CompSci 94
Turning and Procedures
September 13, 2018

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Class Today

• Turning around an object – “as seen by”
• A procedure – organize and reuse code
• Classwork – build a scene with turning and procedures
• Be sure to checkoff your classwork when done
Turn in place vs Turn around

- Turn in place (spin around)
- Turn around something – use “as seen by”
- Make duration larger to slow down
- Go forward around if use “right” and object is to its right, Otherwise go backwards
Code for *turn vs turn as seen by*
Procedure

• Way to put a block of code together, give it a name, and then can call it
• Reuse code – write less code
• Organize code better
• Look at two types of procedures:
  – Procedure for an object
  – Procedure for the scene
MyFirstMethod – is a Procedure

• The editor where you put code is called myFirstMethod, and is a procedure

• Where does an Alice program start?
MyFirstMethod – is a Procedure

- Program starts in procedure sceneActivated
- Note it says to call myFirstMethod and execute it!
Procedure for Object

- Teach Tony to do a front flip
- Click “Scene” tab, then “playing card”, then addPlayingCardProcedure
Give the procedure a name
FlipTony has a tab for code
FlipTony code
How do we test this code?

- Back to sceneActivated, drag in flipTony and **disable** myFirstMethod

- Now click play and only flipTony occurs
Tony flip correct?

• What does Tony flip around?

• How do we get Tony to flip around his center?
When flipTony procedure works

- Disable flipTony
- Reenable myFirstMethod
Use flipTony Procedure

- Drag and drop flipTony in myFirstMethod where you want to see a flip
Difference between object procedure and scene procedure

• Object procedure
  – Applies only to that object

• Scene procedure
  – Could have multiple objects referenced in it, or camera or ground in it
Procedure for the Scene

- Write a procedure called `CameraFromAbove` that moves the camera above to look down
Code for CameraFromAbove

- How to test it? Put it first in myFirstMethod
- Could make it happen instantly – duration 0
- Is there another way to get camera there?
How to get the camera to move back?

• Create a camera marker for original scene
• Then use camera moveAndOrientTo that cameraMarker
Final Sample Code (part 1)
Final Sample Code (part 2)
This lecture covered

• Turn in place vs turn around an object with “as seen by”

• Creating a procedure to organize code
  – Scene procedure
  – Object procedure

• Can call procedure over and over and write less code