CompSci 94
Turning and Procedures
February 1, 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 check off 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*

```
thisalice say "turn in place" add detail
thisalice turn RIGHT, 1.0 add detail
thisalice say "Turn around the queen" add detail
thisalice turn RIGHT, 1.0 asSeenBy this.queenOfHearts, duration 2.0
thisalice say "Better" add detail
thisalice turn LEFT, 0.25 add detail
thisalice turn RIGHT, 1.0 asSeenBy this.queenOfHearts, duration 2.0
thisalice turn RIGHT, 0.25 add detail
thisalice turn RIGHT, 1.0 asSeenBy this.queenOfHearts, duration 2.0
thisalice turn LEFT, 1.0 asSeenBy this.queenOfHearts, duration 2.0
thisalice turn RIGHT, 1.0 asSeenBy this.queenOfHearts, duration 2.0
```
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
When flipTony works, remove it and enable myFirstMethod

• Then drag and drop flipTony in myFirstMethod where you want to see a flip
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
How to get the camera to move back?

• Create a camera marker for original scene
• Then use camera moveAndOrientTo 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