

# CompSci 94

## Introduction to Events

### Mouse Events

October 28, 2021



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# Announcements

- Assignment 4 is due tonight!
- Videos and online quiz for Tuesday

# Q1. How do I setup an object marker for the bunny?



# Q2. How do I use an object marker?



# Q3. Consider the following

- Have 3 animals in an array named `animals`, and three object markers in an array called `objectMarkers`. They are in the order in the array as shown from left to right.



Q3: Suppose the animals have moved as shown.  
What does the mystery procedure do?

```
declare procedure mystery Add Parameter...  
do in order  
  do in order  
    WholeNumber ← number ← 0  
    for each SBiped oneAnimal in this . animals  
      oneAnimal moveAndOrientTo this . objectMarkers [ number ]  
      number ← number + 1  
    loop
```



# Q4. What does the following code do?

The image shows a Scratch script for a panda character. The script is contained within a light blue box with a dotted border. It starts with a 'do in order' loop. The first block is 'this.panda move RIGHT 1.0 add detail'. This is followed by a 'do together' loop containing two blocks: 'this.panda move LEFT 1.0 add detail' and 'this.panda delay 2.0'. Finally, there is a 'this.panda turn RIGHT 0.5 add detail' block.

```
do in order
  this.panda move RIGHT 1.0 add detail
do together
  this.panda move LEFT 1.0 add detail
  this.panda delay 2.0
this.panda turn RIGHT 0.5 add detail
```

Q5 - How do you fix the code below so you only click on cow and moose for them to turn around?

- A scene has bear cub, cow, dalmatian and moose.



```
this addMouseClickedOnObjectListener add detail  
  
declare procedure mouseClicked event getModelAtMouseLocation  
do in order  
  event getModelAtMouseLocation turn RIGHT, 1.0 add de
```



# Q6 What does this event do?

The image shows a Scratch script for a mouse click event. The script starts with a 'when clicked' block, followed by a 'do in order' loop. Inside the loop, there is an 'if' block that checks if the opacity of 'this.dalmatian' is greater than 0.95. If true, it performs three actions: 'say hello', 'set opacity to 0.9', and 'add detail'. If false, it performs two actions: 'set opacity to 1.0' and 'add detail'.

```
when clicked  
do in order  
  if (this.dalmatian.getOpacity > 0.95) is true then  
    this.dalmatian.say "hello" add detail  
    this.dalmatian.setOpacity 0.9 add detail  
  else  
    this.dalmatian.setOpacity 1.0 add detail
```

# Class Today

- Make a simple game

