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
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?

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

```plaintext
declare procedure CameraFromAbove

do in order
- this.camera moveTo (this.queenOfHearts) add detail
- this.camera orientToUpright add detail
- this.camera move UP , 20.0 add detail
- this.camera turn FORWARD , 0.25 add detail
```

How to get the camera to move back?

- Create a camera marker for original scene
- Then use camera moveAndOrientTo that cameraMarker

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