Tutorial on Bunny visiting his animal friends - parameters, events for Alice 3

Susan Rodger
Duke University
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Updated by Yossra Hamid on October 2015

Start with a new world

- Add a bunny, a camel, and several animals of different heights, spread around the world
- I picked bunny, camel, chicken, fox, peacock, caiman—any animals will do but make sure you have some tall animals.

Problem

- The bunny wants to visit each animal where “visit” means: the bunny and the animal face each other, the bunny moves close in front of it, the bunny says “hi” and then the bunny jumps over it. However, the bunny can only jump 1 meter high.

Parts of the Tutorial

- Part 1: Bunny visit each friend
- Part 2: Bunny either go around or jump over
- Part 3: Create an event to click on animal to visit
Part 1: bunny visit camel

• Create a “bunny” method called visit for the bunny to visit the camel

At the top of the method editor, click on Add a Parameter.

A parameter is a piece of information that helps the method work. In this case, the information we want to know is which friend the bunny is visiting (the camel), so name the parameter FriendToVisit

The bunny visit method should now look like this:

Now, you try to add the following code:

– Bunny turns to face the friendToVisit
– friendToVisit turns to face the bunny
– Bunny moves forward 1 meter
Enter the following code

• The bunny turns to visit the friendToVisit and moves toward it.

• To test it out, add “this.bunny.visit” to myFirstMethod, pick the camel as FriendToVisit, and PLAY

Resulting in….

• Click Play

• Yikes, The bunny goes into the camel!
• We want the bunny to stop 2 meters in front of the camel (make sure the camel is more than 2 m away).

How to move the bunny all the way to the camel

• Click on bunny, click on Functions.
• Click and drag “this distance to”, (choose FriendToVisit) on top of the 1 meter.

Use Math and subtract 2

• Click on white arrow

• Select “math”, then “minus sign” then “2”
Resulting in the following code

![Code snippet]

- The bunny will stop two meters in front of the center of the camel...

- Try out the code!

Next add a greeting and jump over

- Have the bunny say a greeting
- Then have the bunny jump over the camel
  - The bunny must jump up
  - The bunny must jump 1m to the camel, plus the camel’s depth, plus another 1m past the camel
    - Total distance: 2 + camel’s depth
    - Find camel’s depth in the camel functions...
  - The bunny jumps down

[code on the next page]

Add the remaining code

Change “when the world starts” to bunny.visit and “Play”

![Code snippet]

Go to myFirstMethod, and have the bunny visit all of their animal friends!
Add another parameter of type String so bunny can give a different greeting to each animal

- Click on the tab for bunny.visit first
- Click on “add parameter”
- The type is “TextString” since the bunny will say words
- The name is “greeting”

The result is...

- Now click and drag “greeting” over the phrase the bunny says “Hello”
- Result is:

Back to MyFirstMethod, add greetings

- Replace “greeting=unset” to a different greeting for each animal.

Part 2: Going around or over friend

- bunny can only jump 1 meter high
- If friend is shorter than 1 meter, it is ok to jump over
- If friend is 1 meter or taller, then go around them

- Then Click Play
First drag in an If/Else from the bottom of the window, placing after the “say”

Select “true”, “Relational DecimalNumber”, less than “<” symbol, and select 0.5 for the first number and 1 for the second number.

Using functions, replace 0.5 with the FriendToVisit’s height

Move the bunny jump over code and put after the if. Then add code after the else to “go around”. Then Play
Part 3 – create an event to visit the friend clicked on

• To stop the movie from playing as is, go to InitializeEventListeners, and delete myFirstMethod from sceneActivated. You can add it back in later.

Drag over the visit code into the do in order and select any animal as friendToVisit. Drag “getModelAtMouseLocation” over the animal

Click on Add Event Listener, Mouse, and “addMouseClickOnObjectListener”

Now click “play” and click on different animals, but not the bunny...

• The bunny will go visit the animal you click on.
• Click on another animal and it will go visit that animal.