scene

- What other views can you use beside Starting Camera View?
  - 2D TOP view
  - 2D SIDE view
  - 2D FRONT View
  - Layout Scene View
Camera Markers

• How does one create a camera marker?

• How does one use a Camera Marker during animation?
Camera Markers

• How does one create a camera marker?
  – Move camera to location.
  – Click on add camera marker in scene setup
  – Give camera marker a name.

• How does one use a Camera Marker during animation?
  – Use camera with moveAndOrientTo instruction to change a scene.
Setting up a CameraMarker

- How does one setup camera for side view?

  - Using one-shots, have camera move to hare.
  - Then upright camera.
  - Move up 1.0
  - Move right 6.0
  - Turn left 0.25
  - Use purple arrows to adjust view.
Setting up a CameraMarker

- How does one setup camera for side view?
  - Using one-shots, have camera move to hare.
  - Then camera orientToUpright
  - Camera move up 1.0
  - Camera move right 6.0
  - Camera turn left 0.25
  - Use purple arrows to adjust view.
More on Camera markers

• When do you add Camera markers?

• What do these buttons mean?
More on Camera markers

• When do you add Camera markers?
  – LAST, after the objects are placed

• What do these buttons mean?
Announcements

• Assignment 3 due Tuesday
• Next time – procedures for classes of objects, and properties.
• RQ7 due Tuesday by class time
Class Today

- Writing procedures with parameters
- Moving between camera views