Creating a Fancier Chicken to use in several worlds
- Inheritance

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June 2009

Creating a fancier chicken

- This tutorial shows you how to add methods, change properties, and add events to the chicken to make a fancier/smarter chicken. Then save out this fancier/smarter chicken and read it into another Alice world. All the properties, methods and events will go with this fancier chicken.

- Creating a smarter/fancier chicken is called “inheritance”. The modified chicken has new things it can do, plus it “inherits” what the standard Alice chicken can do.
Start - Add a chicken to your world

- Pick any background (I picked grass).
- Add a chicken to your world (in the Animals folder).
- First, we will double the size of the chicken. Right click on the chicken word in the object tree and select “methods”, “resize”, “2”.

Change the chicken’s color to Red

- Click on Chicken (in the object tree), then properties.
- Click on the white color beside the color property and select “red”. By changing the property here, the chicken’s color is changed permanently.
Now we will create methods for this talented chicken

- First we will teach him how to jump.
- Under “Chicken”, then “methods”, click on “create new method”

Name the method “jump”

- We will now teach the Chicken how to jump.
Chicken move up and down 1m

In the “jump” method, have the chicken move up and down 1 meter.

How to have the distance to be a choice?

Click on create new parameter on the right

Add Distance parameter

Name is “distance, type is “Number.”

Then drag “distance” over the “1 meter” in your program
The result is:

- In “world.myFirst Method”, try out the Chicken jump method

Add a Flamingo in the world

- In the “Animals” folder, add a flamingo to your world.
- Resize the flamingo by 2.
- Write a Chicken method to go around the flamingo. Click on “chicken” in the object tree, then on the Chicken method tabs, then “create new methods”
Name the Chicken method “goAround”

- Add code to have chicken go around flamingo

  ```
  Chicken.goAround No parameters
  No variables
  ```

  - Chicken turn to face flamingo more...
  - Chicken turn right 0.25 revolutions more...
  - Chicken turn left 1 revolution asSeenBy = flamingo more...

- However, what happens if we save this Chicken and put it in a world with no flamingo? Yikes! Alice will crash!

Add an “object” parameter

- Name the parameter “objectToCircle” and select type “object”
Replace “flamingo” by clicking and dragging “objectToCircle” over flamingo

Try out new code

• In world.myfirstmethod, have the chicken circle around the flamingo.
Add a Chicken Event

- We will create an event that is a “Chicken” event
- DO NOT click on “Create New Event”!
- Instead, click on the word Chicken in the object tree and drag it into the Event window, then select “when a key is typed”

Set up the Chicken Event

- Notice the word “Chicken” before the new event.
- Click on “any key” and select “letter”, then “S”
- Drag “Chicken turn” into the Nothing and select right 1 revolution (see next page)
Resulting Chicken Event

- Because this event is a “Chicken” event, it will be saved out with the Chicken.
- NOTE: If you add a new event for the Chicken, but don’t create it by dragging the object into the event window, then it will default to a world event and will not save out with the Chicken.

Let’s rename our talented Chicken

- In the object tree, right click on “Chicken”, select “rename” and rename the Chicken to “TalentedChicken”.

RESULT:
Now save out the TalentedChicken

• In the object tree, right click on “TalentedChicken”, select “save object”

• The object is saved in a file called TalentedChicken.a2c

Start a new Alice world with sand

• To put the chicken in this world, click on “File”, then “import”

• Browse to where you stored “TalentedChicken.a2c” and import it into your world.
Add Chicken from the local Library

- Note the chicken you saved is red, and twice as big as the Alice Chicken. Also note the methods you wrote, jump and goAround, and the Chicken Event, are also there.

- Note the code you wrote in myFirstMethod is not there! Only items related to Chicken properties and methods are saved with the TalentedChicken.

Add a cow

- Fill in the code in myFirstMethod to have the chicken jump twice and goAround the cow.