CompSci 94
KeyPressListener, Collision Listeners
November 7, 2024

Prof. Susan Rodger

Announcements

- Assignment 5 is due today
- Assignment 6 out, due Nov 21

- Watch videos and online quiz for Thursday

- Exam 3 is November 19
  - Study materials on Nov 19 date on our calendar

Q1: How do I get the hare to turn around?

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- Press any key and the hare will turn around

- Not a good way to do this. Can't use any other keys for anything else.

Q2: What happens if I press letter A? If I press the letter T?


```
this addKeyPressListener  add detail

declare procedure keyPressed   event isLetter   event isDigit
  do in order
    if  event  isLetter  is true then
        this.pig  turn  RIGHT , 1.0   add detail
    else
        drop statement here

    if  event  isKey  T  is true then
        this.panda  turn  RIGHT , 1.0   add detail
    else
        drop statement here
```

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Q2: What happens if I press letter A? If I press the letter T?

- Letter A – pig turns
- Letter T – pig turns, then panda turns


```
this addKeyPressListener  add detail

declare procedure keyPressed   event isLetter   event isDigit
  do in order
    if  event  isLetter  is true then
        this.pig  turn  RIGHT , 1.0   add detail
    else
        drop statement here

    if  event  isKey  T  is true then
        this.panda  turn  RIGHT , 1.0   add detail
    else
        drop statement here
```

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Q3: What happens if press letter A? If press letter T?


```
this addKeyPressListener  add detail

declare procedure keyPressed   event isLetter   event isDigit
  do in order
    if  event  isLetter  is true then
        this.pig  turn  RIGHT , 1.0   add detail
    else
        if  event  isKey  T  is true then
            this.panda  turn  RIGHT , 1.0   add detail
        else
            drop statement here
```

Q3: What happens if press letter A? If press letter T?

- Letter A – pig turns once
- Letter T – pig turns once


```
this addKeyPressListener  add detail

declare procedure keyPressed   event isLetter   event isDigit
  do in order
    if  event  isLetter  is true then
        this.pig  turn  RIGHT , 1.0   add detail
    else
        if  event  isKey  T  is true then
            this.panda  turn  RIGHT , 1.0   add detail
        else
            drop statement here
```

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Q4: What does Combine and Fire_Multiple do?

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- Hold the key down and the whiteRabbit moves a lot faster until you release the key!

Q5: What happens when …

a) panda collides with a bunny?

b) whiteRabbit collides with a bunny?

Note: bunnies is an array of bunnies

Q5: What happens when …

a) panda collides with a bunny?

    WhiteRabbit (W.R.) turns right

b) whiteRabbit collides with a bunny?

    whiteRabbit turns right

Note: bunnies is an array of bunnies

Q6: What happens when

a) panda collides with a bunny?

b) whiteRabbit collides with a bunny?

c) pig collides with a bunny?

d) whiteRabbit collides with panda?

Q6: What happens when

a) panda collides with a bunny?   *Panda says hello*

b) whiteRabbit collides with a bunny?   *W.R. says hello*

c) pig collides with a bunny?   *Nothing happens*

d) whiteRabbit collides with panda?   *Nothing happens*

Q7: Clicking on an array object

- There is an array of bunnies. When a bunny collides with panda, you want the bunny that collided with the panda to say hello and turn around once.

- Why doesn't this code work?

Q7: Clicking on an array object

- There is an array of bunnies. When a bunny collides with panda, you want the bunny that collided with the panda to say hello and turn around once.

- Why doesn't this code work?

Bunny4 says and turns

Q7: Clicking on an array object

- There is an array of bunnies. When a bunny collides with panda, you want the bunny that collided with the panda to say hello and turn around once.
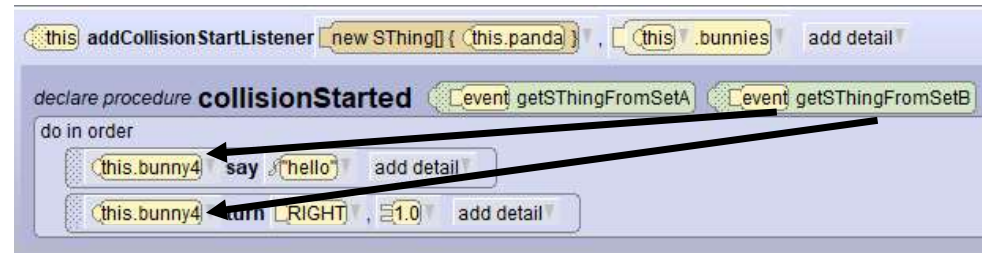
- Can you change the code to this?

Q7: Clicking on an array object

- There is an array of bunnies. When a bunny collides with panda, you want the bunny that collided with the panda to say hello and turn around once.

- Can you change the code to this? **NO!**

Why not?

- This code: `event getSThingFromSetB`
  - Is an Sthing so you CANNOT drop it over a type bunny
- Instead, you have to look through the bunny array and compare each bunny with with an Sthing. When you find the bunny that was clicked on, then you just refer to that bunny

Find bunny clicked on in array

- Write a loop to iterate through the bunny array, for each bunny in the array, check to see if it is the item clicked on.

Find bunny clicked on in array

- Write a loop to iterate through the bunny array, for each bunny in the array, check to see if it is the item clicked on.

COMPARE

Find bunny clicked on in array

- Write a loop to iterate through the bunny array, for each bunny in the array, check to see if it is the item clicked on.

Have someBunny do things if it matches

Find bunny clicked on in array

- Write a loop to iterate through the bunny array, for each bunny in the array, check to see if it is the item clicked on.

FINAL CODE

Class Today

- A game with collisions