# Getting Started – for Mac user (Setting up your Robot)

**Get the drivers and download the software to make your robots go!**

- Programmer Driver

- Arduino Software IDE

- Ringo & Wink Software Libraries

## Driver Installation

To prepare your computer to write code for your Wink and Ringo robots, you will need to perform the following steps. Install the Driver for the Programming Adapter
Install the Arduino Development IDE (this is the program you'll use to write your code)
Install the Ringo Library Files
Inside Arduino, select "Arduino Fio" as the board, and select the correct port in Tools>Port
**Need more help?**
This is a smooth process for most people, and once you have the drivers and software loaded up on your computer, it's easy sailing as you begin to play with your robots. If you do encounter any difficulty

getting the programming process started, please  Contact Us for assistance.

**Driver Installation- IMPORTANT!**
Before you can use the Programming Adapter to load code onto your robots, the FTDI drivers must be installed first. Please follow the instructions on this page to download and install the correct driver for your computer and operating system.

It is important that the FTDI drivers be installed on your computer BEFORE connecting the programmer to your computer.

# Duino Kids

## Windows Driver Installation

1.Download the Windows FTDI driver.
2.Run the installer as administrator.  (Right click the installer .exe you downloaded and select "Run as administrator" from the drop down.  It should be listed toward the top). If not run as administrator, the installation will likely fail.
3.Once installation is complete, the Plum Geek programmer may be plugged in. Your computer should now recognize it as a virtual com port and assign it a com port number.

## Mac Driver Installation

Download the Mac FTDI driver (Mac OS 10.9 and above).
Follow the Mac driver installation guide for your version of Mac OS.  You can download the installation guide here:  (**PDF**)
If you have an earlier version of Mac OS (10.3 to 10.8), you can download the earlier version driver here: (**Download**)
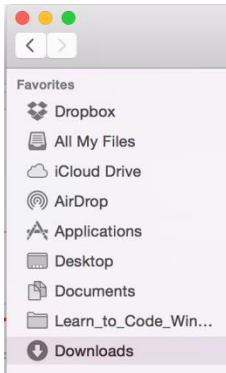
[FTDI Drivers - Windows](#)

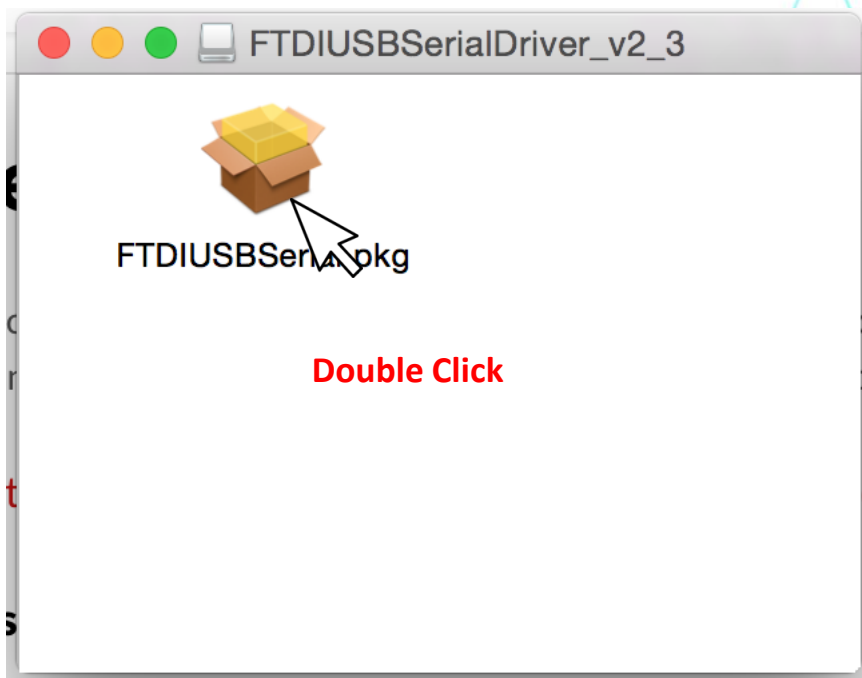[FTDI Drivers - Mac](#)

## For Mac user

| FTDIUSBSerialDriver....dmg | ▾ |

Once the file has been downloaded, you should be able to see the "FTDIUSBSerialDriver....dmg" on the lower left of the download bar or it can be found in the Finder >"Downloads" folder.
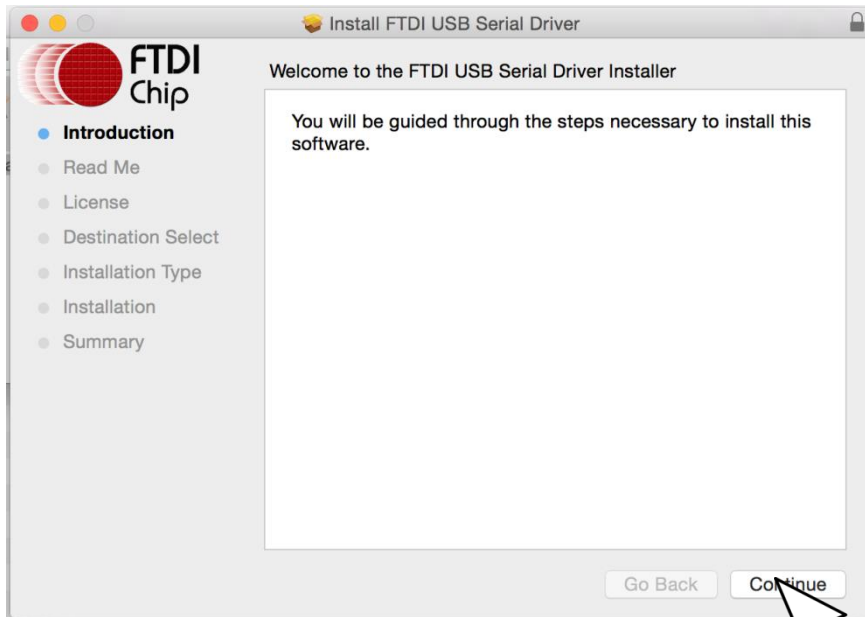
**Favorites**
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FTDIUSBSerialDriver_v2_3.dmg

| FTDIUSBSerialDriver....dmg | ▾ |

**Go ahead to click on the "FTDIUSBSerialDriver....dmg"**

FTDIUSBSerialDriver_v2_3

FTDIUSBSerial.pkg

**Double Click**

**Double click on the "FTDIUSBSerial.pkg" icon**

**Duino Kids**

Install FTDI USB Serial Driver

**Welcome to the FTDI USB Serial Driver Installer**

You will be guided through the steps necessary to install this software.

- Introduction
- Read Me
- License
- Destination Select
- Installation Type
- Installation
- Summary

Go Back    Continue

**Click Continue**

Install FTDI USB Serial Driver

**Important Information**

**FTDIUSBSerialDriver ReadMe**

FTDIUSBSerialDriver is an implementation of a serial driver for FTDI USB devices on Mac OS X.  It supports FT8U232AM, FT8U245AM, FT232BM, FT245BM, FT2232, FT232R, FT245R, FT2232H, FT4232H, FT232H and FT X Series devices.

**Revision History**

v2.3.0      (26th February 2015)
            Updated for 10.9 and 10.10: signed, installs to
            recommended location, 64-bit only.

v2.2.18     (8th August 2012)
            Avoid dropping bytes while writing in some scenarios.

v2.2.17     (24th February 2012)
            Corrected issue with custom port names.
            Release for Lion.

v2.2.16     (28th February 2011)
            Added support for FT232H.

Print…    Save…         Go Back    Continue

**Click Continue again**

- Introduction
- **Read Me**
- License
- Destination Select
- Installation Type
- Installation
- Summary

4

From the Software License Agreement, click Continue to proceed next step.
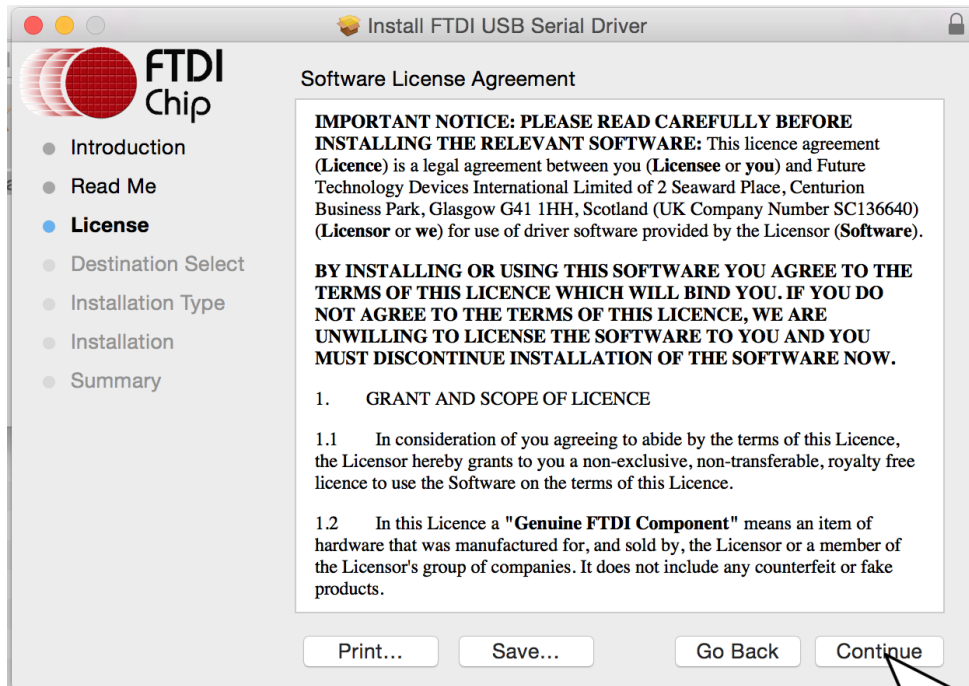


**Click Continue**
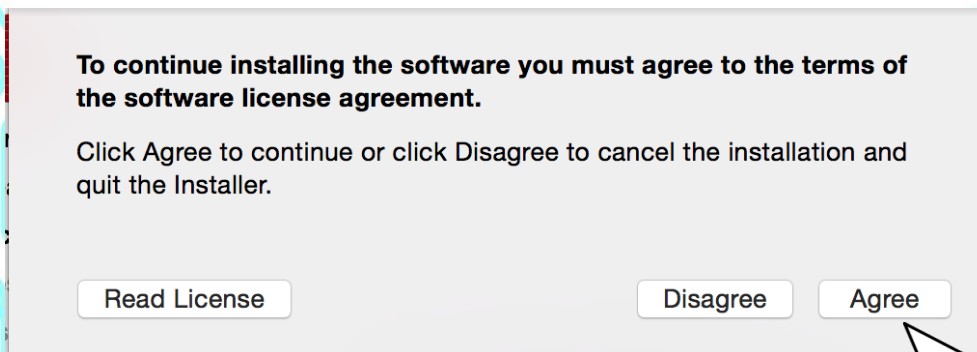


**Click Agree to proceed**

Go ahead to click Install
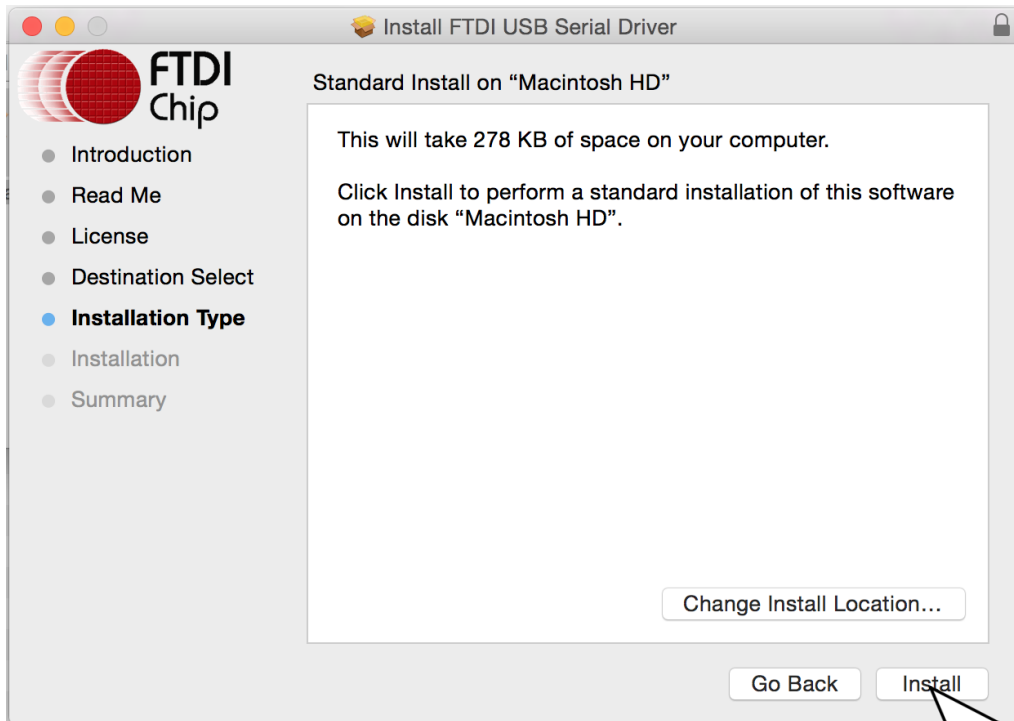
Click Install

Once the installation of the Mac FTDI driver is successful, go ahead and close it.
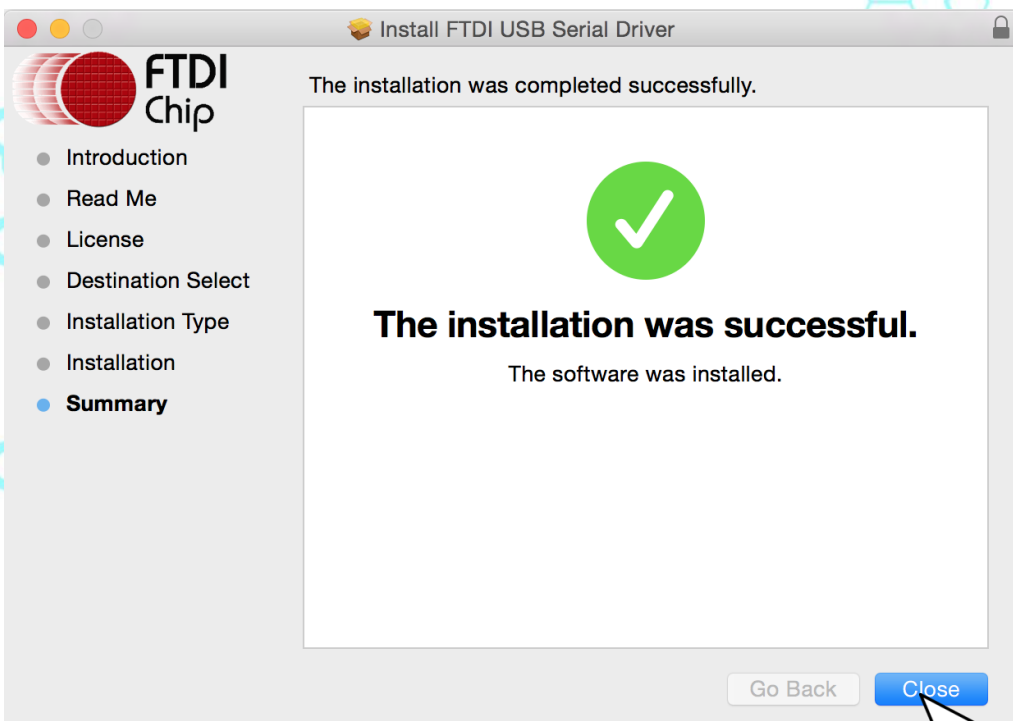
Installation of the Driver Completed

Click Close

  Duino Kids

# Arduino IDE Installation

Arduino is the program you will use to actually write code for your robots.  It is kind of like a text editor or word processor for computer code.  Arduino includes its own compiler that runs in the background, so no additional tools are required.

## Download Arduino for your Operating System



You will want to use Arduino version 1.6.5 or later.

Visit the Arduino Software Download page and grab the correct version for your operating system.



Once you are at the Arduino Home page, go ahead to click "Mac OS X 10.7 Lion or newer"

It will lead you to this page. If you would like to make a donation to support the Arduino Software, go ahead and click "Contribute and Download". Otherwise, click "Just Download".

## Support the Arduino Software

Consider supporting the Arduino Software by contributing to its development. (US tax payers, please note this contribution is not tax deductible). Learn more on how your contribution will be used.

SINCE MARCH 2015, THE ARDUINO IDE HAS BEEN DOWNLOADED 8,051,566 TIMES. IMPRESSIVE! THIS IDE IS NO LONGER JUST FOR ARDUINO AND GENUINO BOARDS. HUNDREDS OF COMPANIES AROUND THE WORLD ARE USING IT TO PROGRAM THEIR DEVICES, INCLUDING COMPATIBLES, CLONES, AND EVEN COUNTERFEIT. YOU CAN HELP ACCELERATE THE DEVELOPMENT OF THE ARDUINO IDE BY CONTRIBUTING TOWARDS THE EFFORT OF MAKING IT BETTER.

$3    $5    $10    $25    $50    OTHER
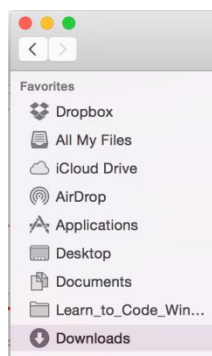
JUST DOWNLOAD          CONTRIBUTE & DOWNLOAD

**Click Here**

Once the file has been downloaded, you should be able to see the "ardunio-1.6.9-macos.zip" on the lower left of the download bar, or it can be found in the Finder>"Downloads" folder.
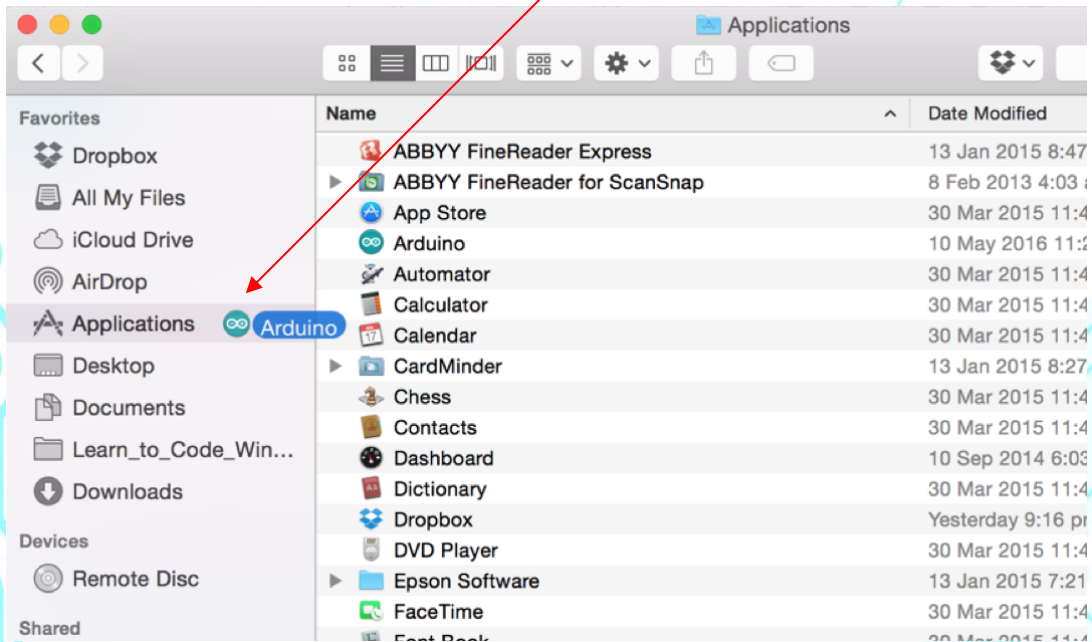
arduino-1.6.9-macosx (1).zip ▾

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- Downloads

arduino-1.6.9-macosx.zip

8
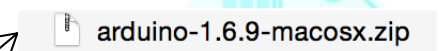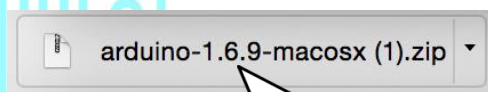
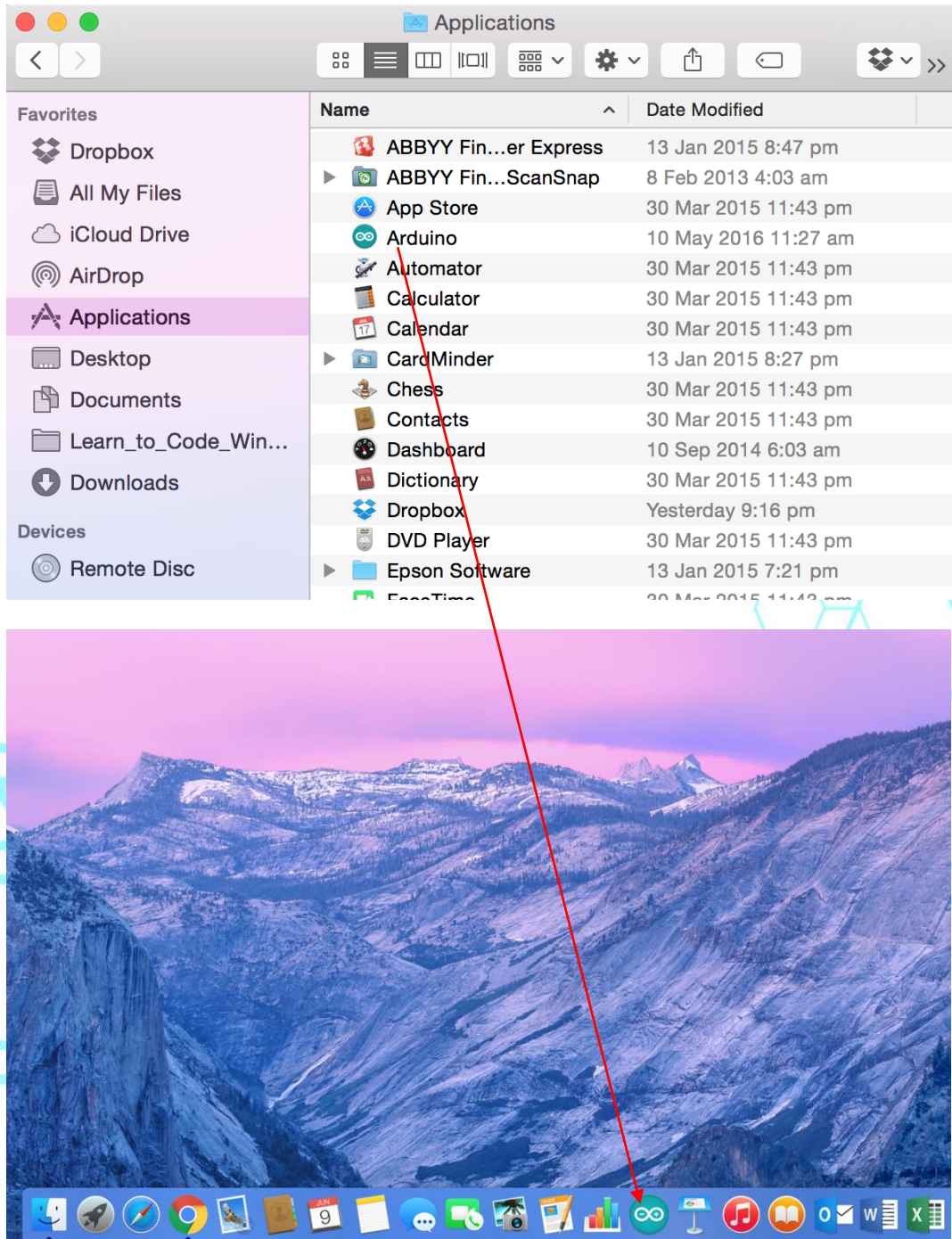**Go ahead to click on the "ardunio-1.6.9-macos.zip" to unzip.**

Next, proceed to Finder >"Downloads" folder, you will see the Arduino file with the icon.
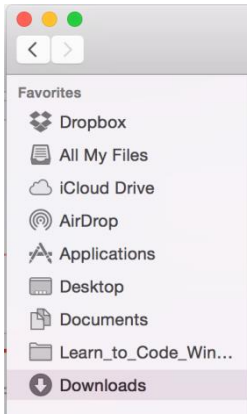
You may drag and drop it in the "Applications" folder

To make it quicker to launch the Arduino IDE, you may drag and drop it in the dock on you Mac. (see below)
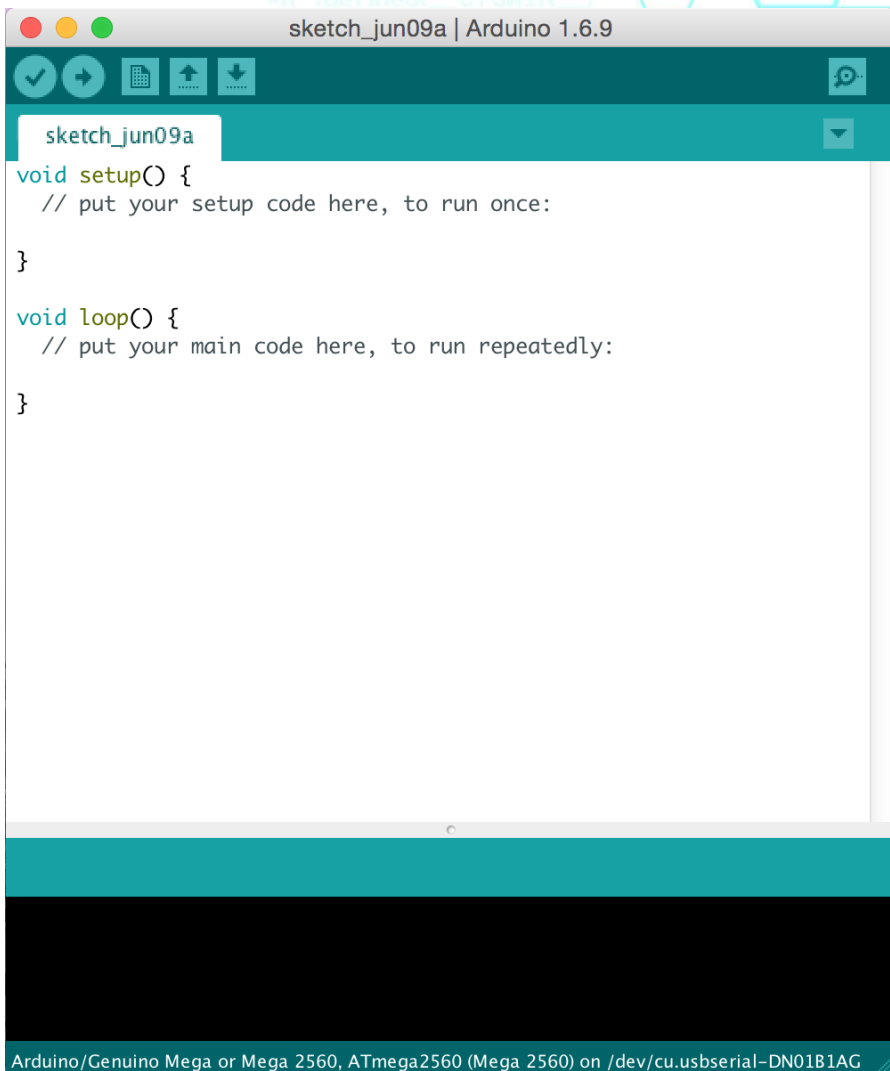
# Duino Kids
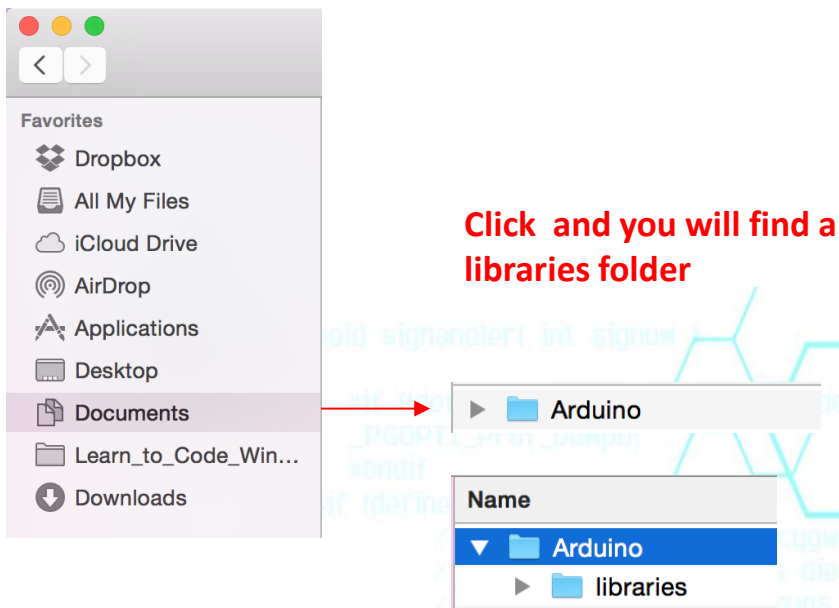
Go ahead and launch the Arduino IDE software

**Click icon to launch**

Once opened. It should look like this.

```
sketch_jun09a | Arduino 1.6.9

sketch_jun09a
void setup() {
  // put your setup code here, to run once:

}

void loop() {
  // put your main code here, to run repeatedly:

}
```

Arduino/Genuino Mega or Mega 2560, ATmega2560 (Mega 2560) on /dev/cu.usbserial-DN01B1AG

## Duino Kids

Locate the" Arduino folder" inside "Documents folder"

**Click and you will find a libraries folder**

Open the "Arduino" folder and you will find a libraries folder created. The next step is to install the "Ringo" software libraries into the "Arduino Libraries" .Go ahead to quit the Arduino software

**Click to close Ardunio**

# ⌨ Duino Kids
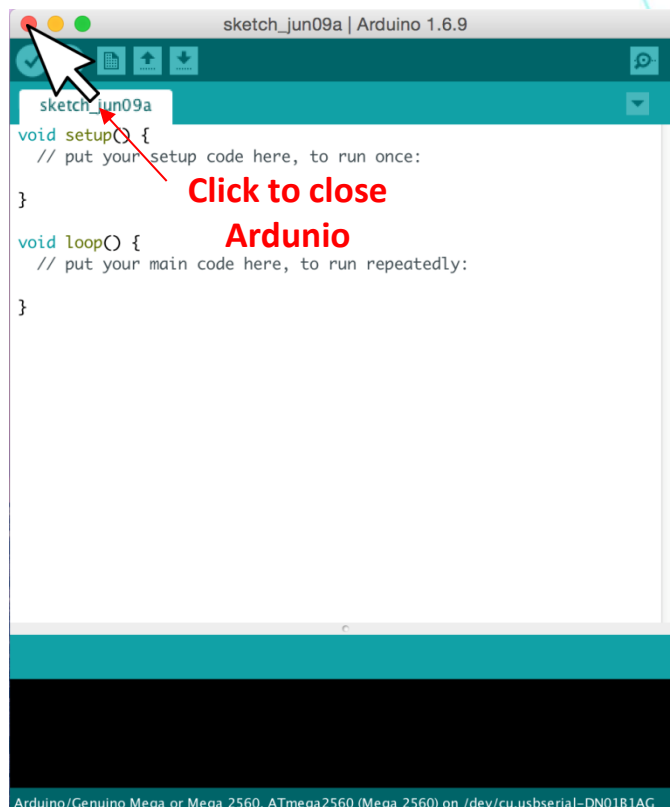
# Install Ringo Software Libraries

The software libraries include code you'll add to your Arduino installation.  This only needs to be done one time.  Arduino will use these library files as necessary automatically after they are installed.

1)   Download a zip archive including all the **Ringo library** files (also use these same files for Wink) or Click on the icon below:

## Libraries

| Ringo Libraries | |
|---|---|

**2) Copy the three folders included in this zip file into your Arduino/libraries folder:**
For the examples to compile, these three important folders must be copied into your libraries folder:  **Adafruit_NeoPixel**, **RingoMsTimer2**, and **RingoWire**
You'll need to re-start the Arduino software for it to see the new libraries.

The "libraries" folder is located inside the folder where your computer saves Arduino sketches.

**Windows Library Location:**
My Documents\Arduino\libraries

**After copying the paths should look like this:**
My Documents\Arduino\libraries\Adafruit_NeoPixel
My Documents\Arduino\libraries\RingoMsTimer2
My Documents\Arduino\libraries\RingoWire

**Mac Library Location:**
Documents/Arduino/libraries

**After copying the paths should look like this:**
Documents/Arduino/libraries/Adafruit_NeoPixel
Documents/Arduino/libraries/RingoMsTimer2
Documents/Arduino/libraries/RingoWire

Arduino libraries installation

For more information or help regarding library installation, check out the "Libraries" page on the official Arduino site:
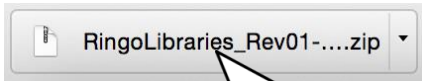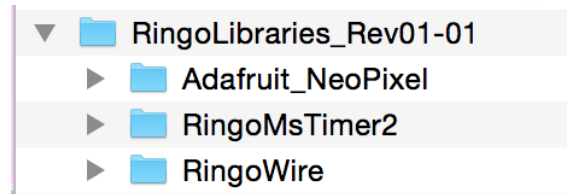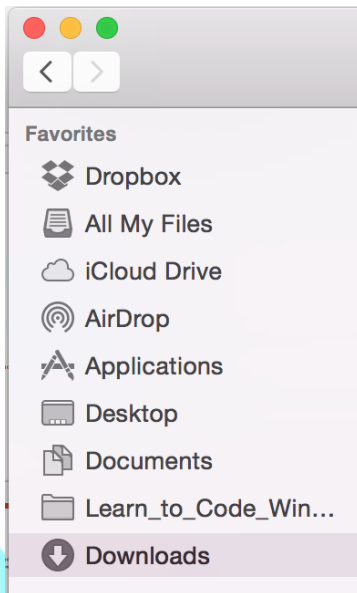https://www.arduino.cc/en/Guide/Libraries

Once the file has been downloaded, you should be able to see the "RingoLibraries_Rev01…..zip" on the lower left of the download bar or it can be found in the "Downloads" folder.
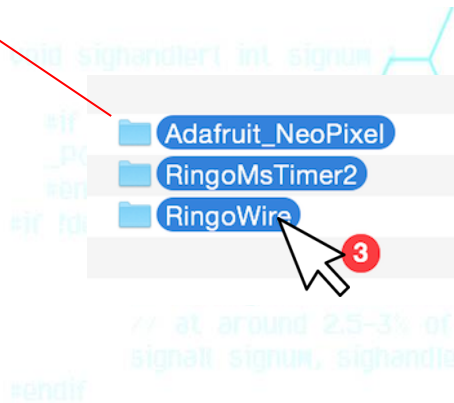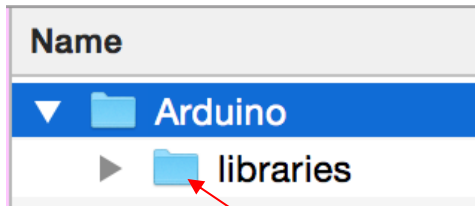
RingoLibraries_Rev01-....zip

RingoLibraries_Rev01-01.zip
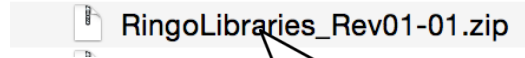
**Go ahead to click  on the "RingoLibraries_Rev01…..zip"**

Once you've unzipped the folder, you will see the following three folders from the "Downloads" folder:
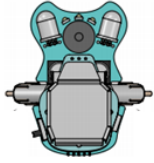
| | |
|---|---|
| Favorites | ▼ 📁 RingoLibraries_Rev01-01 |
| Dropbox | ▶ 📁 Adafruit_NeoPixel |
| All My Files | ▶ 📁 RingoMsTimer2 |
| iCloud Drive | ▶ 📁 RingoWire |
| AirDrop | |
| Applications | |
| Desktop | |
| Documents | |
| Learn_to_Code_Win… | |
| Downloads | |

Drag and drop/ copy the three files into the Arduino libraries folder.



Once the files is inside the "Arduino Libraries" folder, you are done with the complete installation process.
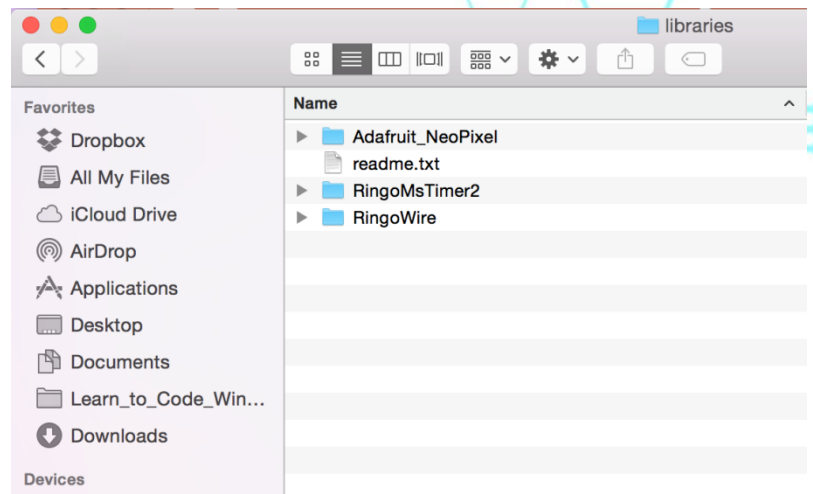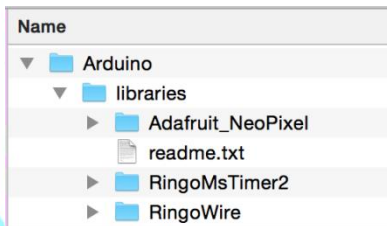
# Programming your Robot

Follow the steps  and  get yourself familiar with how to load the program sketch into your robot.

Windows

Mac

Windows user

Mac user

# Duino Kids

Once the button is clicked, it will lead you to the following page

## Wink Demo

There is four fun demo software for you to get your robot up and running. These are called Arduino code files (sketches). You may use the "Base Sketch" as a template to begin writing your code. If you are already familiar with writing some basics, go ahead to explore your creativity or modify the other code examples to learn and have a better understanding.

| Software File | Description | Download |
|---|---|---|
| Base Sketch | Use the Base Sketch to begin writing your own code. The project automatically includes the supporting tabs that include Wink's background functions. | |
| Pre-Loaded Demo | This is the code that was loaded on your Wink when it was shipped. The basic behaviours include the Wink Dance, Barrier and Object Avoidance, and Light Seeking. You can index between the three behaviours by pressing the BTN button on the robot. | |
| Drive with IR Remote | This demo allows you to drive an IR equipped Wink with the optional remote control. Use this sketch as a basis for making your own remote control triggered behaviours. | |
| ZOMBIE Wink! | This is a fun behaviour we created for Arduino Day 2016. Load this on two or more Wink robots and watch the Zombie Apocalypse happen! | |

**Click this icon to download the "Pre-Loaded Demo"**

Once the file has been downloaded, you should be able to see the
"Wink_PreLoadedDemo.zip" on the lower left of the download bar or it can be found
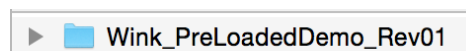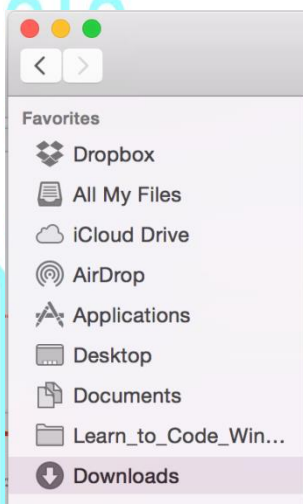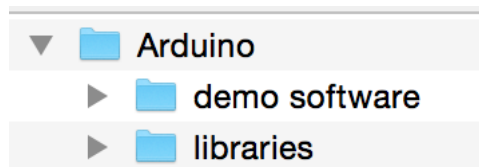in the "Downloads" folder.

📄 Wink_PreLoadedDemo.zip ▾

**Click to open the unzip the file**

Favorites
- 💾 Dropbox
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- 📁 Learn_to_Code_Win...
- ⬇ Downloads

📄 Wink_PreLoadedDemo.zip
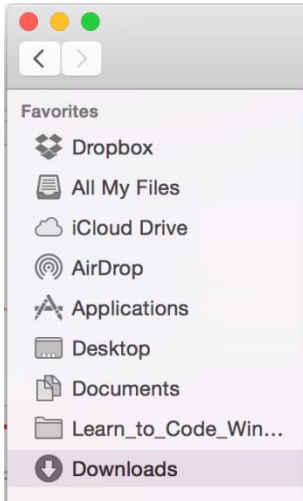
**Or unzip it from the downloads
folder**

Once the compressed folder is unzipped, you should be able to see the
Wink_PreLoadedDemo folder.

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- 🖥 Desktop
- 📄 Documents
- 📁 Learn_to_Code_Win...
- ⬇ Downloads

▶ 📁 Wink_PreLoadedDemo_Rev01

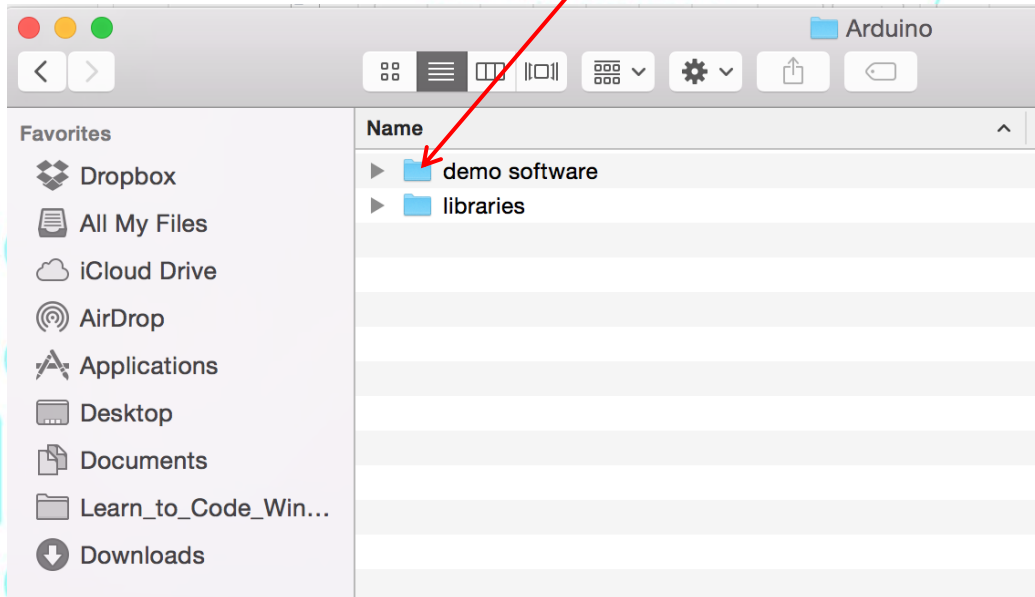Create a new folder in the Arduino folder and name it as "demo software"



And it should look like this.
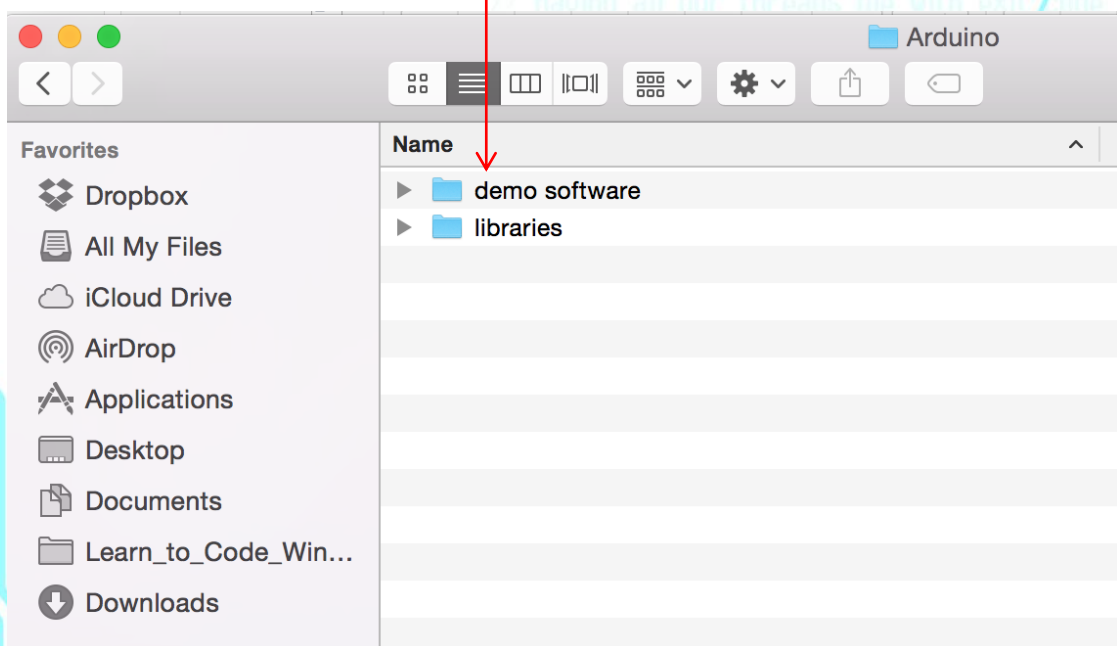
From the Downloads folder, copy the folder of the "Wink_PreLoadedDemo" and paste it inside the demo software folder which you have just created.
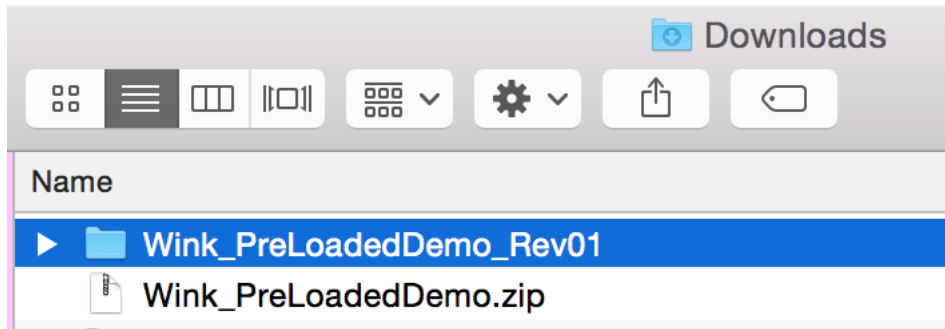


**Copy and paste or drag and drop inside here.**
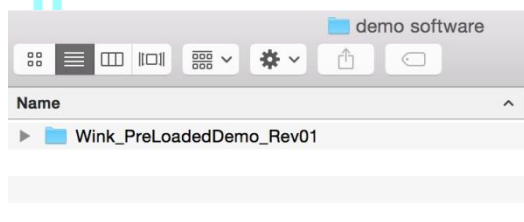


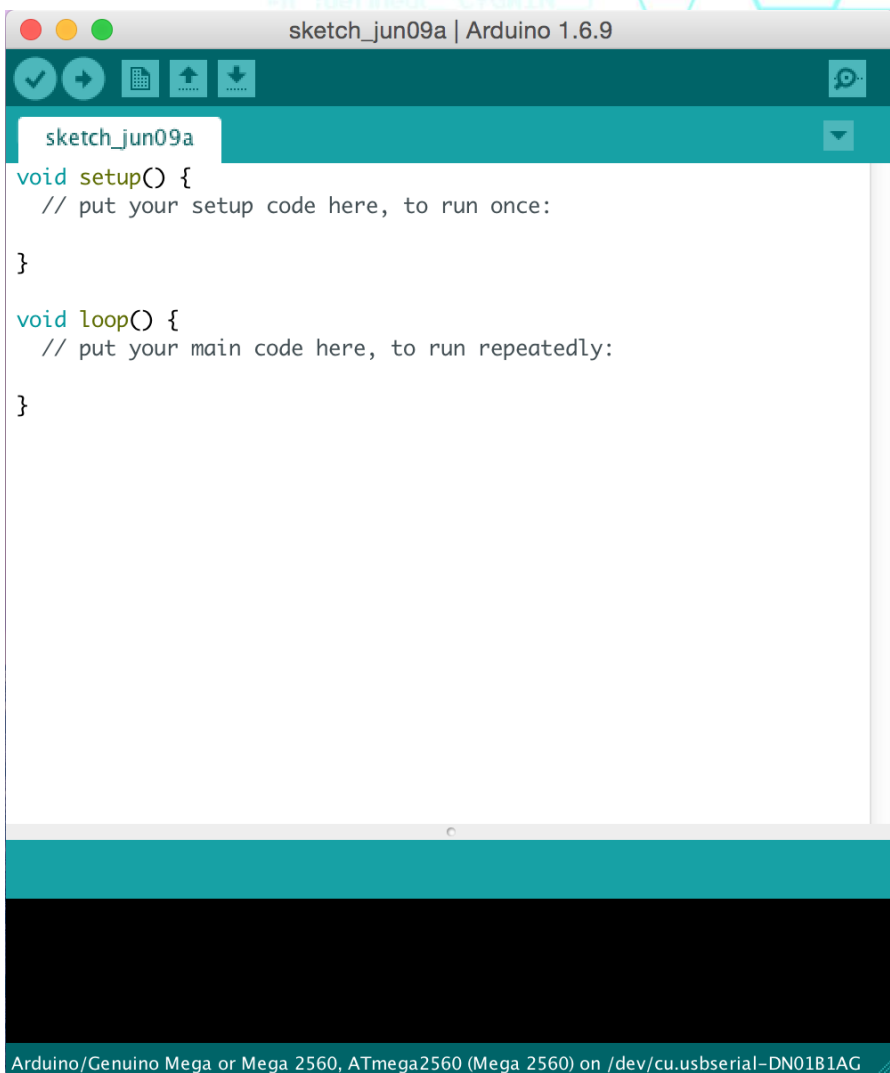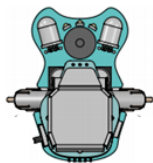Once done, the "Wink_PreLoadedDemo" folder should be inside the "demo software' folder.

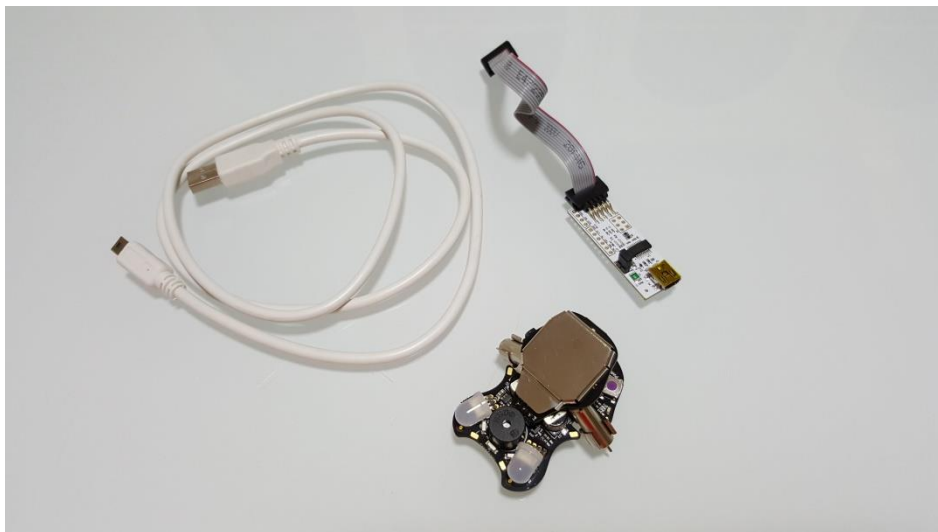Go ahead and re-launch the Arduino IDE software

**Click icon to launch**

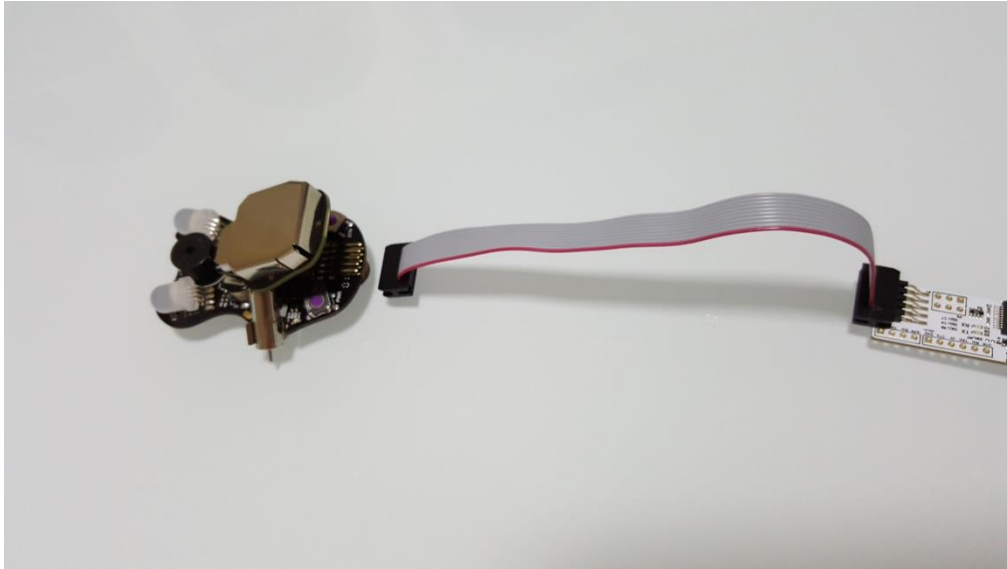Once opened. It should look like this.

# Connecting your Robot

Ensure that you have all these items on hand. Wink robot, programming adapter and (A USB) to (B mini) USB cable.
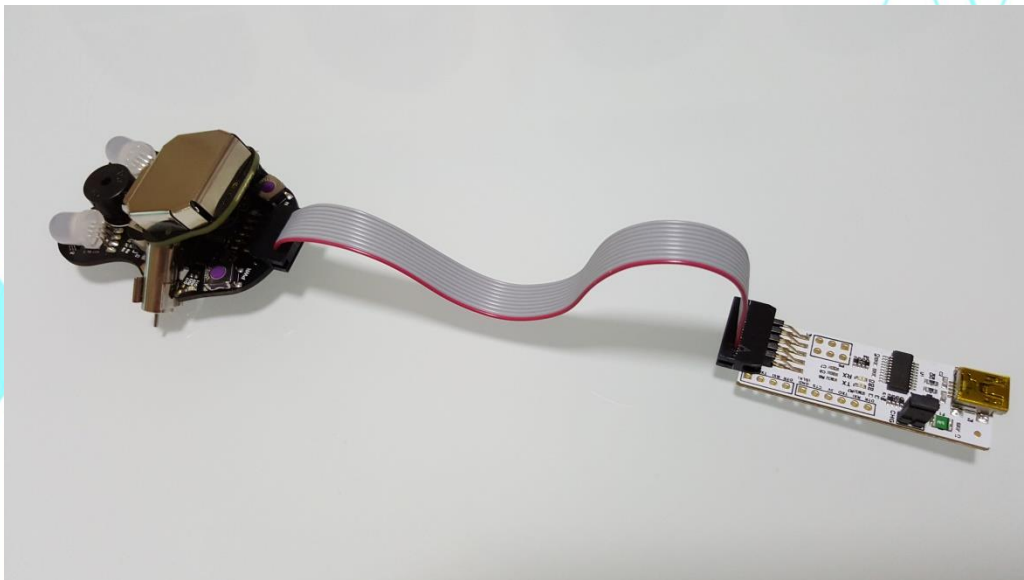


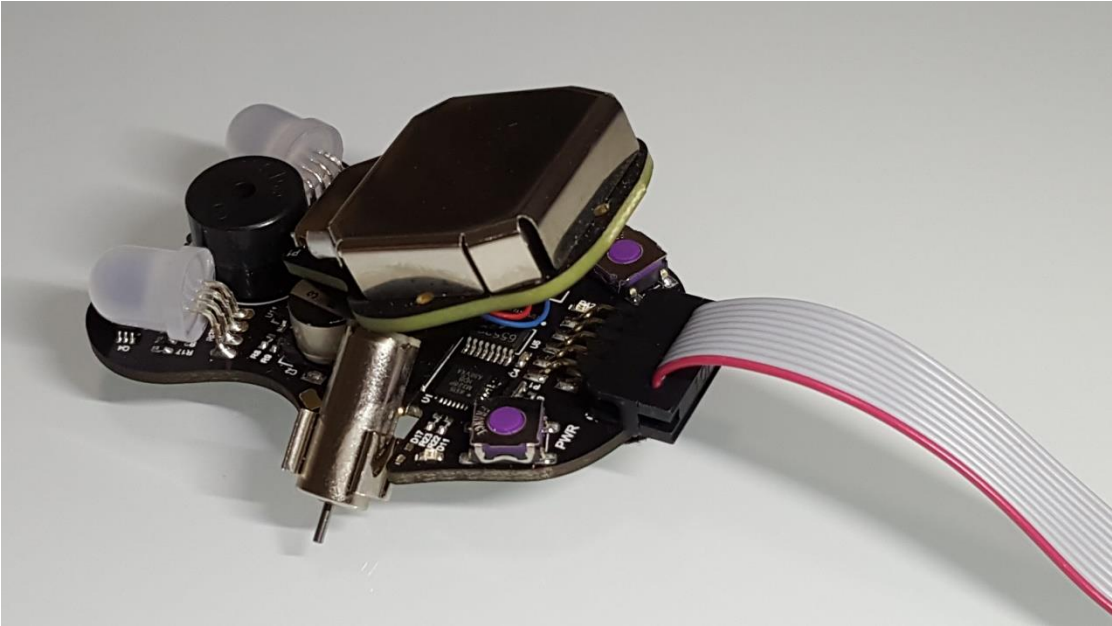Connect the (B mini) USB cable to the programming adaptor.

Now connect the ten pins supplied cable to the robot .



**! IMPORTANT** Ensure that the orientation of the ten pins cable is correctly aligned and not twisted!

Ensure all  the ten pins is properly inserted into the connector of the robot.
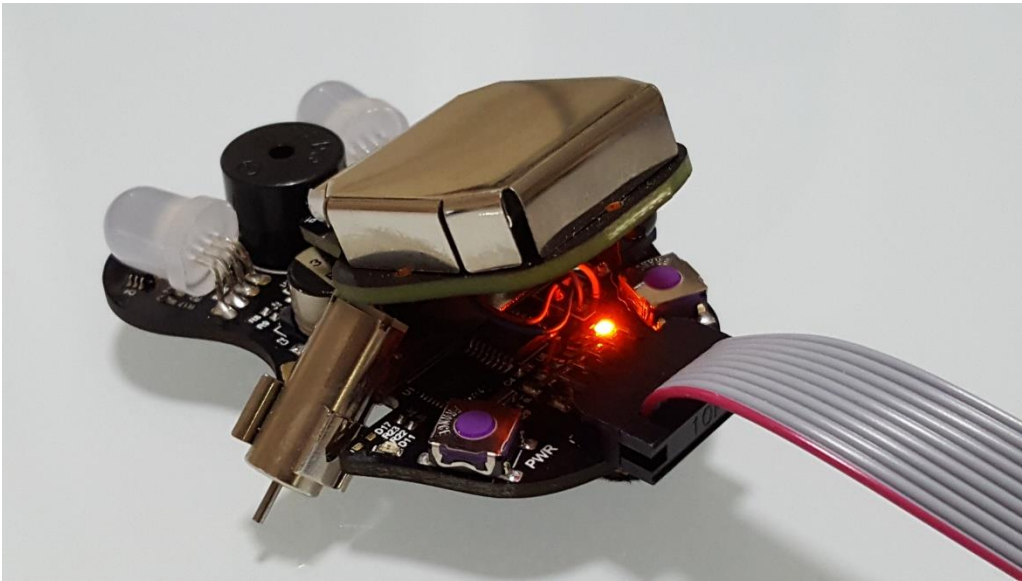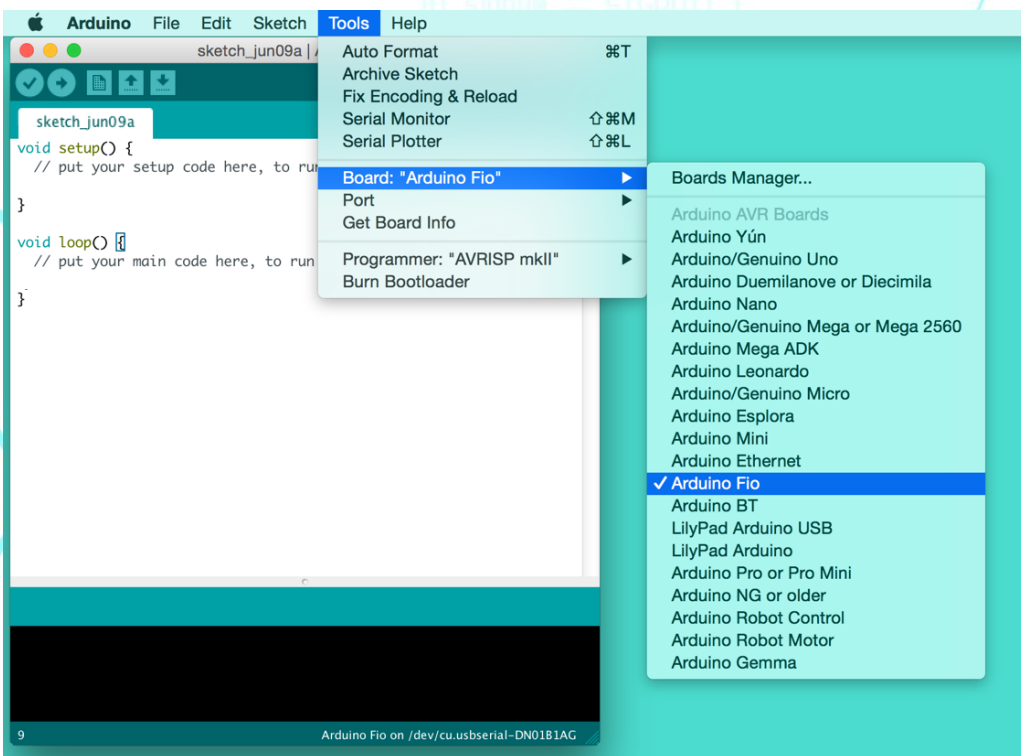


Next, connect the USB cable to your Mac.

You should see the LED lighted up on the robot and is on charging mode.



From the Arduino IDE, go to "Tools" > Board: select "Arduino Fio"

From "Tools" again point to > Port:  and you will see "/dev/cu.usbserial-DN01AA11".
If you don't see any port available, try disconnecting the USB and reconnect again.
(This is a common problem, and it's normal where the computer needs to refresh to
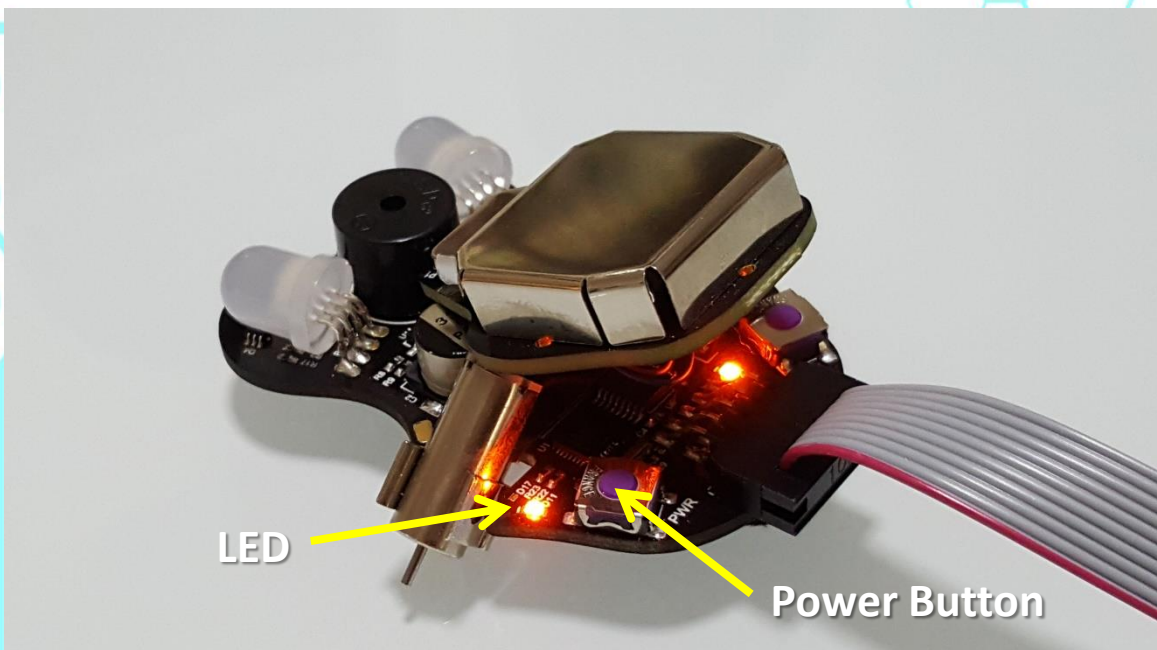detect the port)
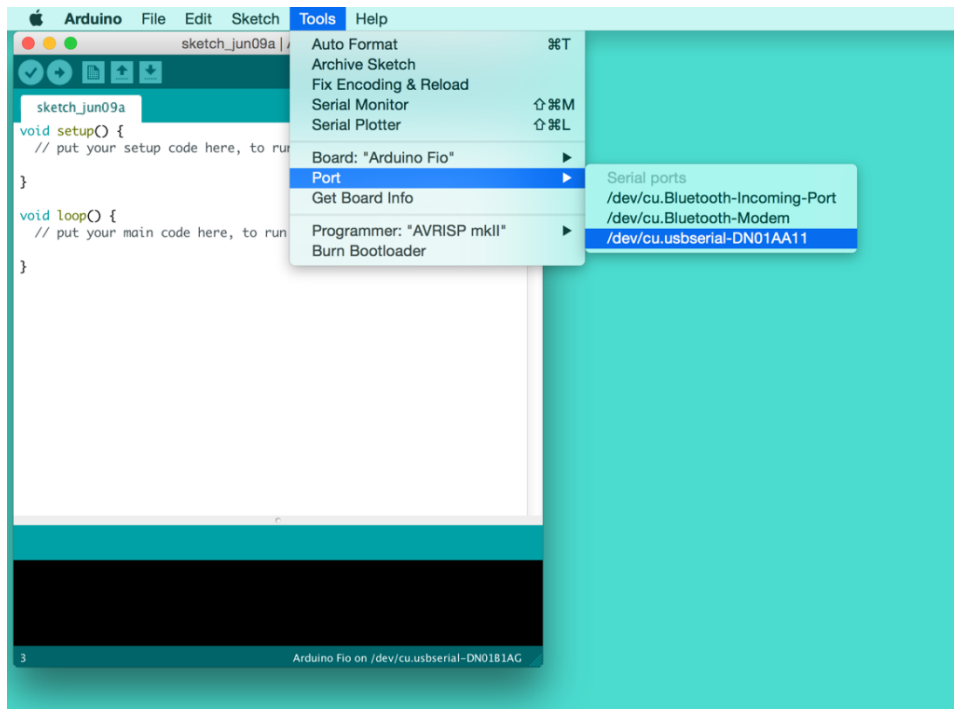


Now, your Arduino IDE setup is ready to download sketches to the robot.
Point to File > Sketchbook > demo software > Click "Wink_PreLoadedDemo"



**Click to open**

# 🖵 Duino Kids
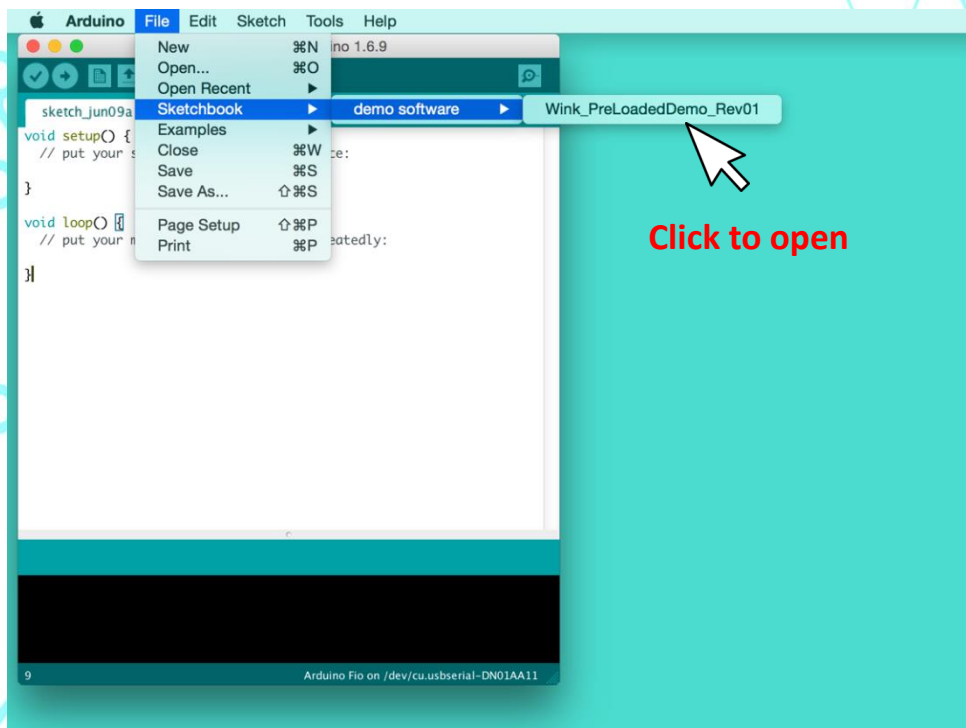
A new Arduino IDE window will open with the entire "Wink_PreLoadedDemo" sketch.
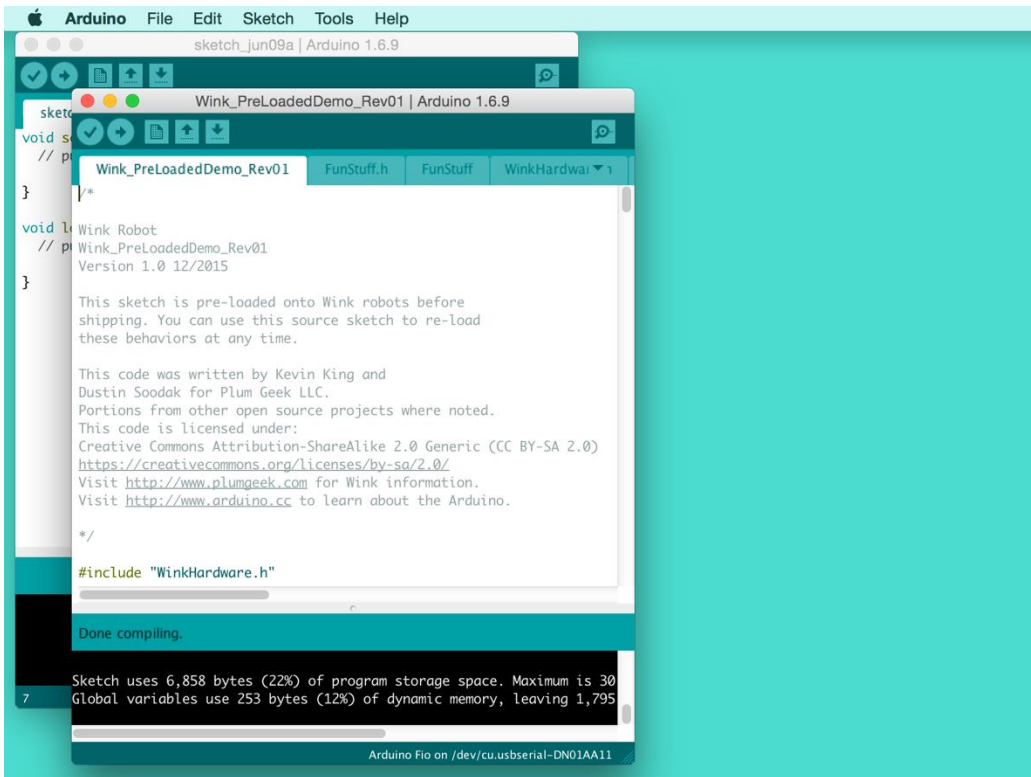


Turn on your robot by pushing the Power Button as shown. The LED next to the power button should be lighted up.
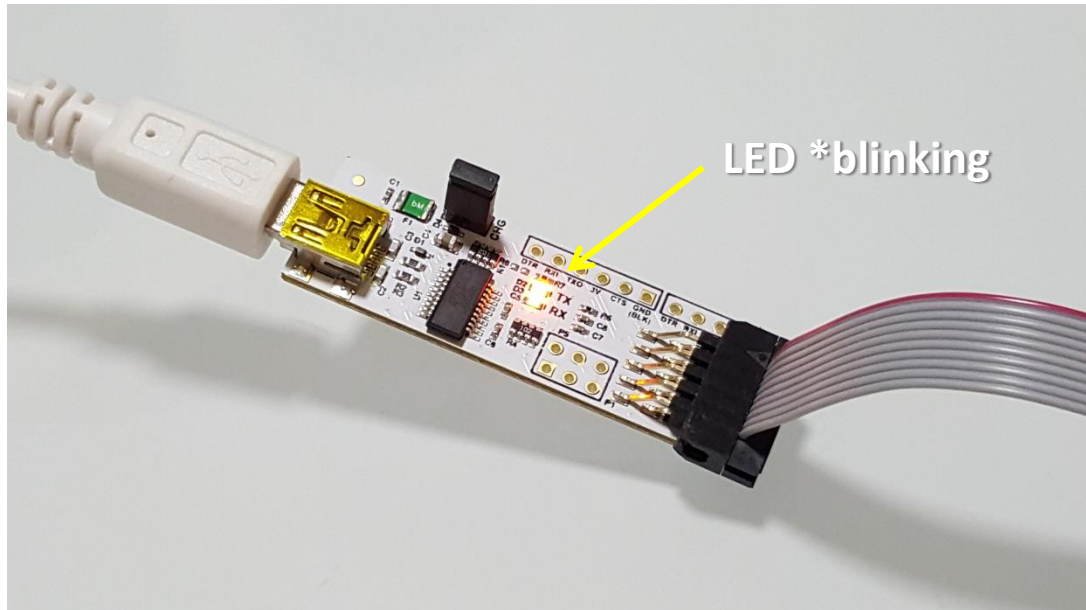
Click the arrow button to upload the sketch to your robot.

Click here

While the program is uploading the sketch, you will see the blue progress bar at the bottom right of the Arduino IDE.

The LED on the programming adaptor should be blinking while uploading is in progress.



**LED *blinking**

Once completed, you will hear a short beep on the robot and it will show "Done uploading" at the bottom of the Arduino IDE. Congratulation! You have successfully uploaded the sketch on your robot. **Enjoy and Have Fun!**