Getting Started – **for Windows 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 programming adapter may be plugged in. Your computer should now recognize it as a virtual com port and assign it a com port number.
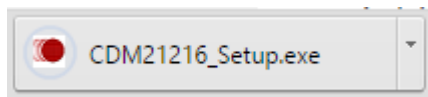
Mac Driver Installation

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 : (**PDF**)
If you have an earlier version of Mac OS (10.3 to 10.8), you can download the earlier version driver : (**Download**)
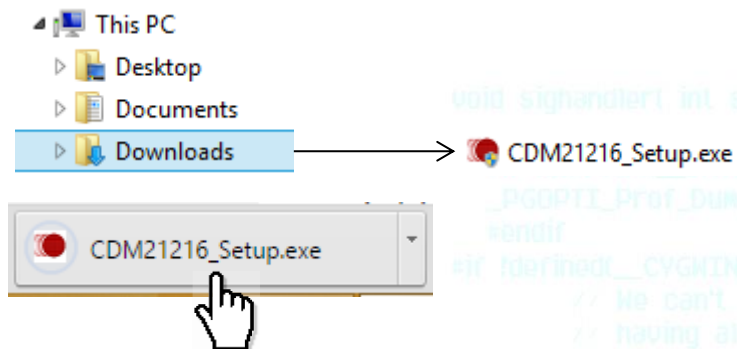
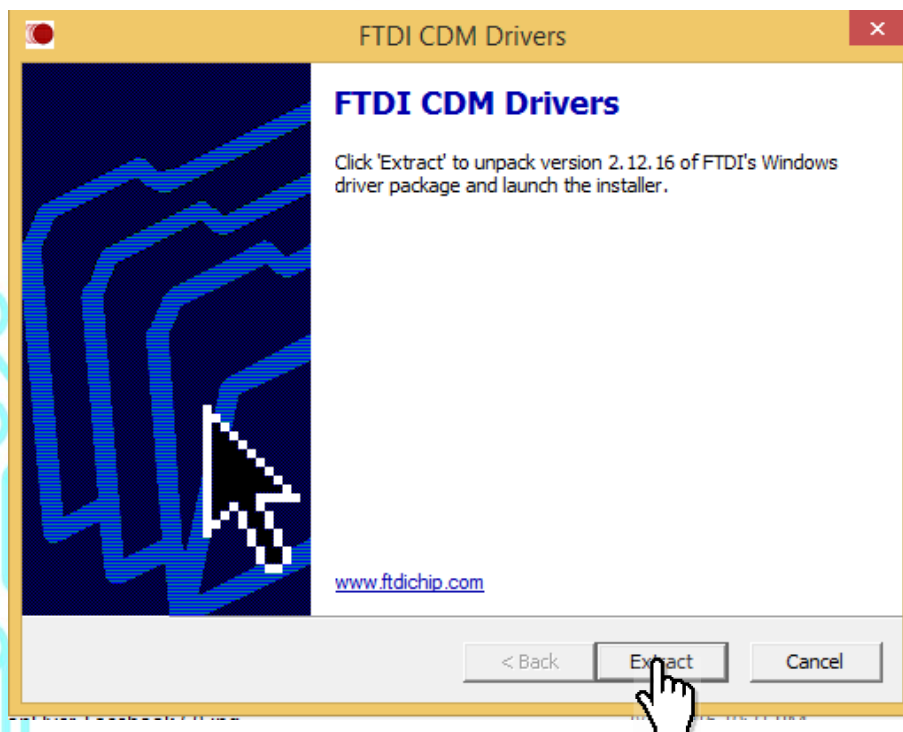[FTDI Drivers - Windows](#)

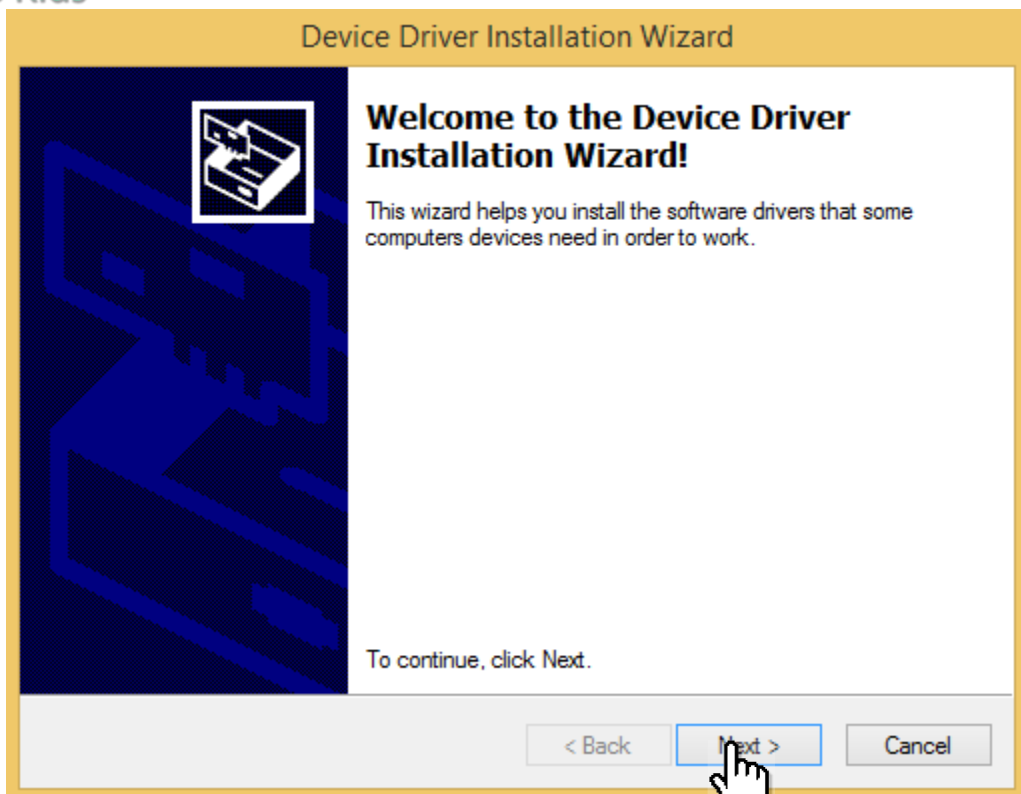[FTDI Drivers - Mac](#)

For Windows user:

Once the file has been downloaded, you should be able to see the
"CDM21216_Setup.exe" on the lower left of the download bar or it can be found in
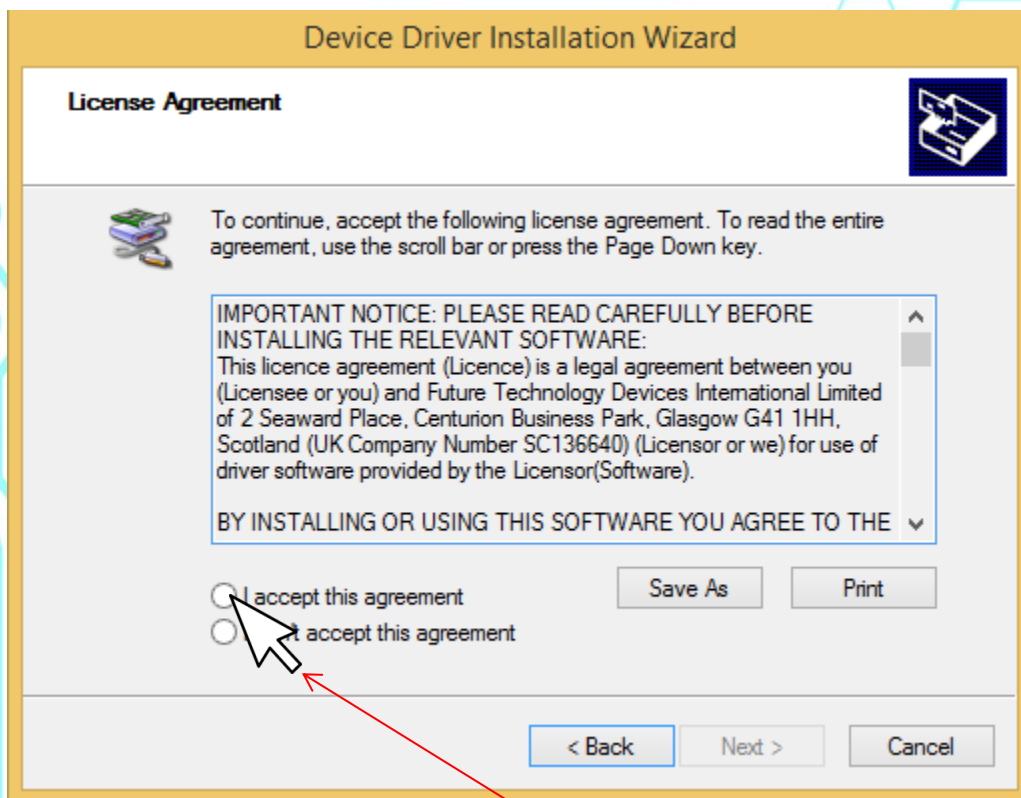the "Downloads" folder.

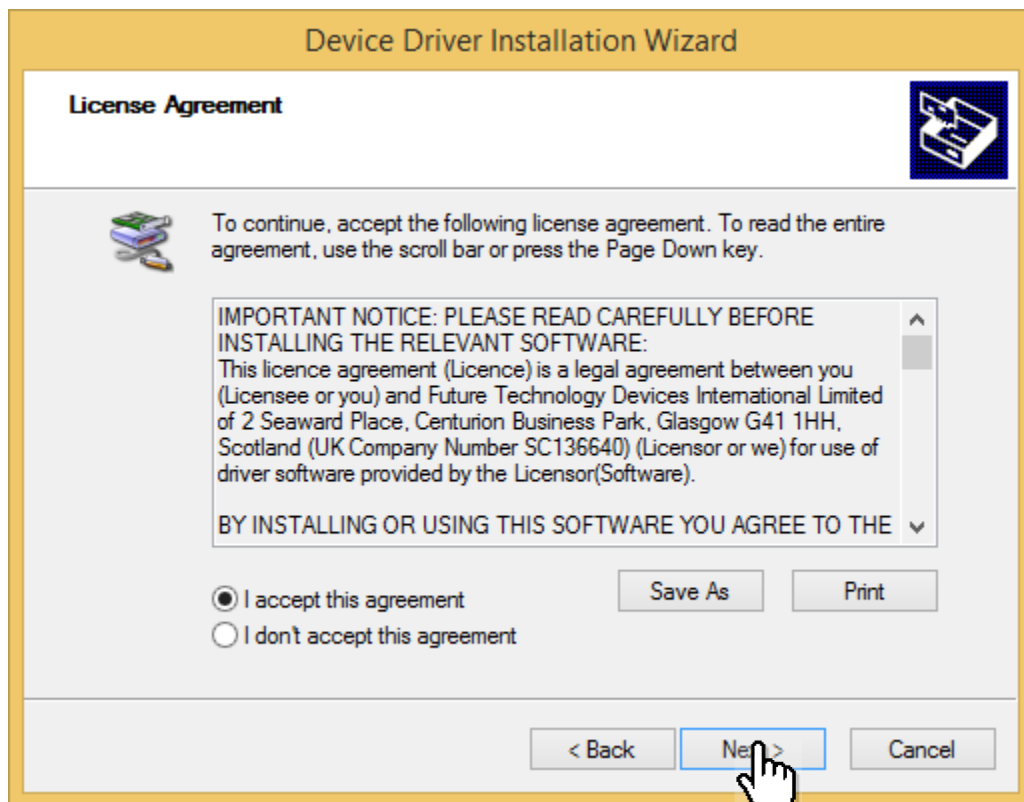**Go ahead to click on the "CDM21216_Setup.exe"**
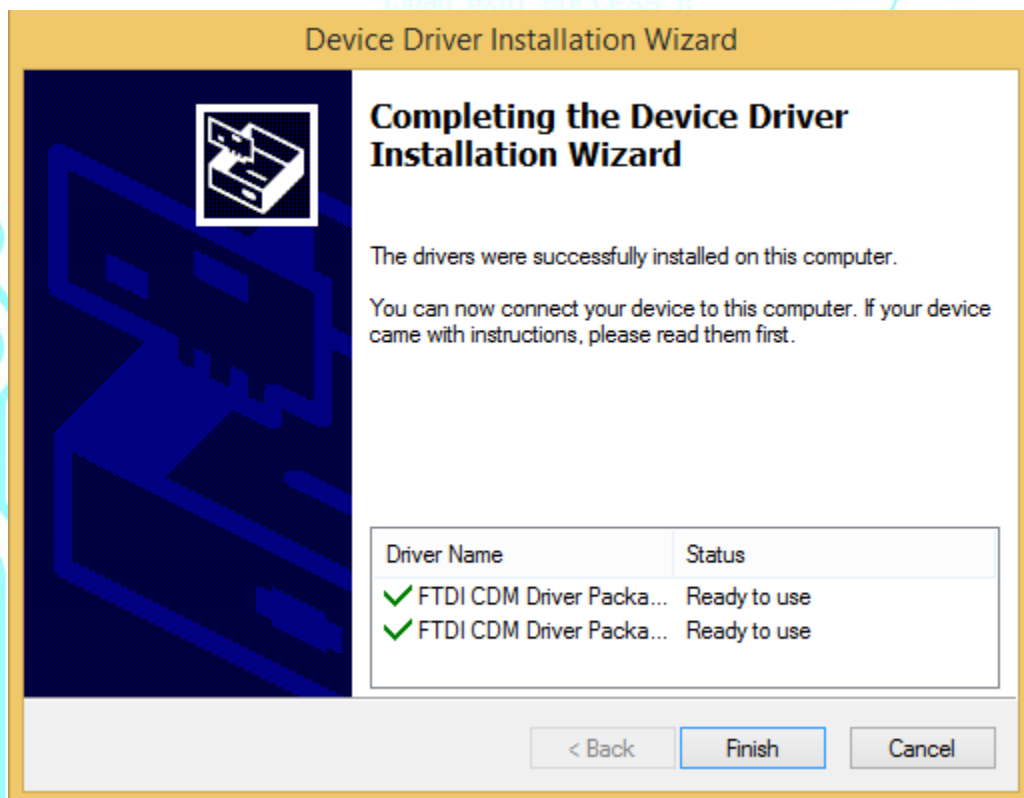

Click Extract

Device Driver Installation Wizard

Welcome to the Device Driver Installation Wizard!

This wizard helps you install the software drivers that some computers devices need in order to work.

To continue, click Next.

< Back   Next >   Cancel

Click Next

Device Driver Installation Wizard

License Agreement

To continue, accept the following license agreement. To read the entire agreement, use the scroll bar or press the Page Down key.

IMPORTANT NOTICE: PLEASE READ CAREFULLY BEFORE INSTALLING THE RELEVANT SOFTWARE:
This licence agreement (Licence) is a legal agreement between you (Licensee or you) and Future Technology Devices International Limited of 2 Seaward Place, Centurion Business Park, Glasgow G41 1HH, Scotland (UK Company Number SC136640) (Licensor or we) for use of driver software provided by the Licensor(Software).

BY INSTALLING OR USING THIS SOFTWARE YOU AGREE TO THE

◯ I accept this agreement   Save As   Print
◯ I don't accept this agreement

< Back   Next >   Cancel

Select " I accept this agreement"

4

Device Driver Installation Wizard

License Agreement

To continue, accept the following license agreement. To read the entire agreement, use the scroll bar or press the Page Down key.

> IMPORTANT NOTICE: PLEASE READ CAREFULLY BEFORE INSTALLING THE RELEVANT SOFTWARE:
> This licence agreement (Licence) is a legal agreement between you (Licensee or you) and Future Technology Devices International Limited of 2 Seaward Place, Centurion Business Park, Glasgow G41 1HH, Scotland (UK Company Number SC136640) (Licensor or we) for use of driver software provided by the Licensor(Software).
>
> BY INSTALLING OR USING THIS SOFTWARE YOU AGREE TO THE

◉ I accept this agreement   [Save As]   [Print]
◯ I don't accept this agreement

[< Back]   [Next >]   [Cancel]

Click Next

Device Driver Installation Wizard

Completing the Device Driver Installation Wizard

The drivers were successfully installed on this computer.

You can now connect your device to this computer. If your device came with instructions, please read them first.

Driver Name	Status
✔ FTDI CDM Driver Packa...	Ready to use
✔ FTDI CDM Driver Packa...	Ready to use

[< Back]   [Finish]   [Cancel]

Installation of the Driver Completed

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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.

Software

Once you are at the Arduino Home page, go ahead to click "Windows Installer"

Download the Arduino Software

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-windo…..exe" on the lower left of the download bar, or it can be found in the "Downloads" folder.
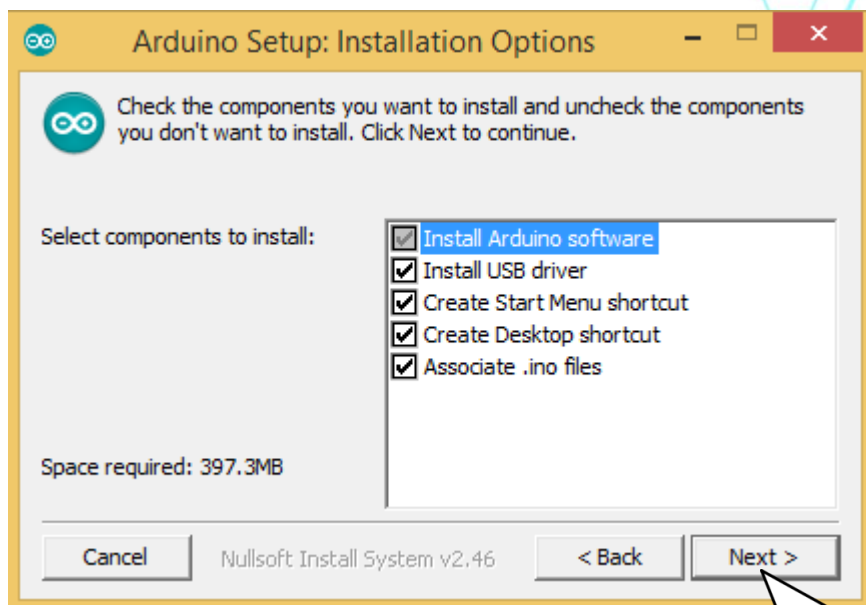
arduino-1.6.9-windo….exe

▲ 🖥 This PC
  ▷ 🖿 Desktop
  ▷ 📄 Documents
  ▷ 📁 Downloads ⟶ ⊙⊙ arduino-1.6.9-windows.exe

arduino-1.6.9-windo….exe
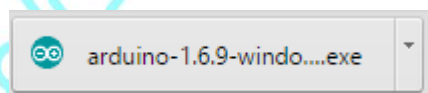
Go ahead to click on the "ardunio-1.6.9-windo…..exe"

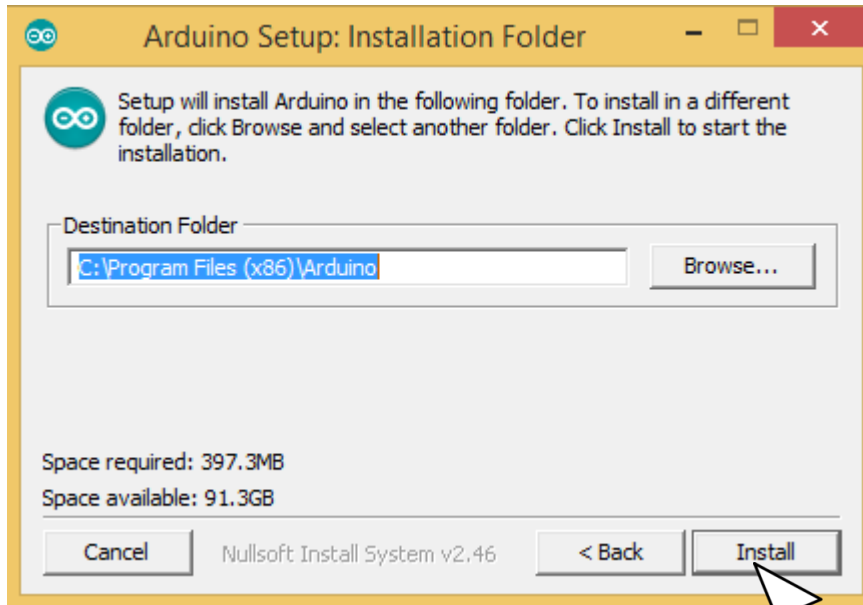On the Arduino Setup: License Agreement window, click "I Agree"
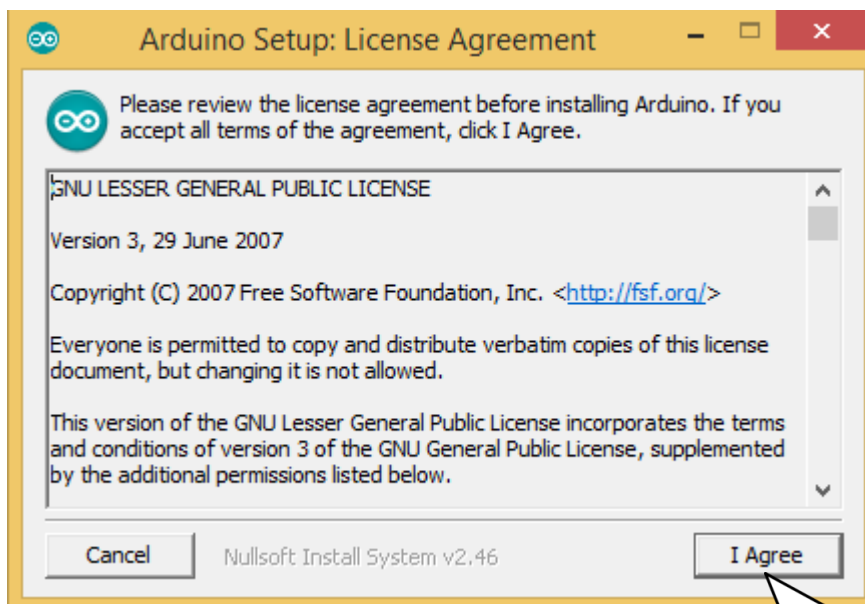
Click Here

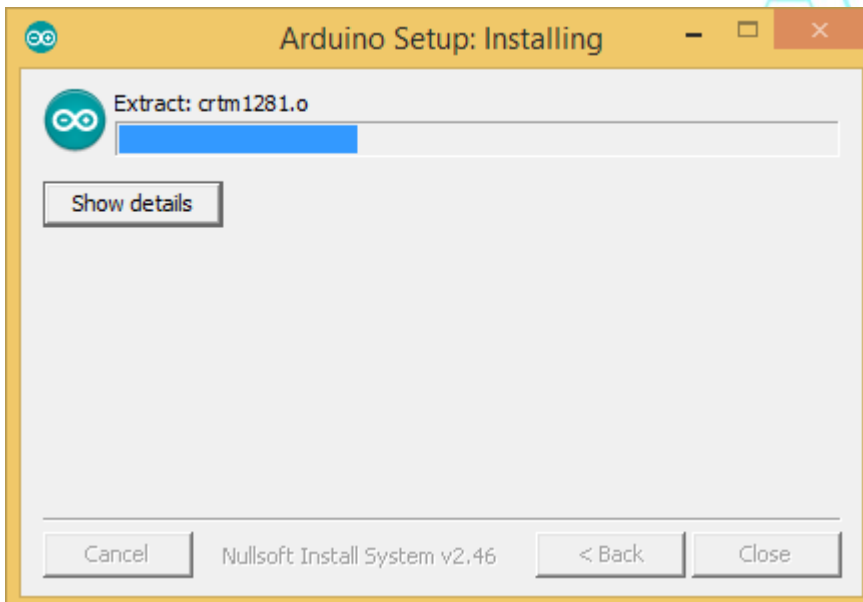Proceed to click the "Next" button

Click Next

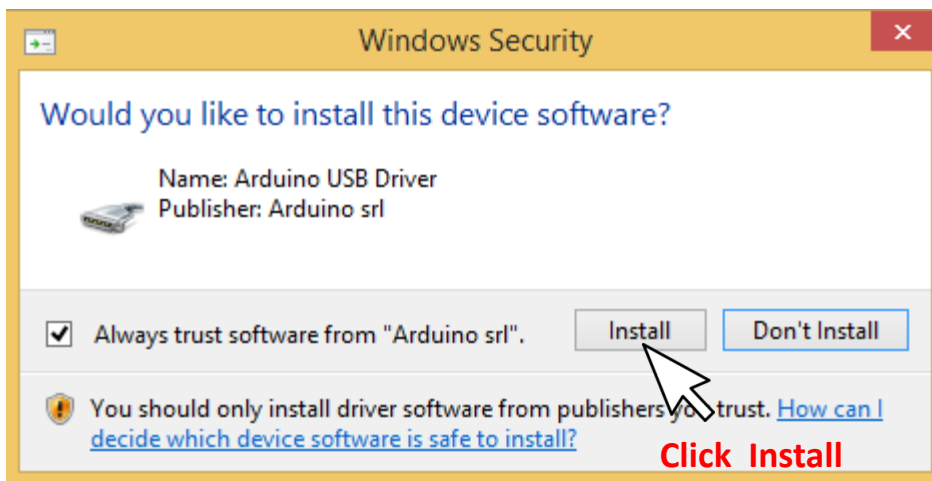From the Arduino Setup: Installation Folder window, proceed to click "Install"
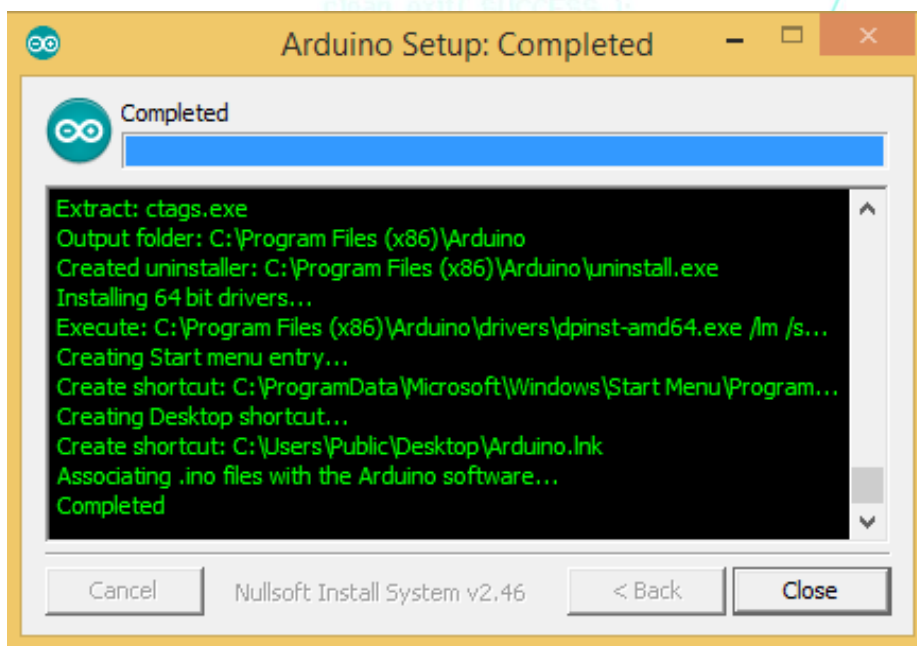

Click Install

Wait for the process to complete.

Next, go ahead to click "Install" the Arduino USB Driver
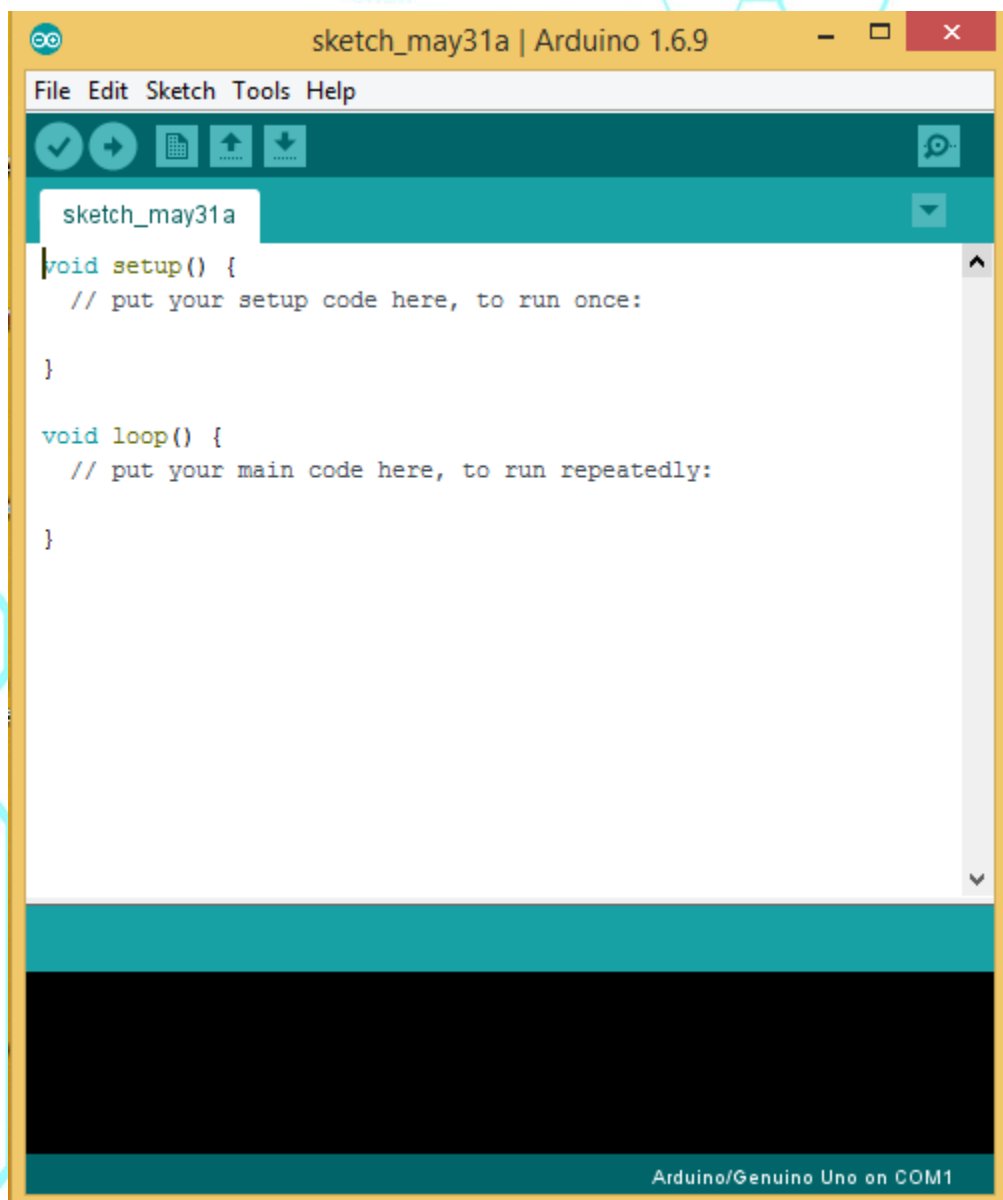

The Arduino Setup is Completed

Duino Kids

Now you have the Arduino IDE software installed in your computer. Go to your desk top and double click on the Arduino shortcut icon to launch the Arduino IDE software.
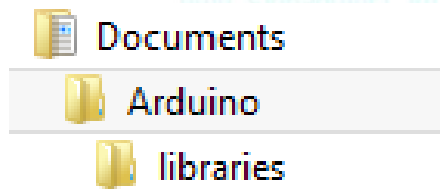
**Double click
to launch**

Once launched, it should look like this.

🖥 Duino Kids

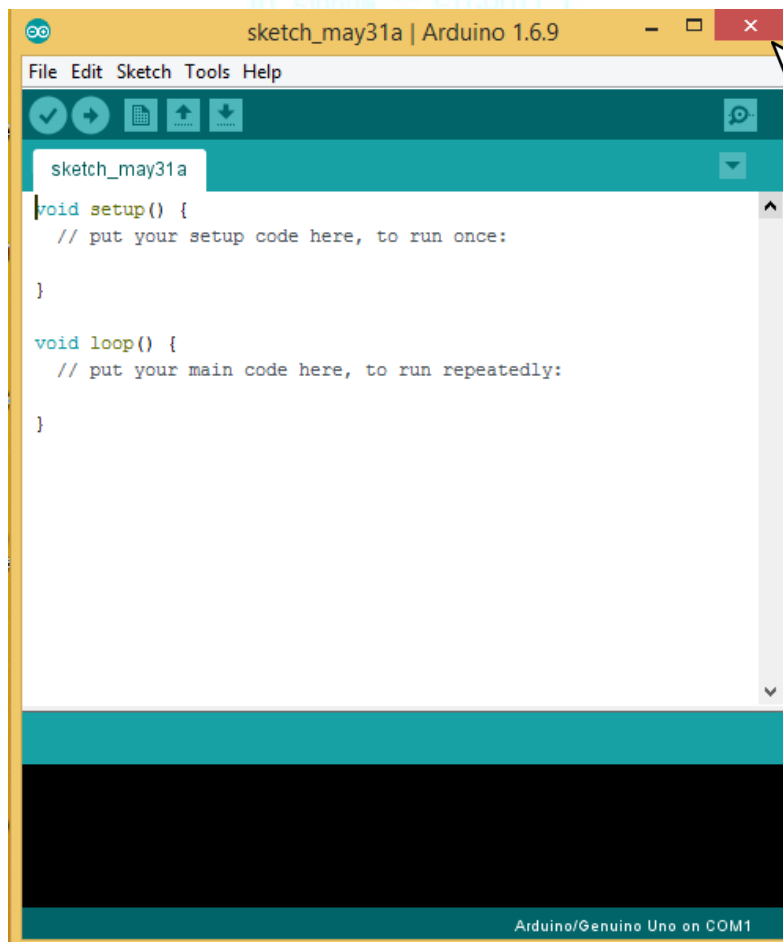Locate the" Arduino folder" inside "Documents folder"

▲ 📄 Documents
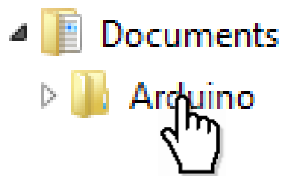
▷ 📁 Arduino 🖱

Click and open this folder

📄 Documents

📁 Arduino

📁 libraries

And you will see a libraries folder

Next steps is to install the Ringo folder library. Go ahead to quit the Arduino software

```
sketch_may31a | Arduino 1.6.9    –  □  ✕

File  Edit  Sketch  Tools  Help

✓  →   📄  ⬆  ⬇                          🔎

sketch_may31a                          ▼

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

}

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

}



                    Arduino/Genuino Uno on COM1
```

Click to close Ardunio

12

🖵 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) Click on the icon below:

Libraries
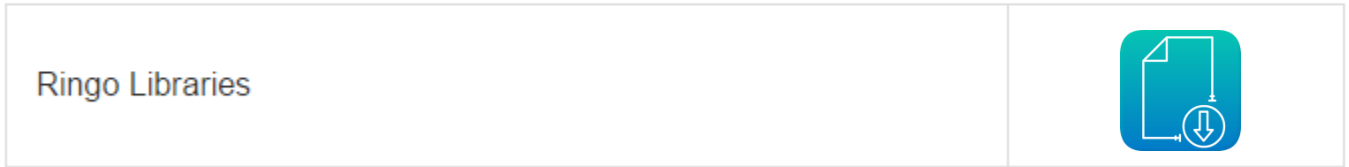
Ringo Libraries	🗋⬇

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.
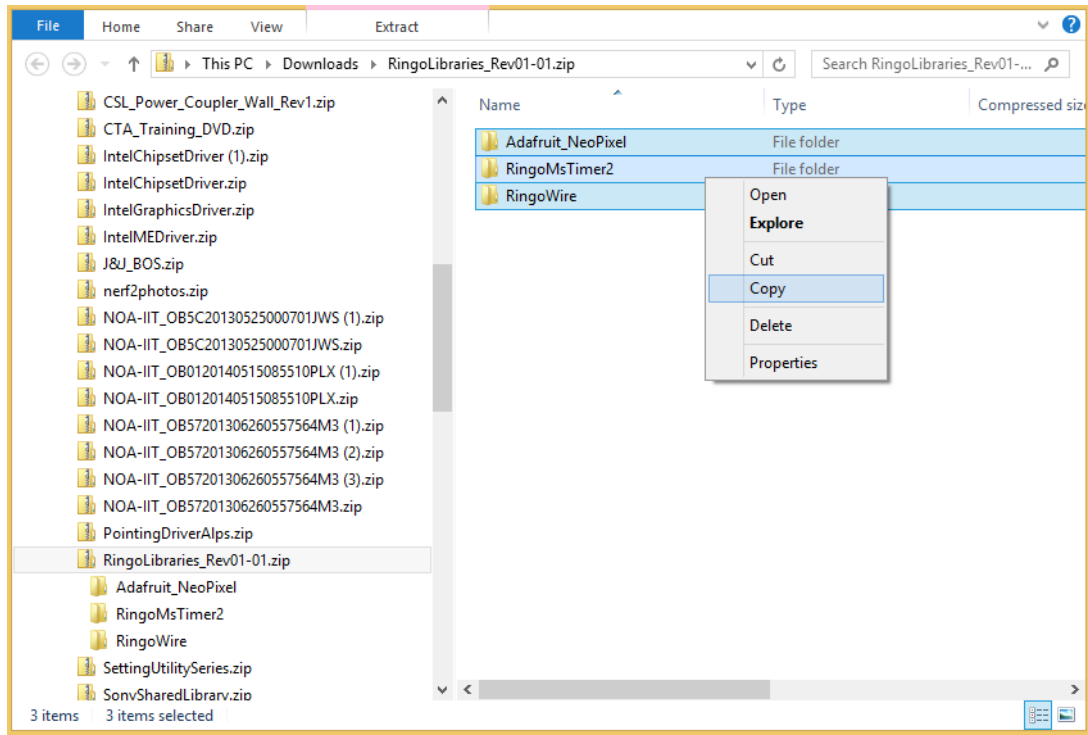
RingoLibraries_Rev01….zip

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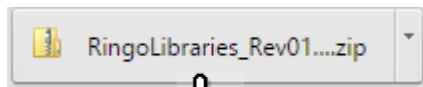
Go ahead to click on the "RingoLibraries_Rev01…..zip"

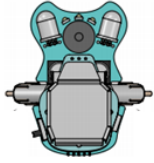Once you've unzipped the folder, you will see the following three folders:

RingoLibraries_Rev01-01.zip
Adafruit_NeoPixel
RingoMsTimer2
RingoWire
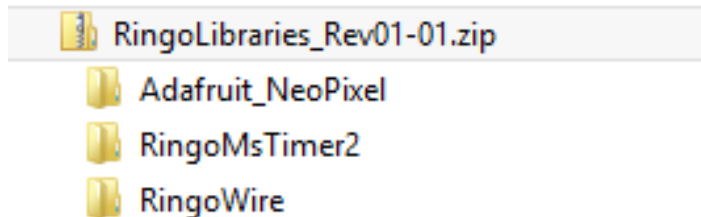
Drag and right click to copy the three folders.

Paste them inside the Arduino libraries folder and you are done with the complete installation process.
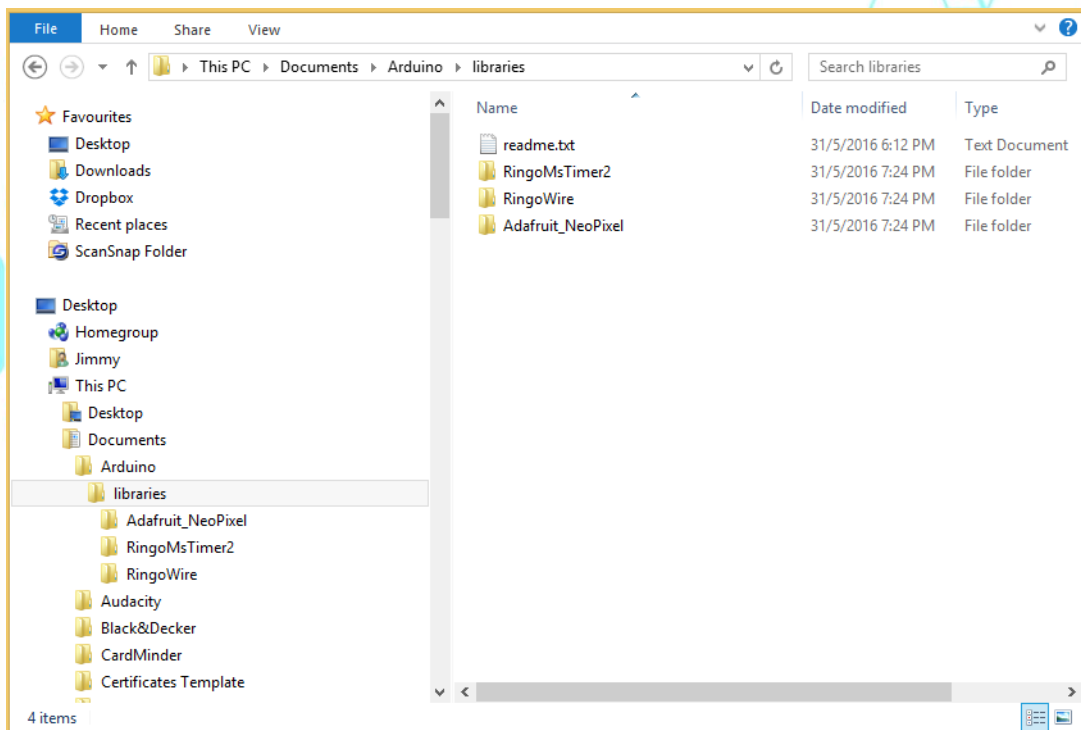
Programming your Robot

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

Windows   Mac

Windows user   Mac user

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.
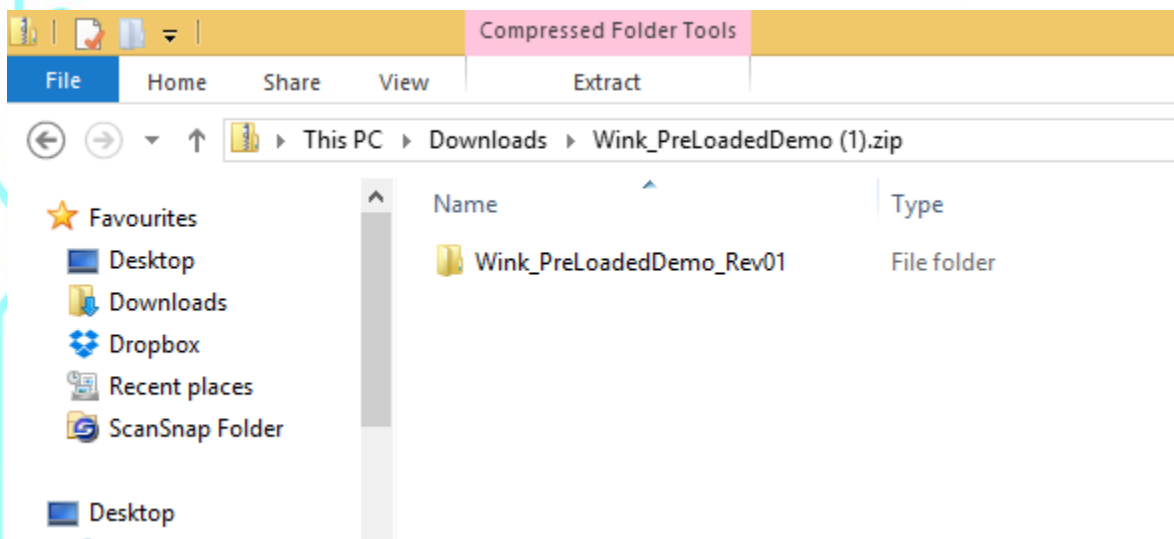
| 📥 Wink_PreLoadedDemo.zip | ▾ |

Click to open the zip file
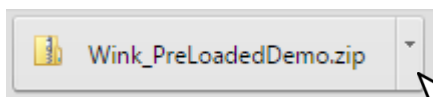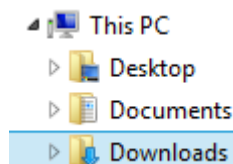
| ▲ 💻 This PC | | |
▷ 🖥 Desktop		
▷ 📄 Documents	Name	Type
▷ 📥 Downloads	→ 📁 Wink_PreLoadedDemo_Rev01	File folder

Or double click to open the zip file from the downloads folder

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

| 📥 | 📝 📁 ▾ | | Compressed Folder Tools | | |
| File | Home | Share | View | Extract | |

⬅ ➡ ▾ ↑ 📥 ▸ This PC ▸ Downloads ▸ Wink_PreLoadedDemo (1).zip

| ⭐ Favourites | Name | Type |
🖥 Desktop	📁 Wink_PreLoadedDemo_Rev01	File folder
📥 Downloads		
🔷 Dropbox		
📋 Recent places		
🔵 ScanSnap Folder		
🖥 Desktop		

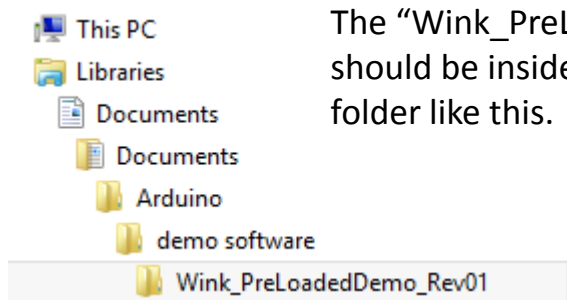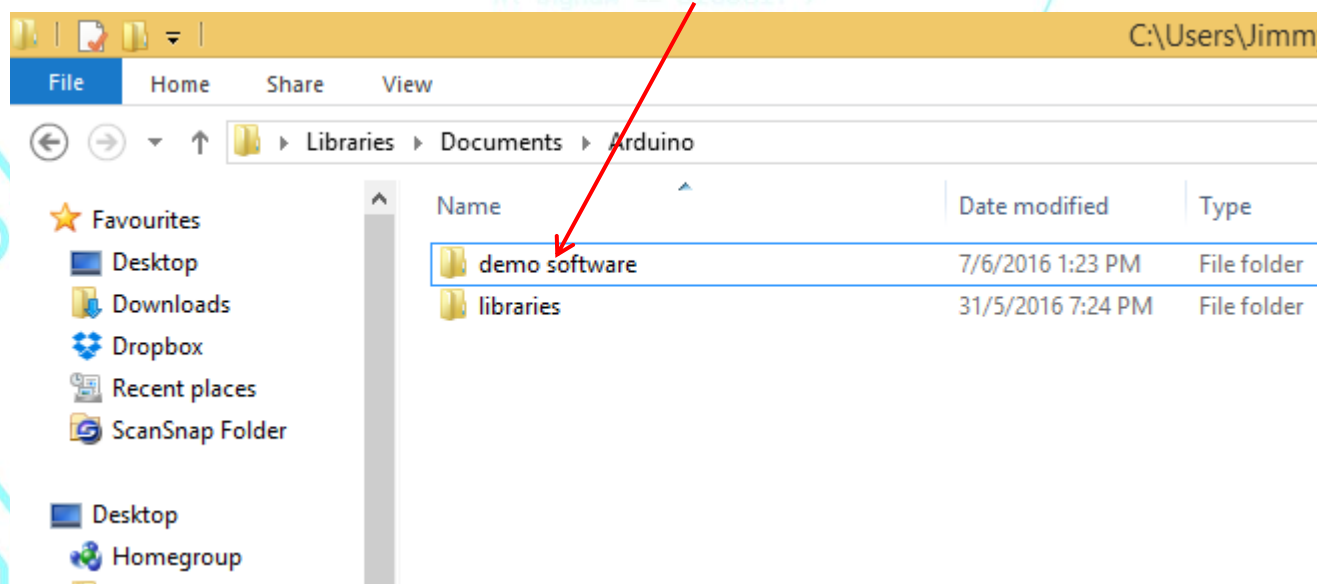Create a new folder in the Arduino folder and rename it as "demo software"
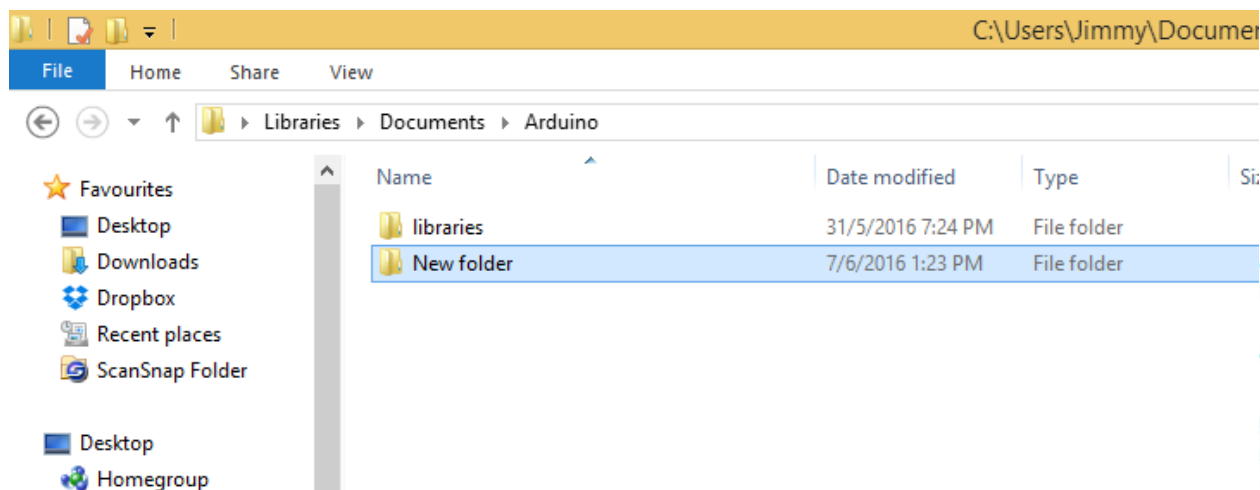
And it should look like this.
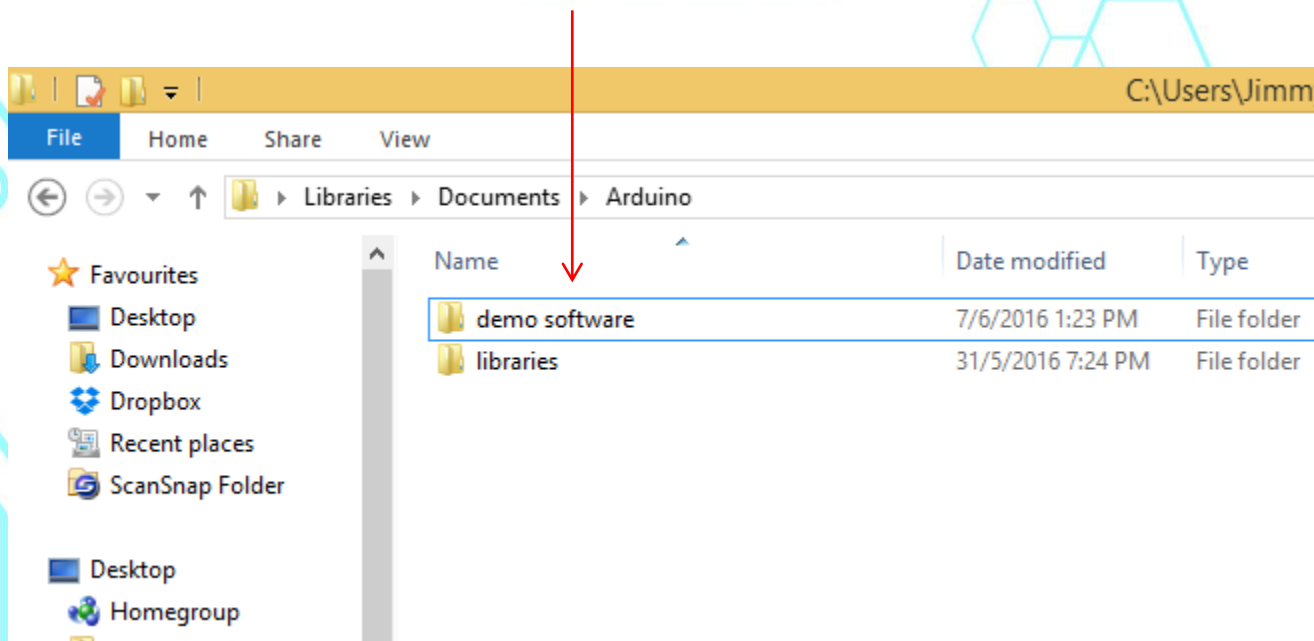
From the Downloads folder, right click and copy all the folder of the "Wink_PreLoadedDemo" and paste it inside the demo software folder which you have just created.
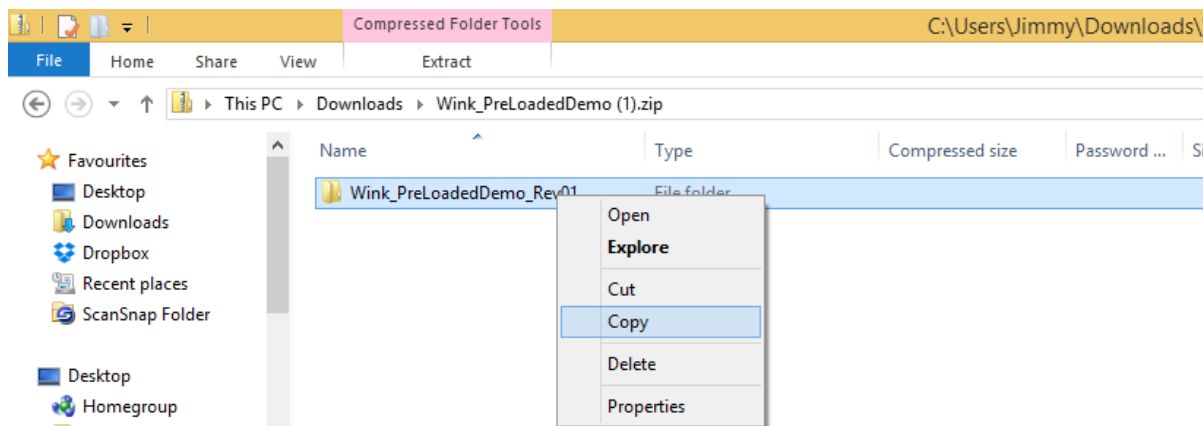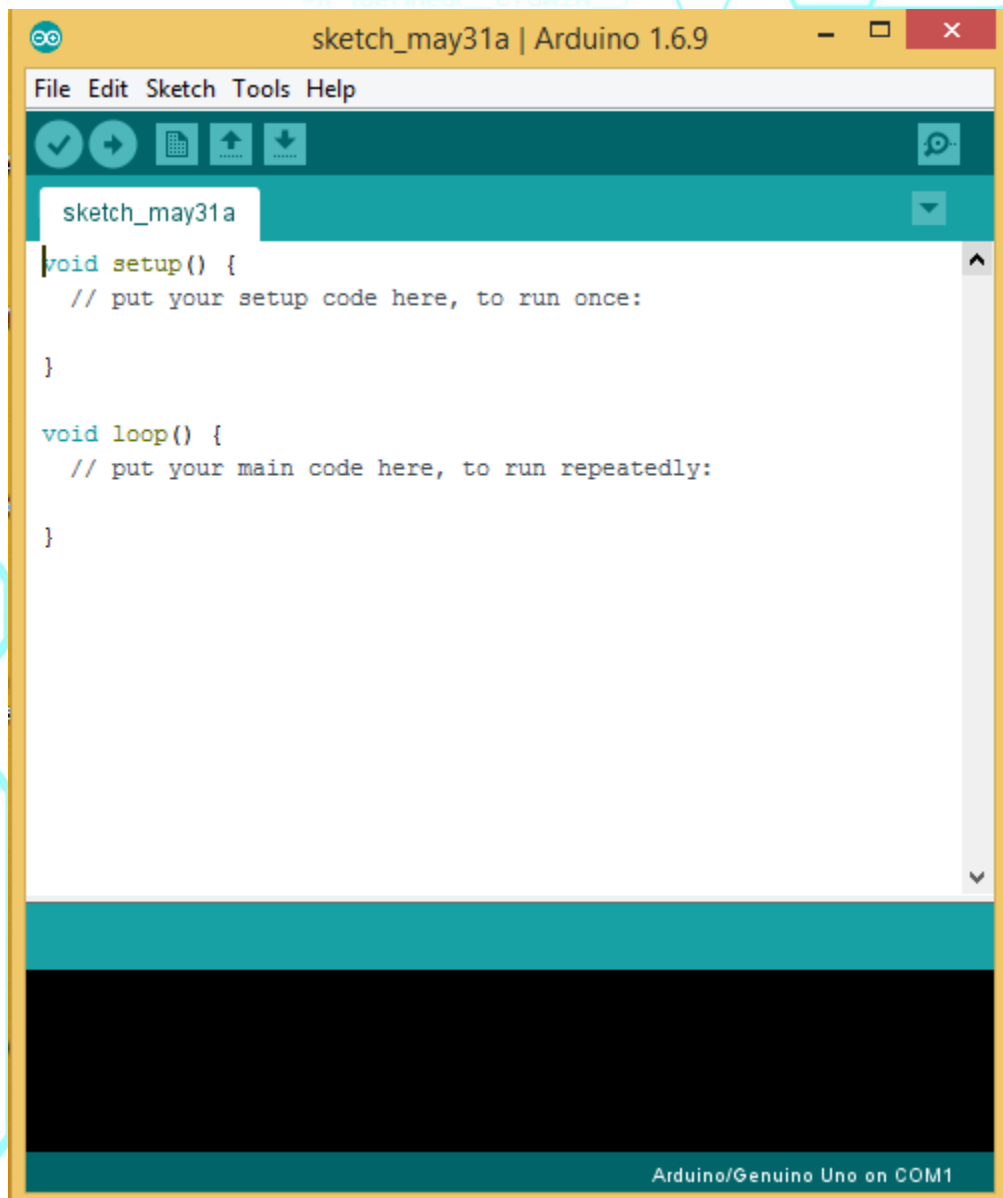

Right click copy and paste inside here.

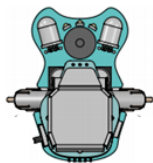The "Wink_PreLoadedDemo" folder should be inside the "demo software' folder like this.

20

From your desk top, double click on the Arduino shortcut icon to re-launch the Arduino IDE software.

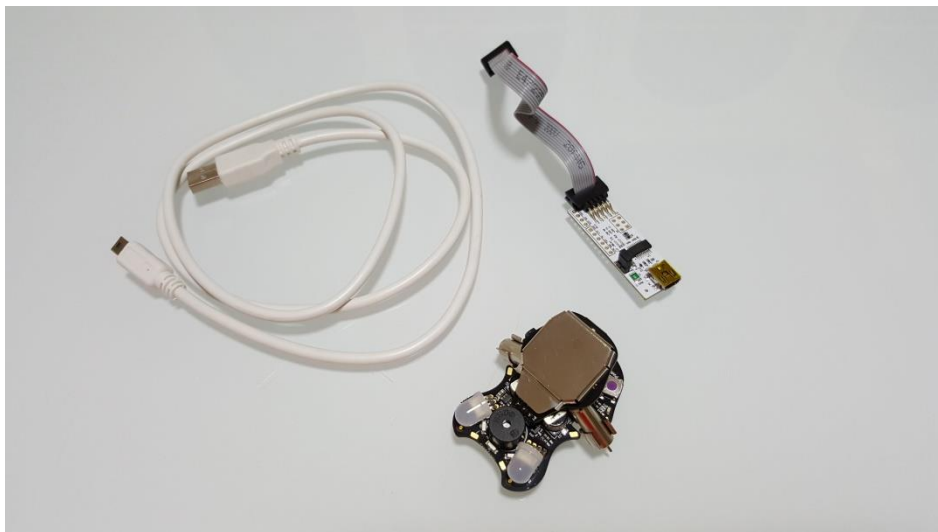**Double click to re-launch the Arduino IDE software**

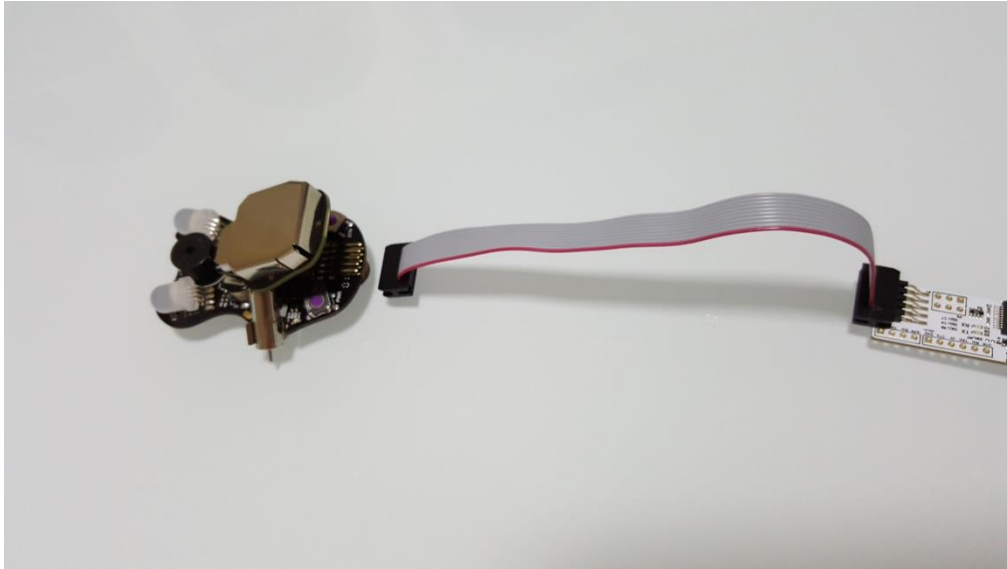Once opened. It should look like this.

Connecting your Robot

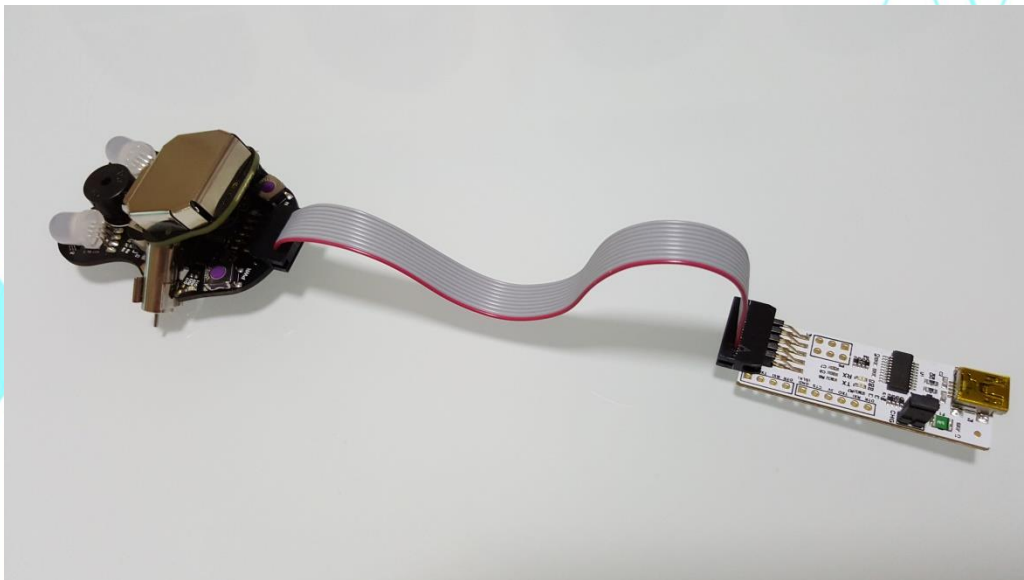Ensure that you have all these items on hand. Wink robot, programming adapter and (A USB) to (B mini) USB cable.

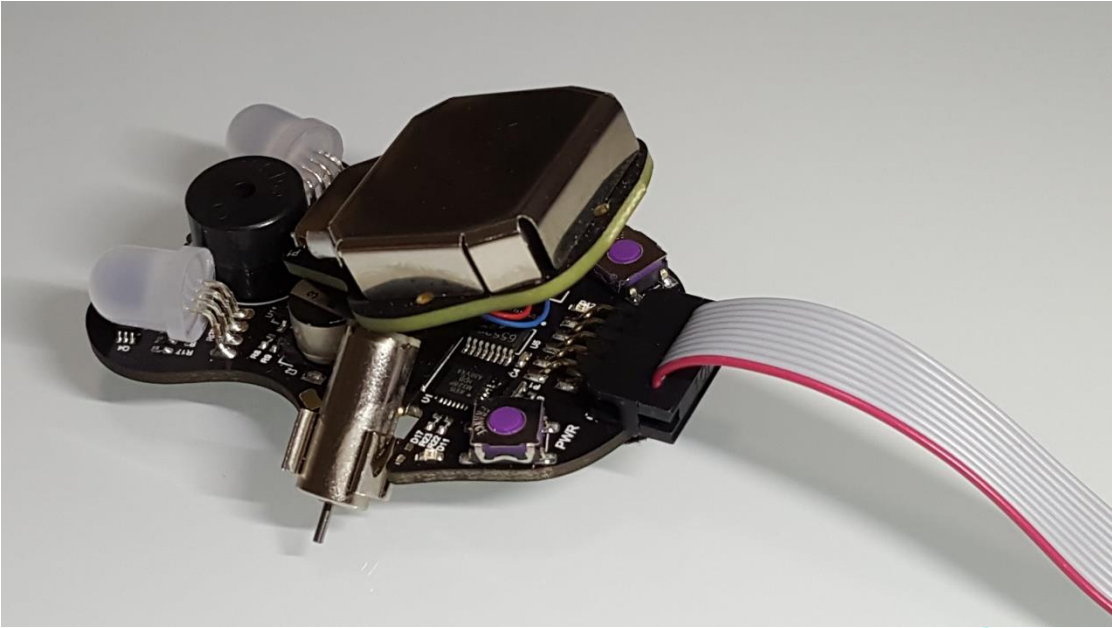Connect the (B mini) USB cable to the programming adaptor.

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!

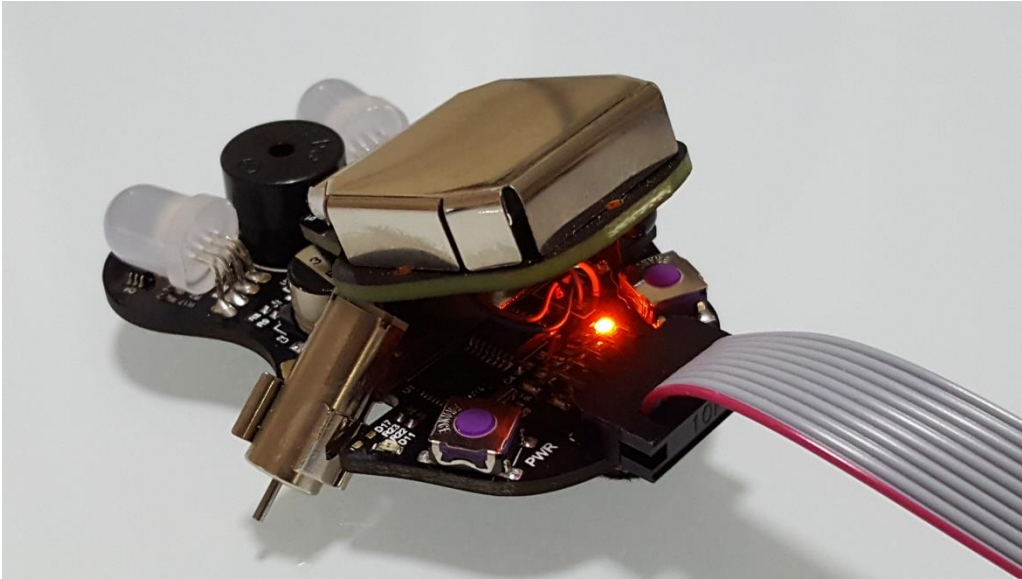Ensure all the ten pins is properly inserted into the connector of the robot.
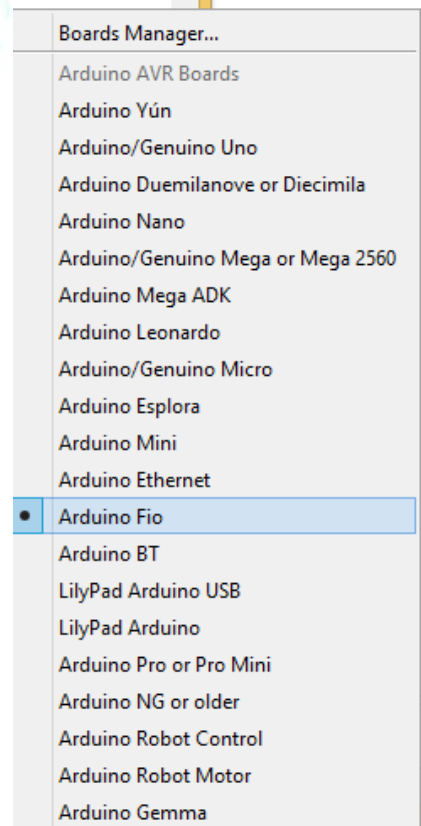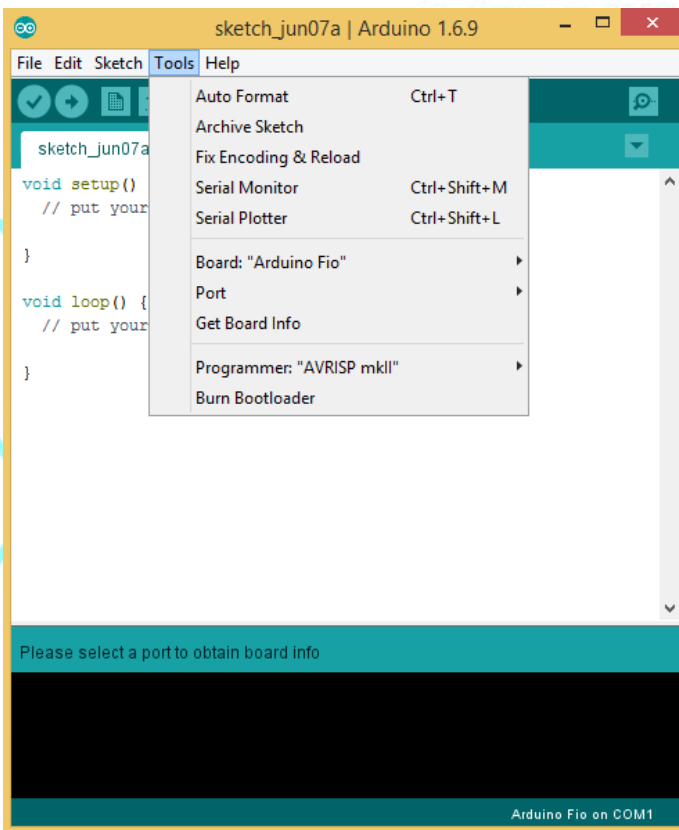

Next, connect the USB cable to your computer.

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 "COM 3", "COM 4" depending on your computer. 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)
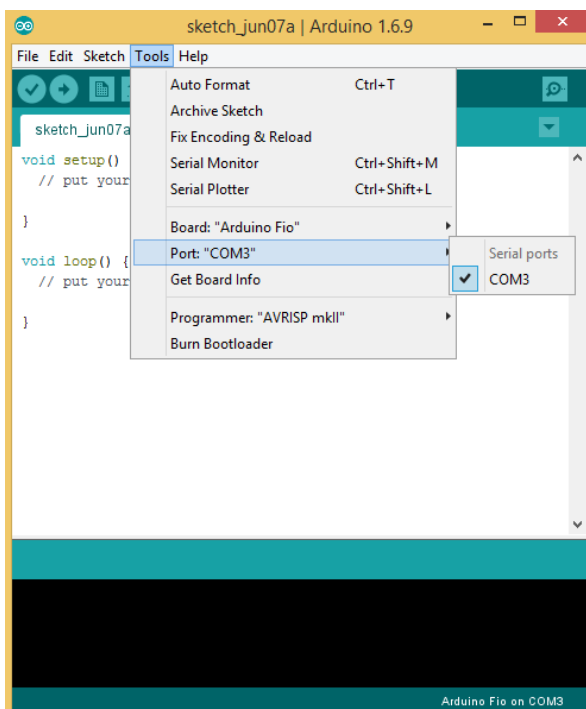
Now, your Arduino IDE setup is ready to download sketches to the robot.
Point to File > Sketchbook > demo software > Click "Wink_PreLoadedDemo"

Click to open

26

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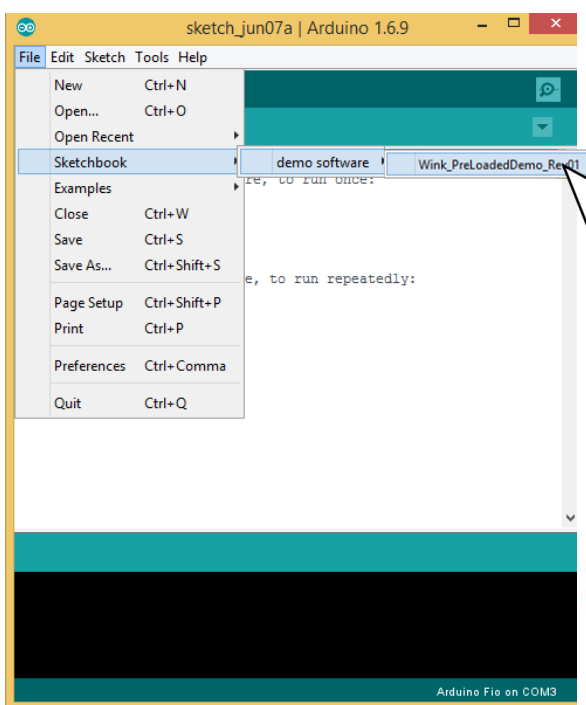
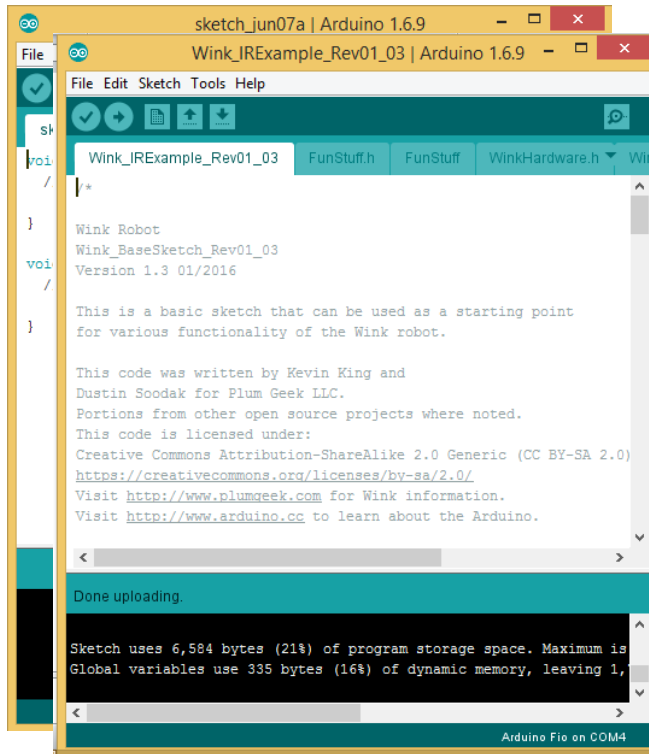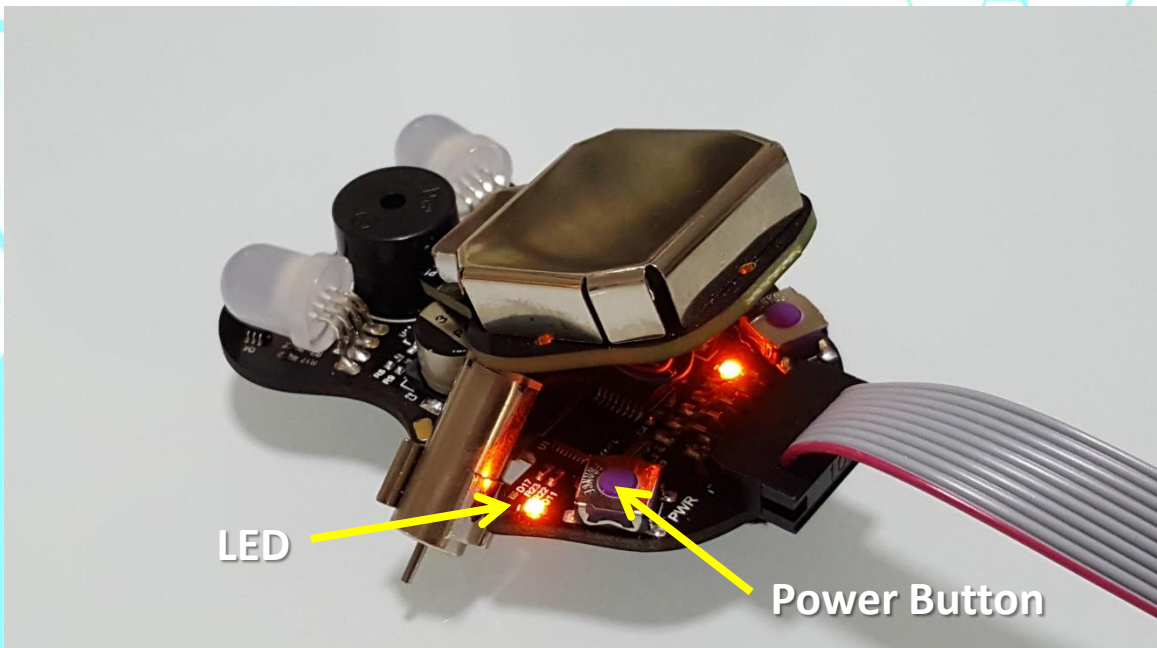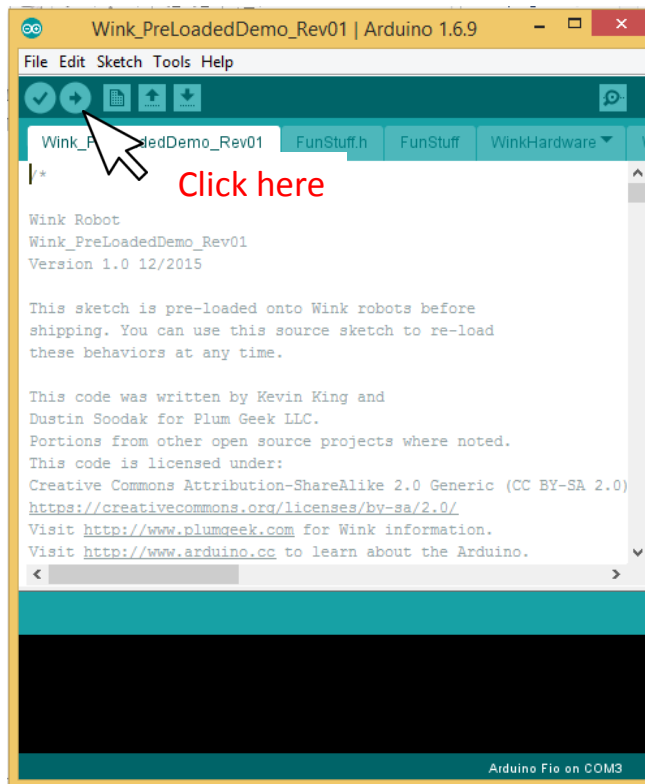A new Arduino IDE window will open with the entire "Wink_PreLoadedDemo" sketch.

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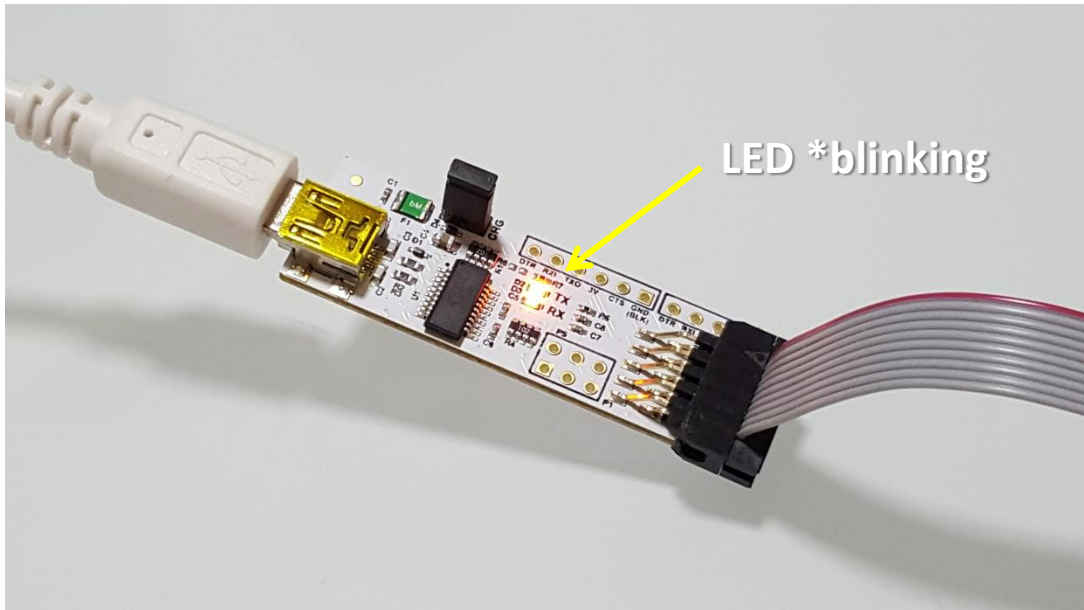

LED

Power Button

Click the arrow button to upload the sketch to your robot.

While the program is compiling the sketch, you will see the green progress bar at the bottom right of the Arduino IDE.
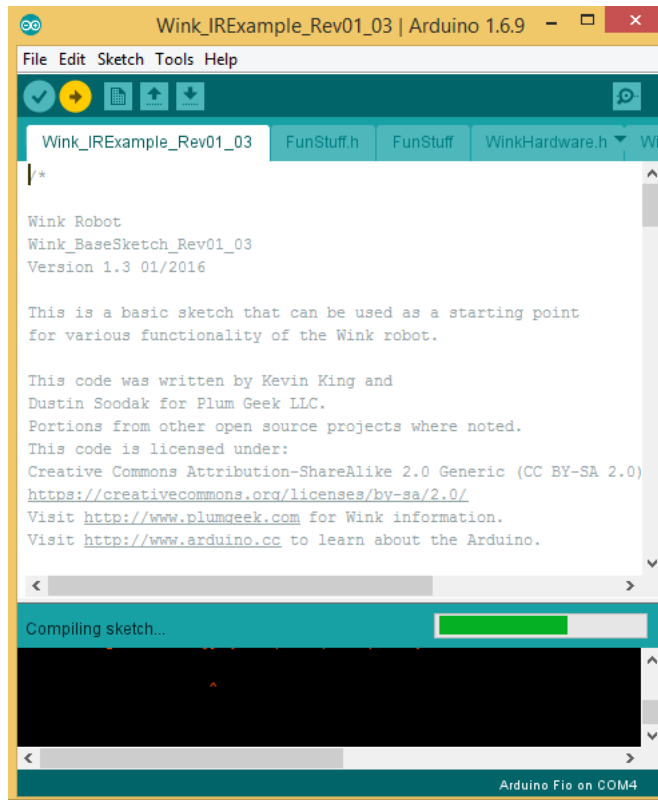
The LED on the programming adaptor should be blinking while compiling is in progress.

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!**

Wink_IRExample_Rev01_03 | Arduino 1.6.9

File Edit Sketch Tools Help

Wink_IRExample_Rev01_03   FunStuff.h   FunStuff   WinkHardware.h   Wi

```
/*

Wink Robot
Wink_BaseSketch_Rev01_03
Version 1.3 01/2016

This is a basic sketch that can be used as a starting point
for various functionality of the Wink robot.

This code was written by Kevin King and
Dustin Soodak for Plum Geek LLC.
Portions from other open source projects where noted.
This code is licensed under:
Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0)
https://creativecommons.org/licenses/by-sa/2.0/
Visit http://www.plumgeek.com for Wink information.
Visit http://www.arduino.cc to learn about the Arduino.
```

Done uploading.

```
Sketch uses 6,584 bytes (21%) of program storage space. Maximum is
Global variables use 335 bytes (16%) of dynamic memory, leaving 1,
```

Arduino Fio on COM4