

Scribbler Mac Setup

Step 1: Download Calico

Open a browser (such as Internet Explorer or Firefox or Chrome; this setup will use Chrome) and follow the instructions for Mac at http://calicoproject.org/Calico_Download#Macintosh

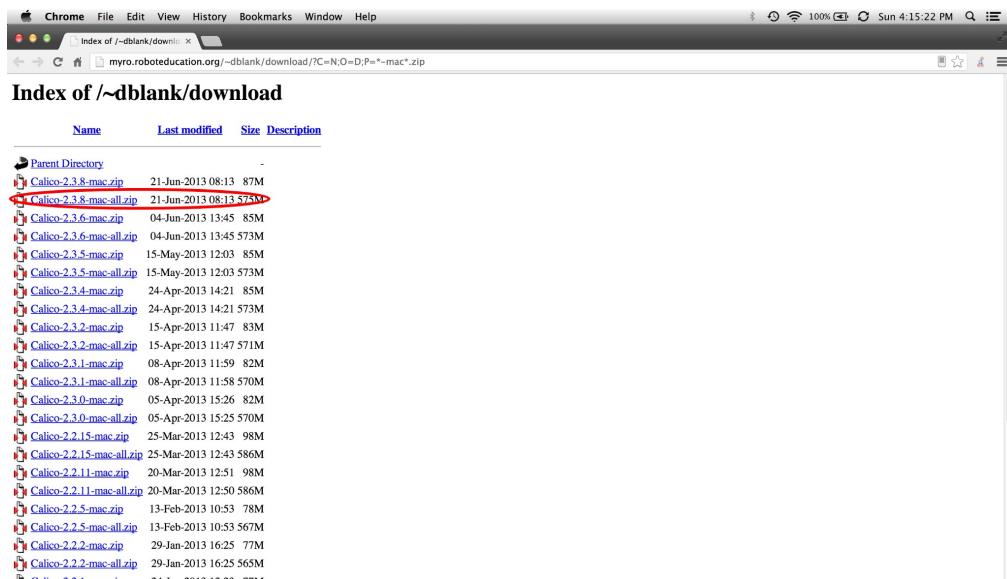
Picture Walkthrough:

1. Install Calico Software:

1. Open a browser (such as Chrome) and go to the following link

http://myro.roboteducation.org/~dblank/download/?C=N;O=D;P=*-mac*.zip

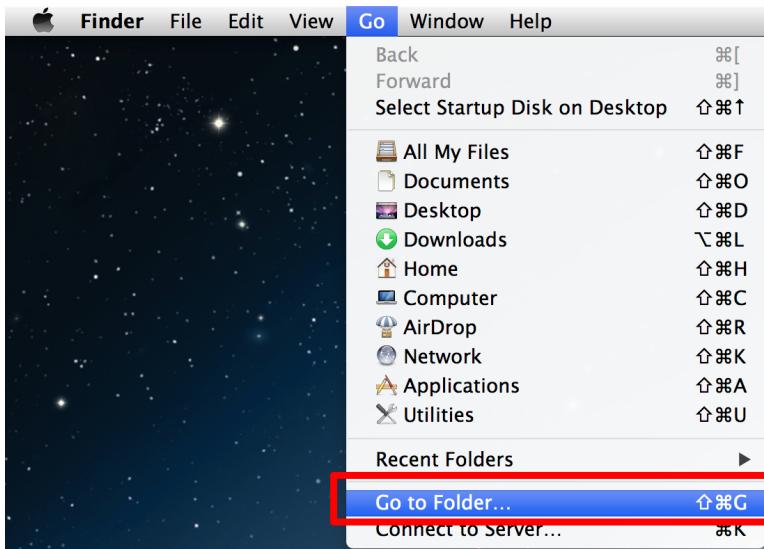
2. Download the latest version of Calico by left-clicking the highest-numbered version on top that has -all in its name.



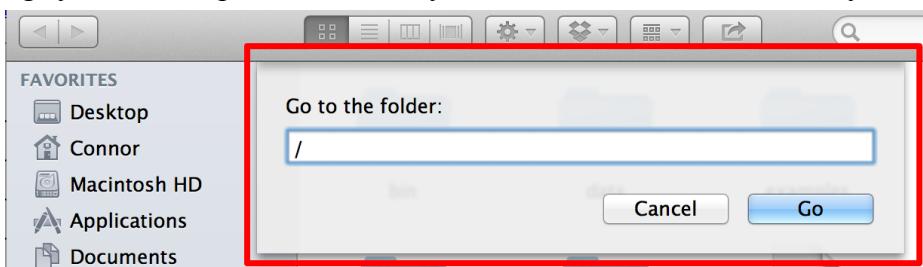
3. By default, the zip file will download to your “Downloads” folder on your Mac. If you’re prompted to choose a location, just pick the Downloads folder.

4. When the download is complete, go to your Downloads folder (or the location the file downloaded to) and double click the zip file Calico-2.3.8-mac-all.zip (the version name may be higher) to unzip it. A new folder called “Calico” should appear when it is done unzipping. Open this Calico folder by double-clicking it.

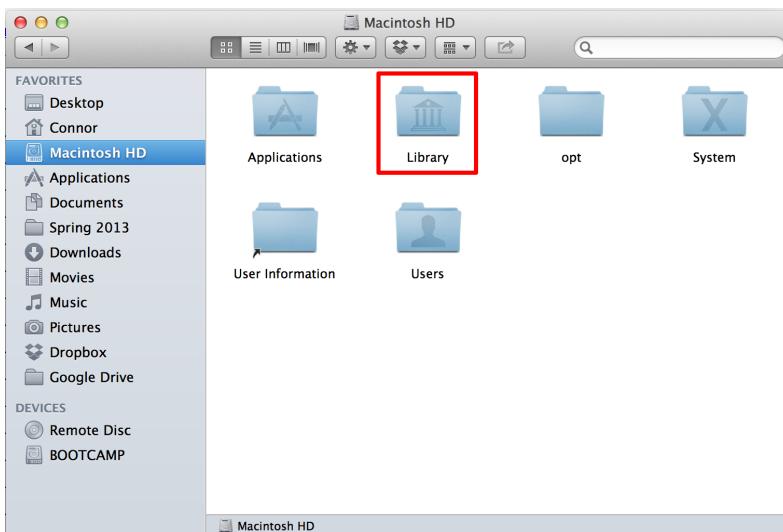
5. You now need to open the Frameworks folder in your Mac’s Library to transfer some files from the Calico folder so that the application can run. To start this, open a new finder window (by pressing the “File” menu up top then “New Finder Window” or using the keyboard shortcut Command+N), and keep the window with the Calico folder open — you’ll be coming back to it shortly. With the new finder window open, click the “Go” menu at the top, then “Go to Folder...”



6. A dialog will pop up where you can specify what folder you want to go to. Type “/” then click go. This brings you to the topmost folder on your hard drive where the Library folder is located.

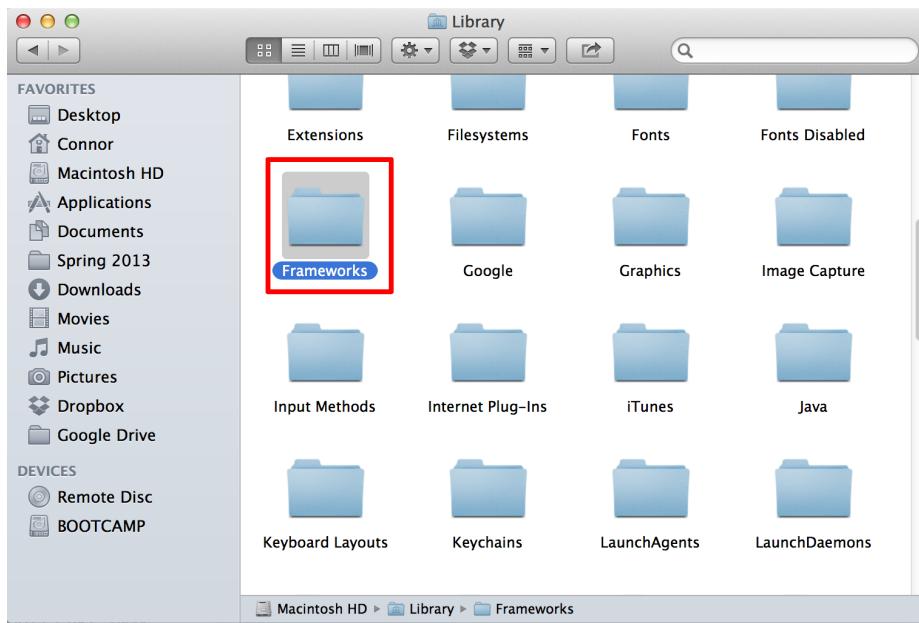


7. Look for the “Library” folder, and double-click to open it

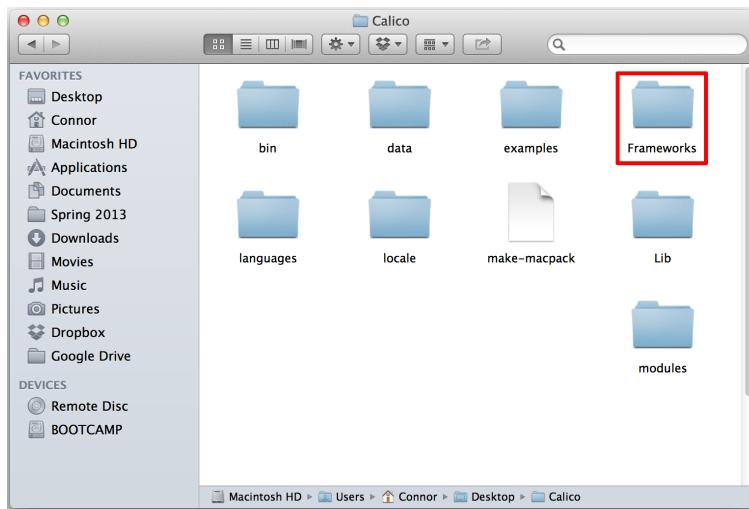


8. Now look for the “Frameworks” folder inside the Library folder you just opened. You only need to

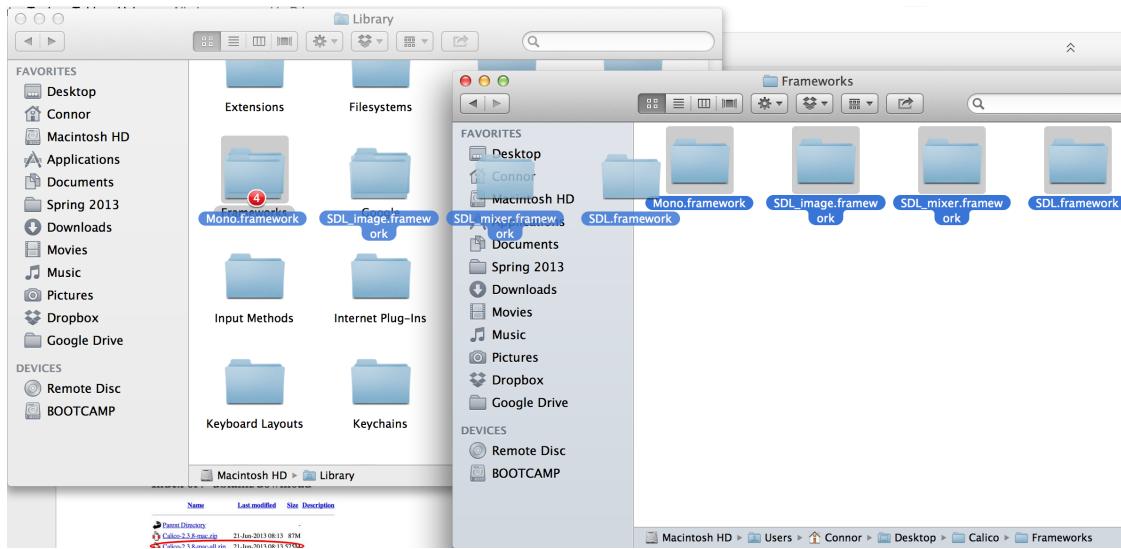
locate it — you don't need to open it. The Frameworks folder is where we'll be copying some files from the Calico folder to.



9. Now go back to your finder window that has the Calico folder, and open the “Frameworks” folder inside it by double-clicking (Note: this is the Frameworks inside the Calico folder, which is different from the Frameworks folder in your Mac’s Library)



10. Copy all of the the folders inside Calico’s Frameworks folder to your Library’s Frameworks folder by dragging a box around them and clicking and dragging the selection from one window to the other.

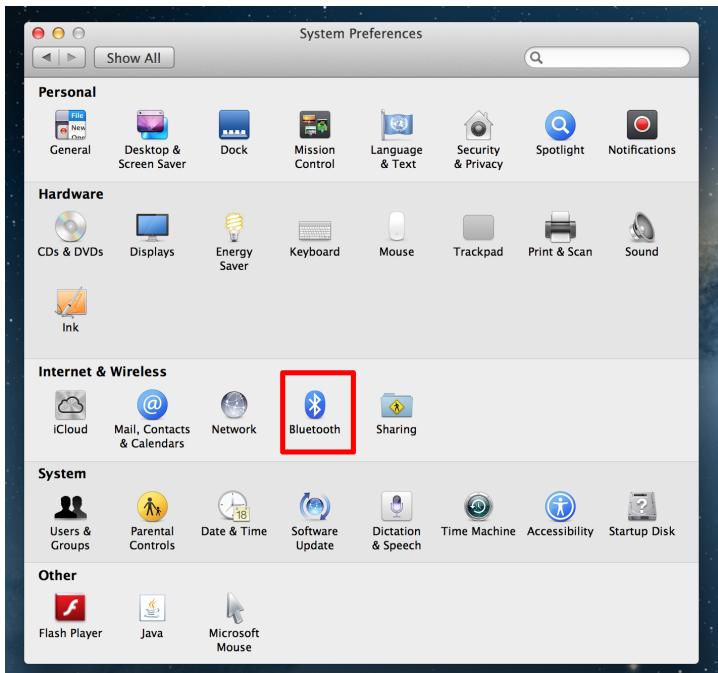


11. If you want, you can drag the whole Calico folder into your Mac's Applications folder. While it's not necessary, I recommend it. This makes it easier to find in the future and puts the Calico application in the Launchpad if you're running Mac OS X 10.7 or higher. You are now done setting up Calico. All that's left is setting up bluetooth!

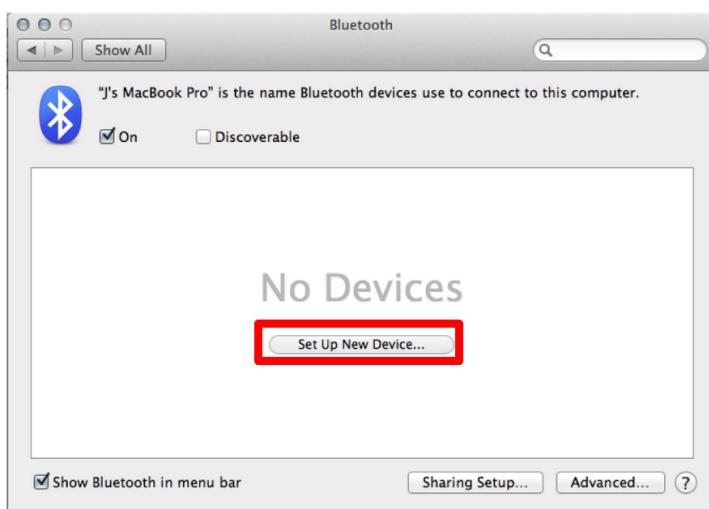
Step 2: Scribbler Bluetooth

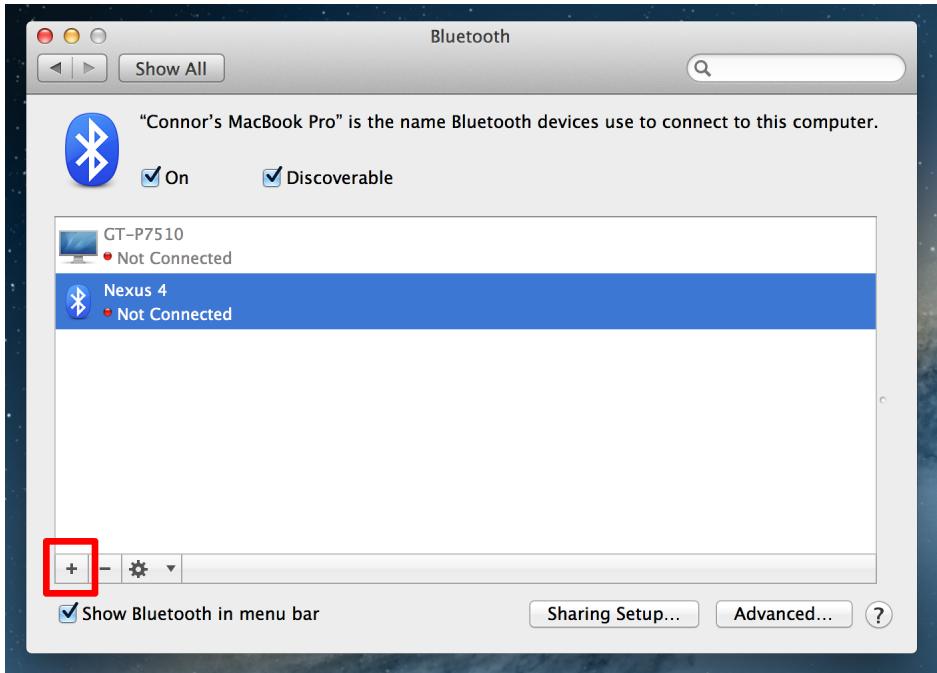
To connect to the Scribbler and run programs in Calico, you need to set up the bluetooth connection with the Fluke.

1. Open System Preferences → Bluetooth

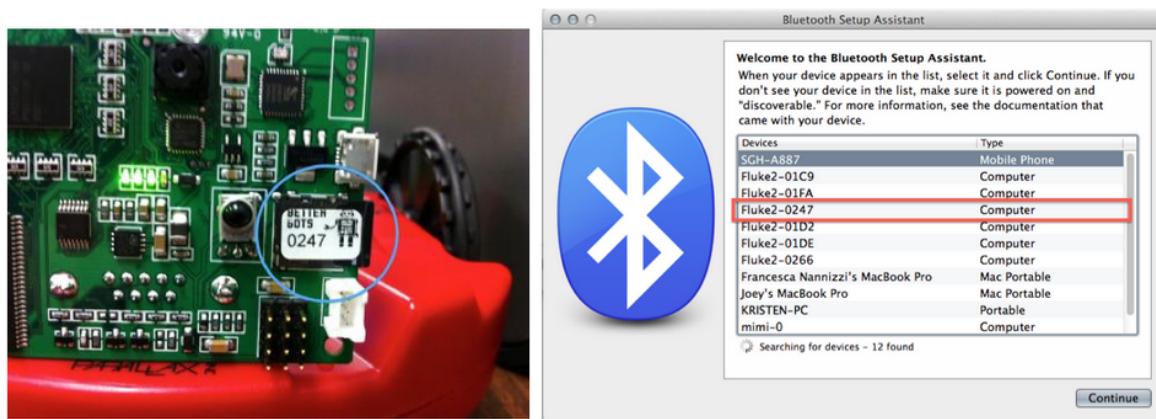


2. Turn on your robot.
3. Press the “Set Up New Device...” Button, or + Button, depending on your OS version.

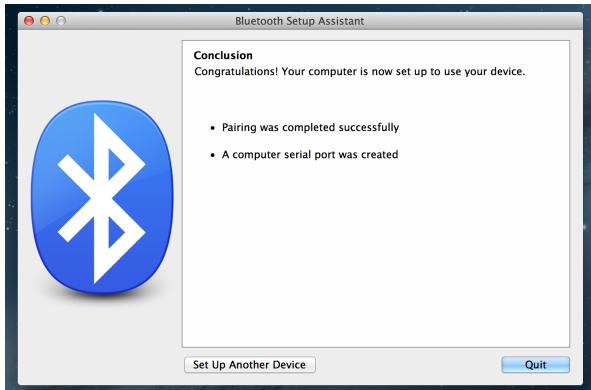




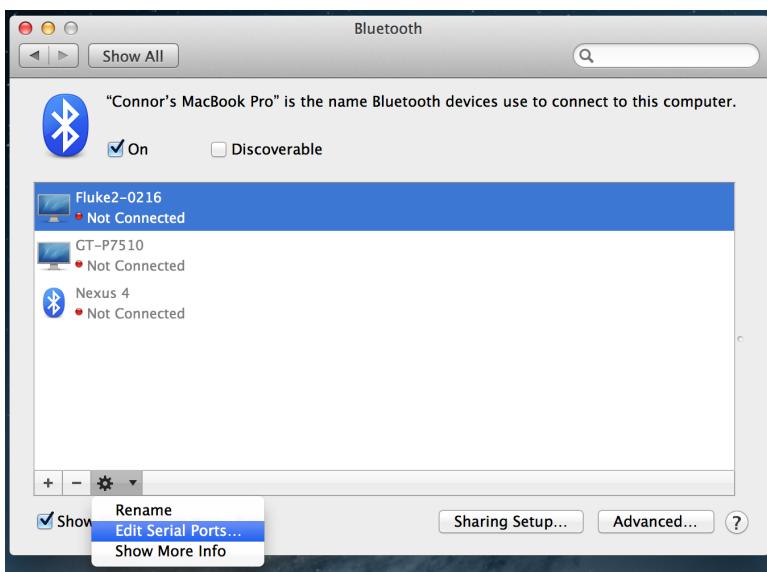
4. Find your fluke number in the window. Press “continue”



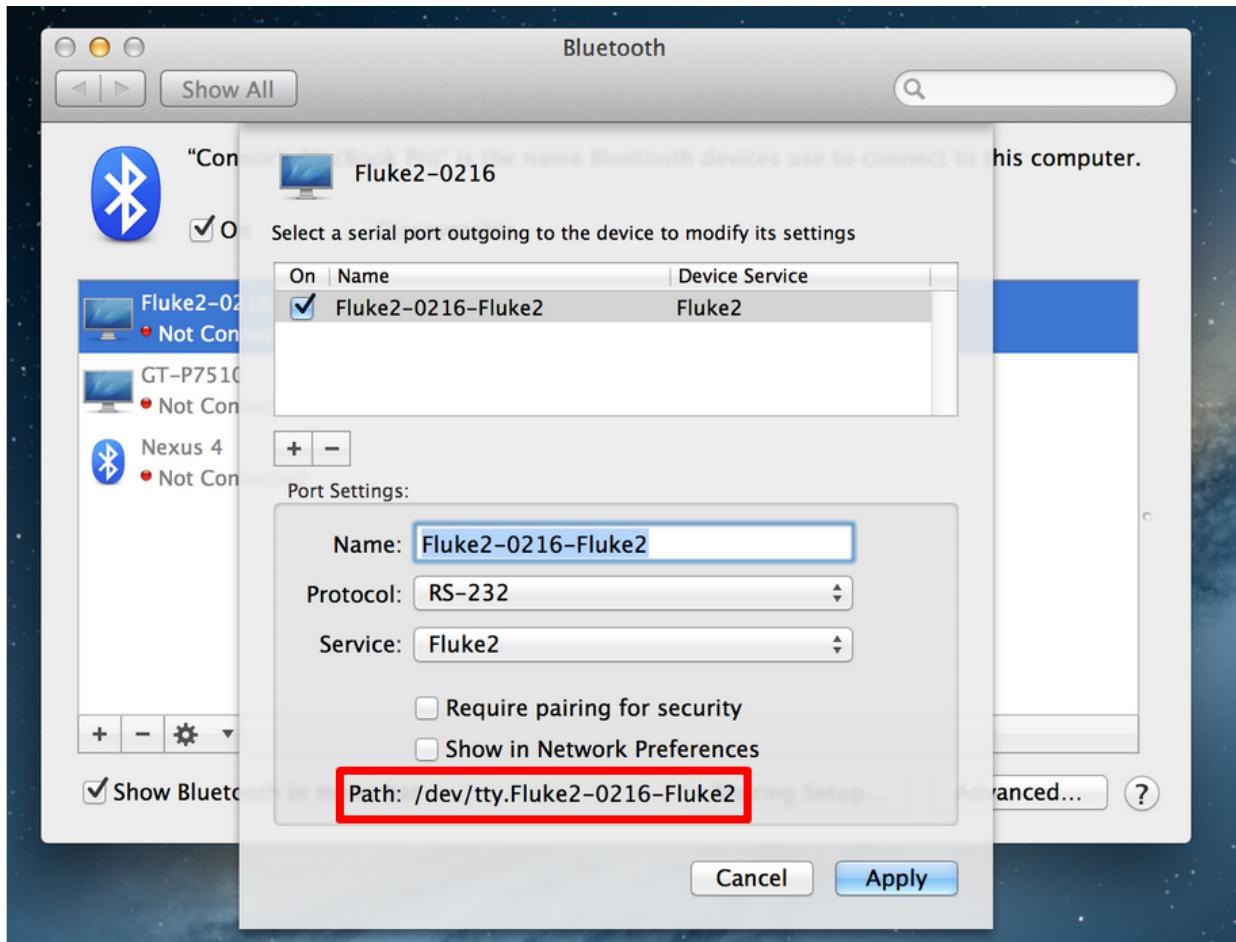
5. After a successful connection, you should be able to see the following window. Close the window.



6. Have the Fluke selected in the Bluetooth window, and press the gear button, and click “Edit Serial Ports”

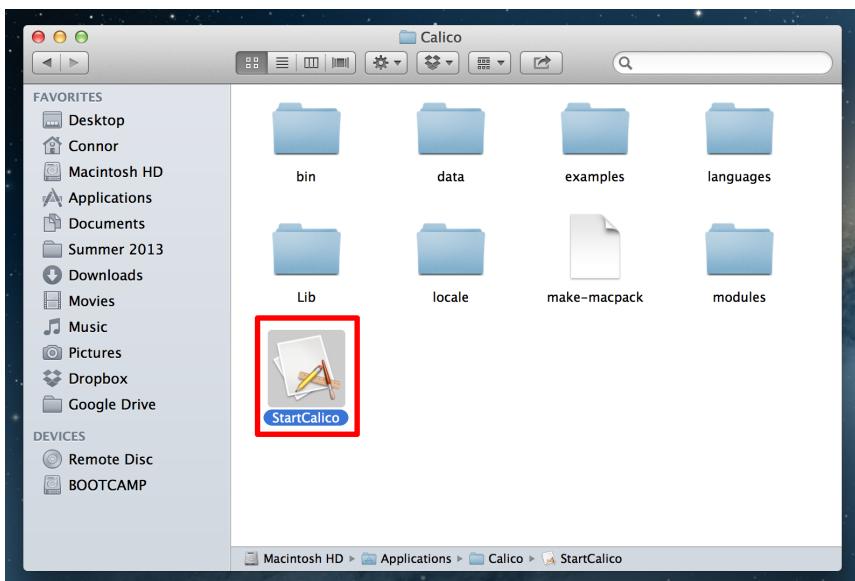
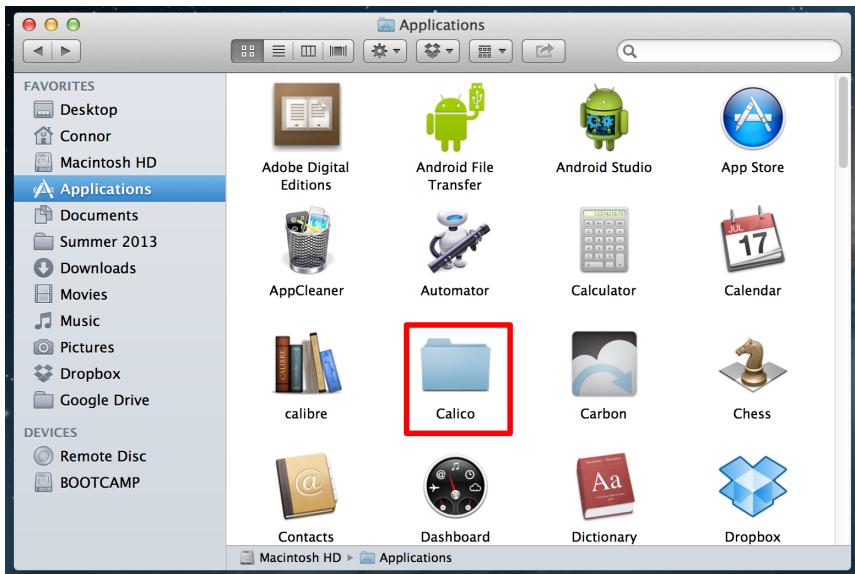


7. Find the field that says Path: at the bottom of the screen. For my robot, it's
/dev/tty.Fluke2-0216-Fluke2 You will need this path every time you write a new program to connect to your robot. Highlight the text and copy it so that you can paste it later.

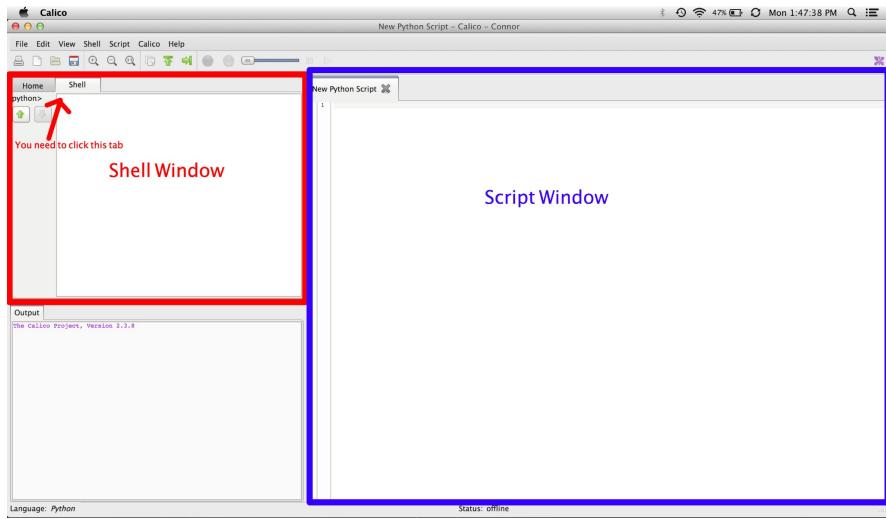


Step 3: Firmware Upgrade (if it's a new Scribbler)

1. Go to your Calico folder (in Applications or Downloads if you didn't move it) and double-click the StartCalico application — you may need to scroll down in the folder to see it.

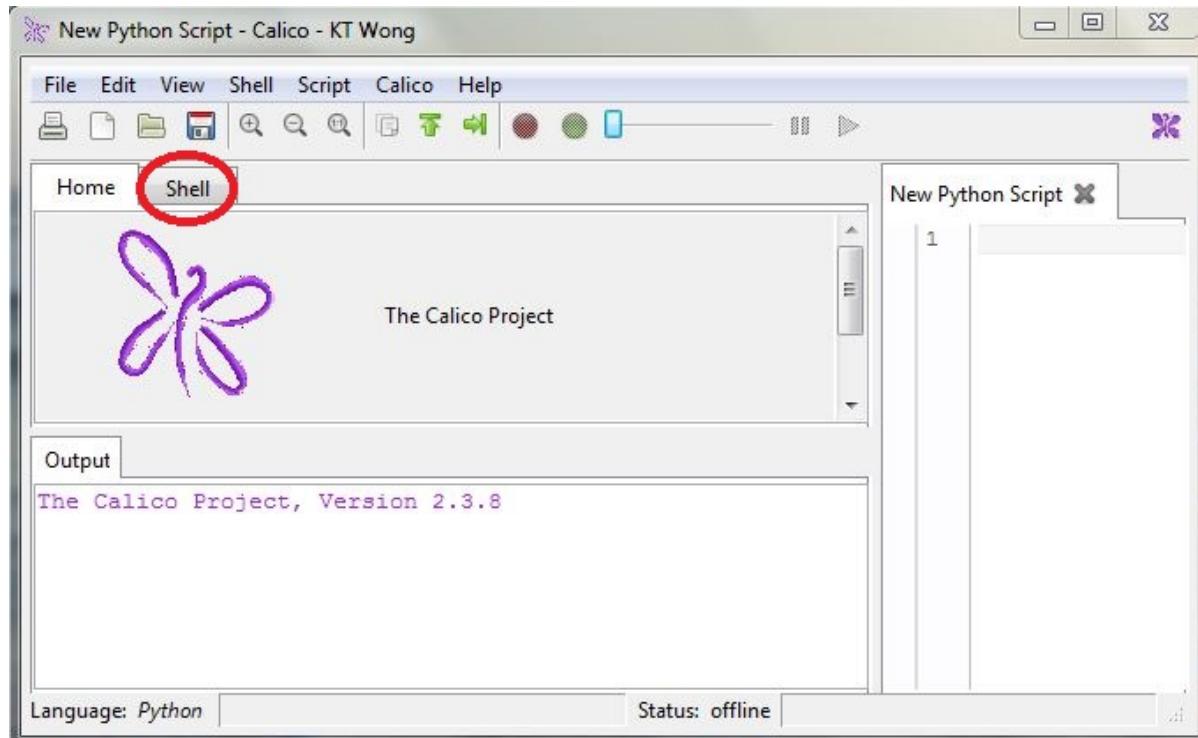


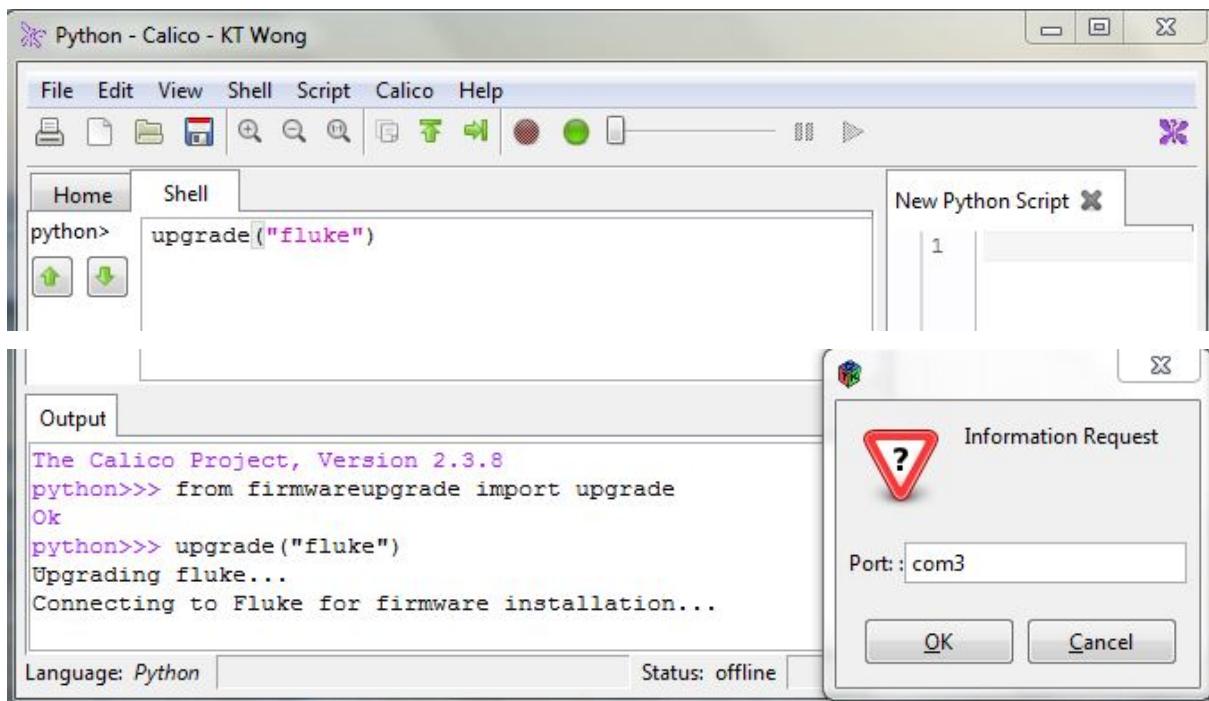
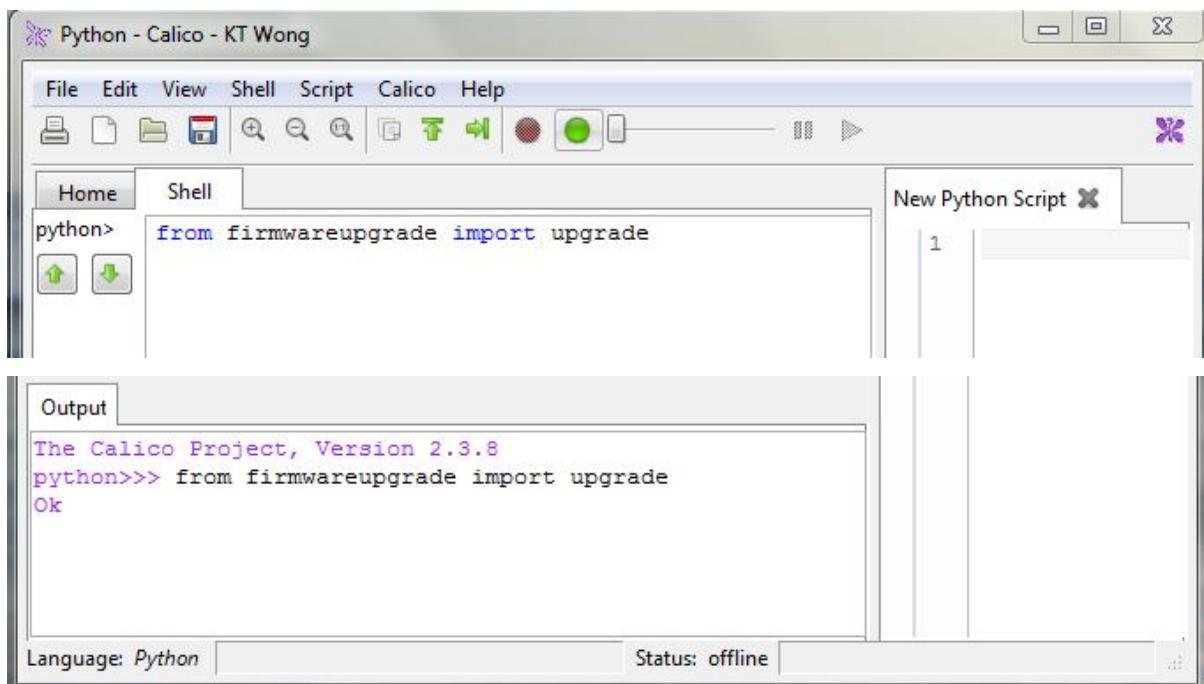
2. Calico will open. When it opens, click the shell tab in the upper left region:

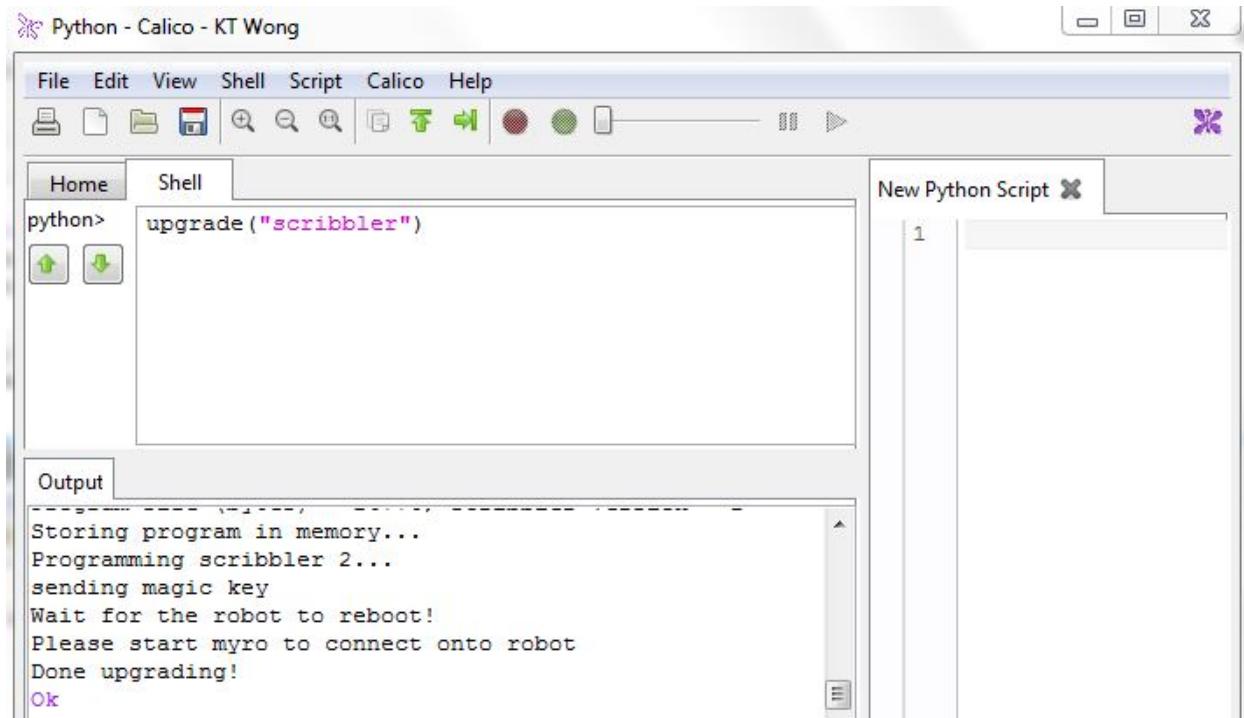


Type the following lines and press enter after each line. You'll need to enter the bluetooth port in a pop-up window, which is what you got in Step 2 (ex: /dev/tty.Fluke2-0216-Fluke2):

```
from firmwareupgrade import upgrade  
upgrade("fluke")  
upgrade("scribbler")
```



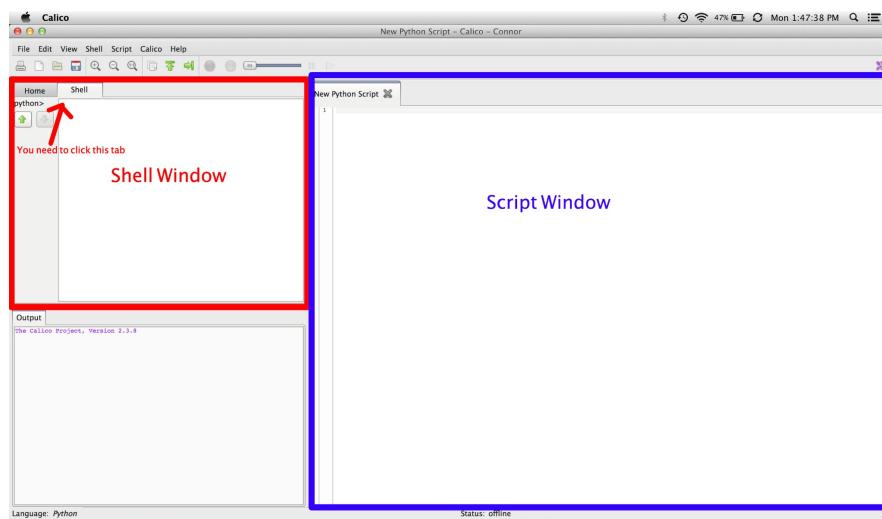




Done! Now you're ready to run your first program. NOTE: You may need to close Calico and re-open it before starting to run your first program.

Step 4: First Program

You can follow along and type python code as shown or just copy and paste it into the Calico Script window (you used the Shell to upgrade the robot, but it's good try out both). This is the blue region in the picture below:



The first lines should start with importing all (*) functions from Myro and then initializing your Scribbler:

```
from Myro import *
init("/dev/tty.Fluke2-0216-Fluke2")
```

Notice that you type init using the path to the robot you found during the bluetooth setup. You will need to **replace init("/dev/tty.Fluke2-0216-Fluke2") with the path to your robot that you copied earlier.**

Now you can set your Scribbler's name into the Scribbler's memory and then you can print the newly set name with

```
setName("CPK")
print("Now my name is ", getName())
```

For some basic functions, you can use

```
beep(1, 440)
forward(0.5, 1)
stop()
```

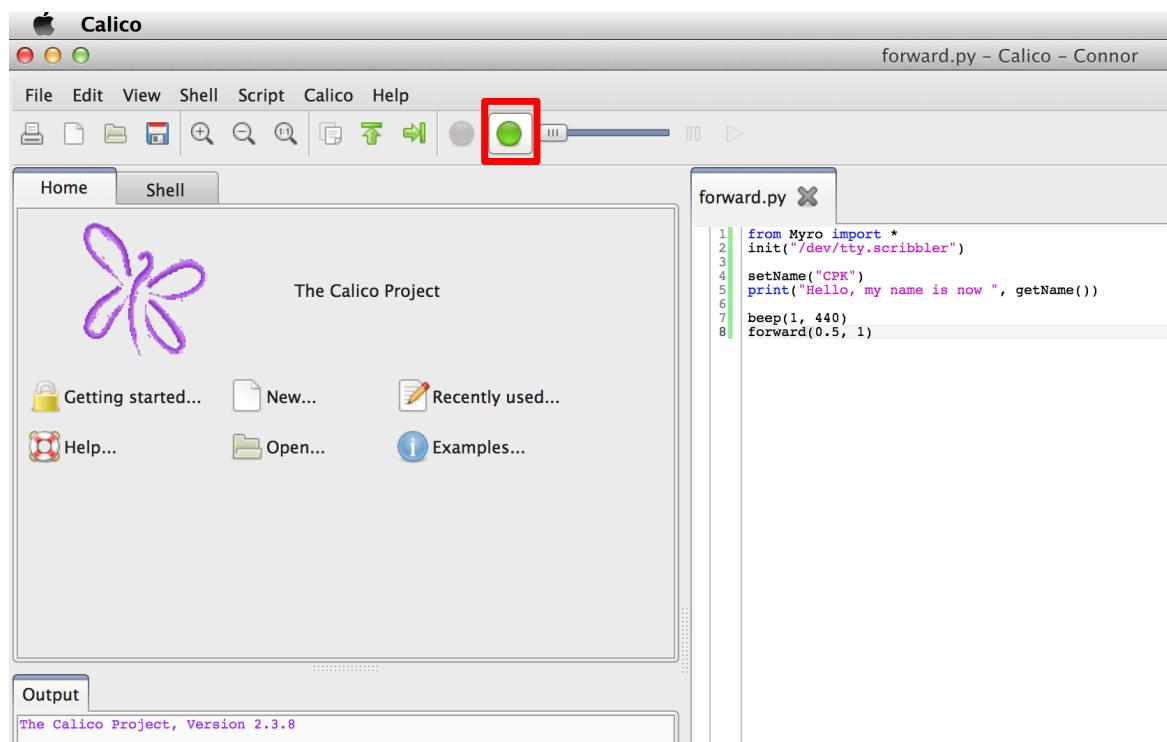
which will make the Scribbler beep for 1 second at 440 Hz and move forward at a speed of 0.5 (where 1 is the max speed) for 1 second and then it will stop all movement and end

The total script is:

```
from Myro import *
init("/dev/tty.Fluke2-0216-Fluke2")

setName("CPK")
print("Now my name is ", getName())
```

```
beep(1, 440)
forward(0.5, 1)
stop()
```



3. Left-click the Green button to run the program. You can save the file under any name - in this guide, we will call it forward

4. After your Scribbler beeps and moves forward, you have run your first Scribbler program! The output produced by the program is shown below

The screenshot shows the "Output" window of the Calico IDE. It displays the following text:

```
The Calico Project, Version 2.3.8
Running '/Users/Connor/Desktop/forward.py'...
Shell reset!
You are using:
  Fluke, version 3.0.9
  Scribbler2, version 1.1.5
Hello, my name is 'Scribbly'!
Hello, my name is now CPK
Done
```