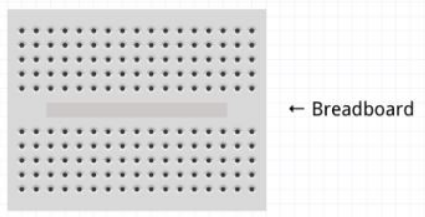


Use Pages 1 & 2 as a reference to the Lab. It will become very helpful for learning the fundamentals before executing Lab 1. Use Pages 3 & 4 to download the software for the following Labs.

Components

Click any photo to learn more about the component!

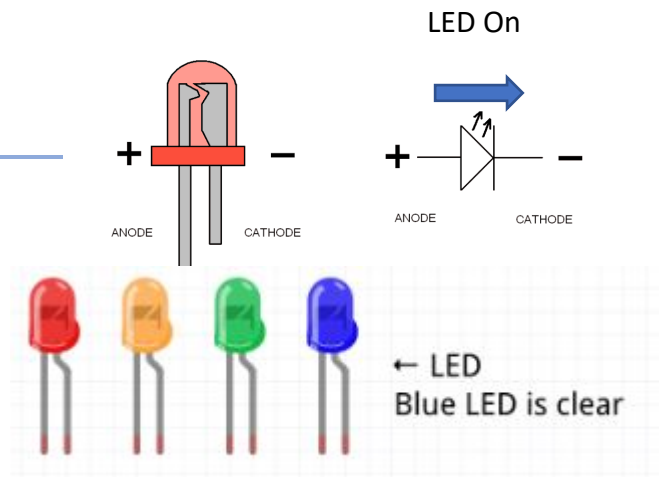
Breadboard



- Wires, Resistors, and LED's are place in the holes, **interconnected** with the holes **below/above**.
- Split into **two** parts, **not** connected to one another.

LEDs

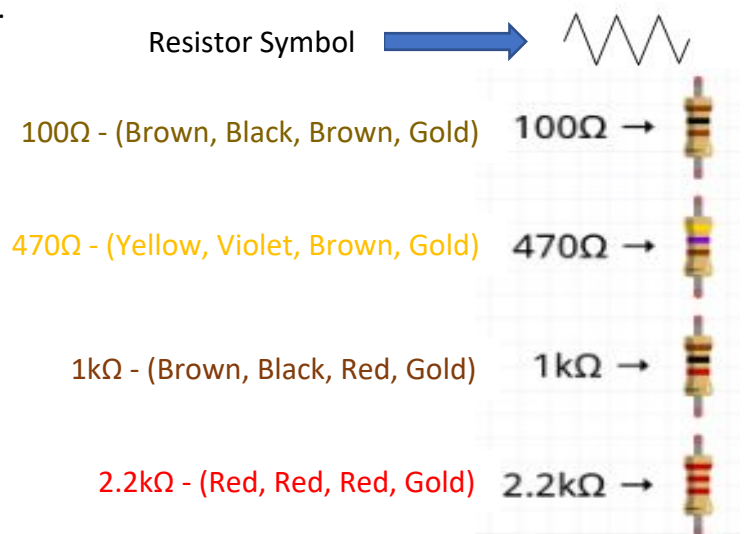
- The **longer** wire is the Anode and **shorter** is Cathode
- Power will be going through the long wire **first** to illuminate the LED.



Resistors

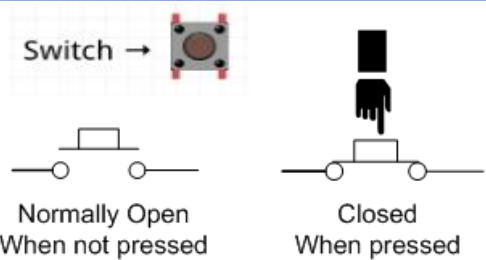
Resistors are able to be placed in **either** direction.

- **Colour** coordinated to display the resistive value.
- Used to create current and protect other components.

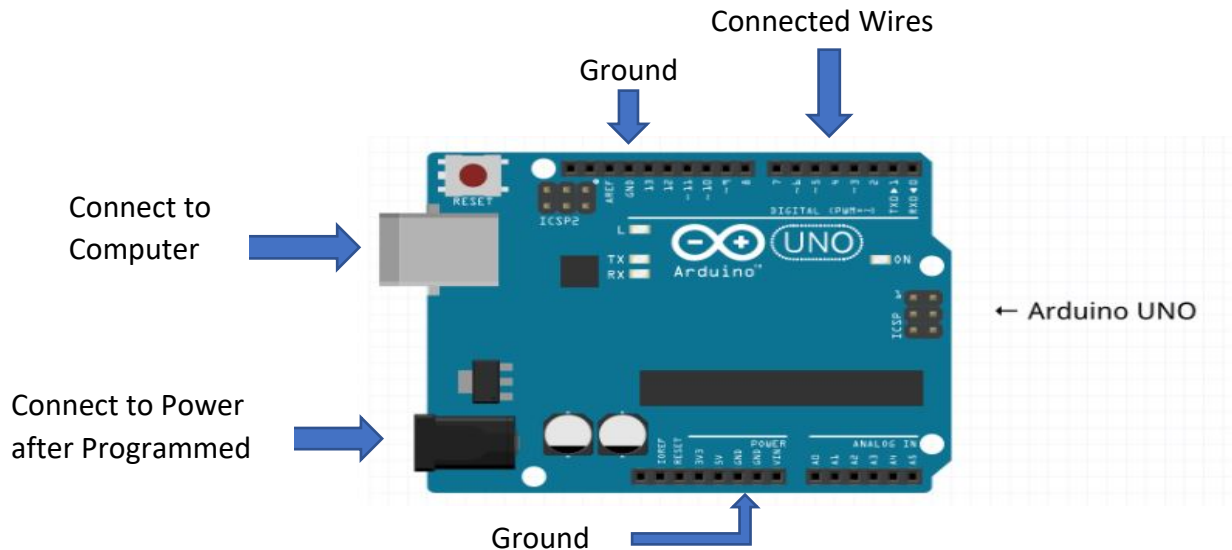


Switches

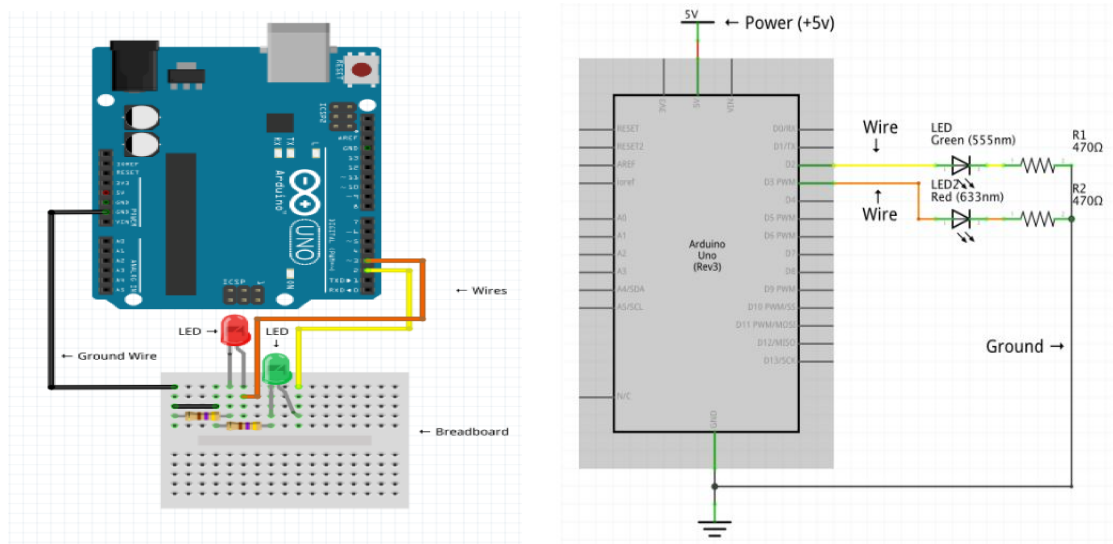
- The switch is not allowing any power through when it is **not** pressed.
- When **pressed down**, it allows for power to go through.



Arduino-Uno



Schematic Example:

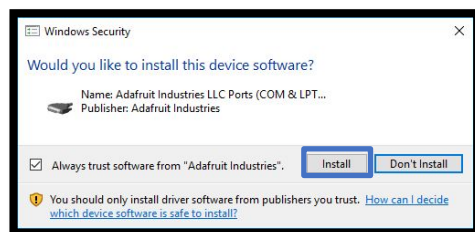
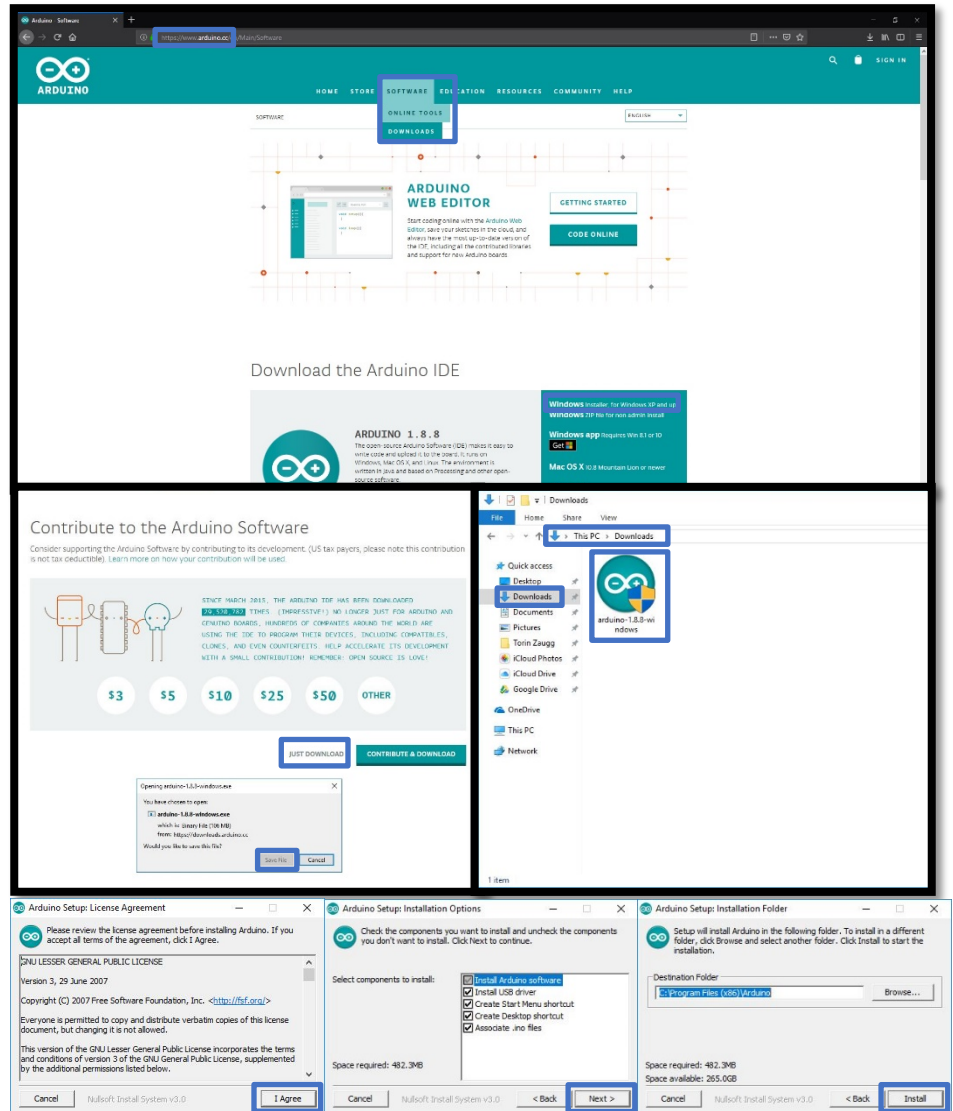


Arduino Software

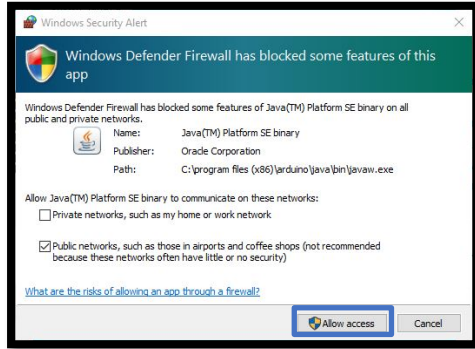
Windows Install Instructions

If your laptop or computer is running Windows:

1. In your web browser, go to www.arduino.cc
2. Under the software tab, click [downloads](#)
3. Click “windows installer”
4. Click “Just Download”
5. If necessary, click “save file”
6. Once the file has finished downloading, navigate to your downloads folder and double click “Arduino-1.8.8-windows.exe”.
7. A warning may appear asking if you want “this app to make changes to your device”. Click yes.
8. Click your way through the installer. Three times in the install process a window will open asking “would you like to install this device software”. Always click Install.



9. Once the software is finished installing, go to the start menu and find “Arduino”.
10. The first time you launch the software it’s going to ask if you want to let it through the firewall. Click Allow Access.



11. The Arduino software is installed, you're ready for your first Arduino program!

MacOS Install Instructions

If your laptop or computer is running MacOS:

1. In your web browser, go to www.arduino.cc
2. Under the software tab, click downloads
3. Click "Mac OS X".
4. Click "Just download"
5. Once the file has finished downloading, navigate to the downloads folder and move Arduino.app to the applications folder.
6. Navigate to the applications folder and launch Arduino. The first time you start it a window will open asking if you really want to open. Click "Open".
7. The Arduino software is installed, you're ready for your first Arduino program!

