CompSci 94
Reading Code with Events
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Class Today

• Practice reading code that has events
• What is the order of what happens?

• Then problem solving to build a game.
A Program

• The following slides are the code from a program. Look over the code and see if you can understand it.
Scene
Declare procedure `myFirstMethod`

**do in order**

- For each `SJointedModel` item in `this.smallCritters`:
  - `item` move `UP`, `=1.0`, duration `=0.5`, add detail
  - `item` turn `RIGHT`, `=1.0`, add detail
  - `item` move `DOWN`, `=1.0`, duration `=0.5`, add detail

**loop**

- If `this.panda` getDistanceTo `this.cow` getFrontRightKnee `< 0.5` is true then:
  - `this.cow` say "You are too close!", add detail

**else**

- Drop statement here

- While `this.cow` getDistanceTo `this.ostrich` `> 3.0` is true:
  - `this.ostrich` moveToward `this.cow`, `=0.5`, add detail

**loop**

- `this.cow` say "press J and I jump", add detail
Events (1)

```
declare procedure sceneActivated
    do in order
    this myFirstMethod

declare procedure sceneActivated
    do in order
    if this.ostrich getLeftAnkle getDistanceTo this.chicken < 2.0 is true then
        this.chicken say "ostrich Too CLOSE!" add detail
    else
        drop statement here
    
    this.cow say "press Space key to make the pin disappear and reappear" add detail
```
Events (2)
Events (3)

declare procedure `pointOfViewChanged`

do in order

if 
this.bunny
getDistanceTo
this.bowlingPin
> 2.0
is true then

this.bowlingPin
say "bunny far from pin"
add detail

else

drop statement here

declare procedure `pointOfViewChanged`

do in order

while
this.tortoise
getDistanceTo
this.bowlingPin
> 1.0
is true

this.tortoise
turnToFacedthis.bowlingPin, duration = 0.25
add detail

this.tortoise
move FORWARD, = 0.25
add detail
Events (4)
Answer the following questions about the code

• If the world starts, without interacting with the program, what happens, and what is the order it happens in?
• Then trigger some events, how does that change the running of the program.
This lecture covered

- Tracing Code
- Understanding how events work