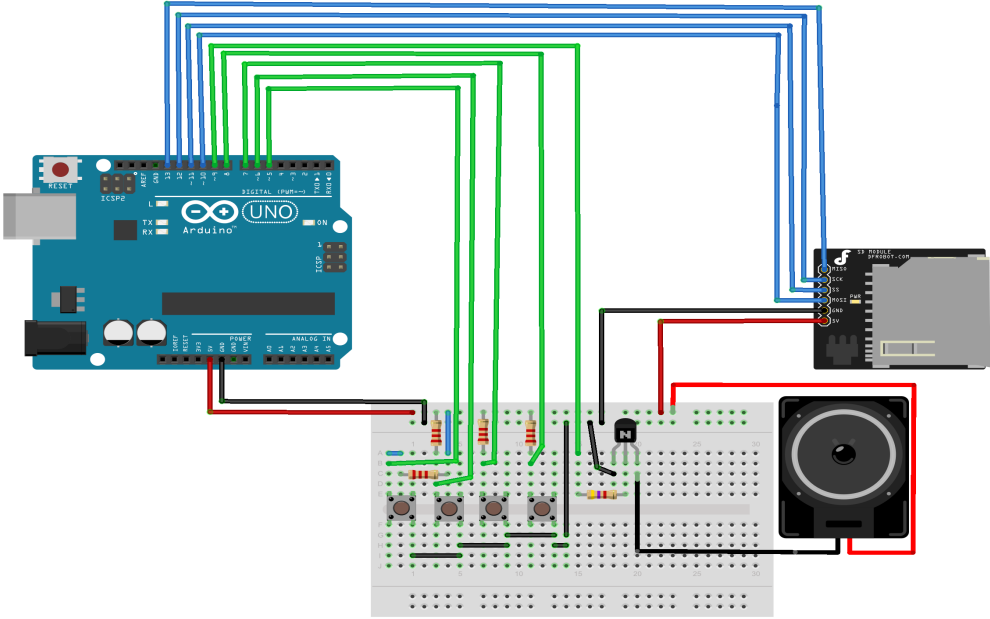
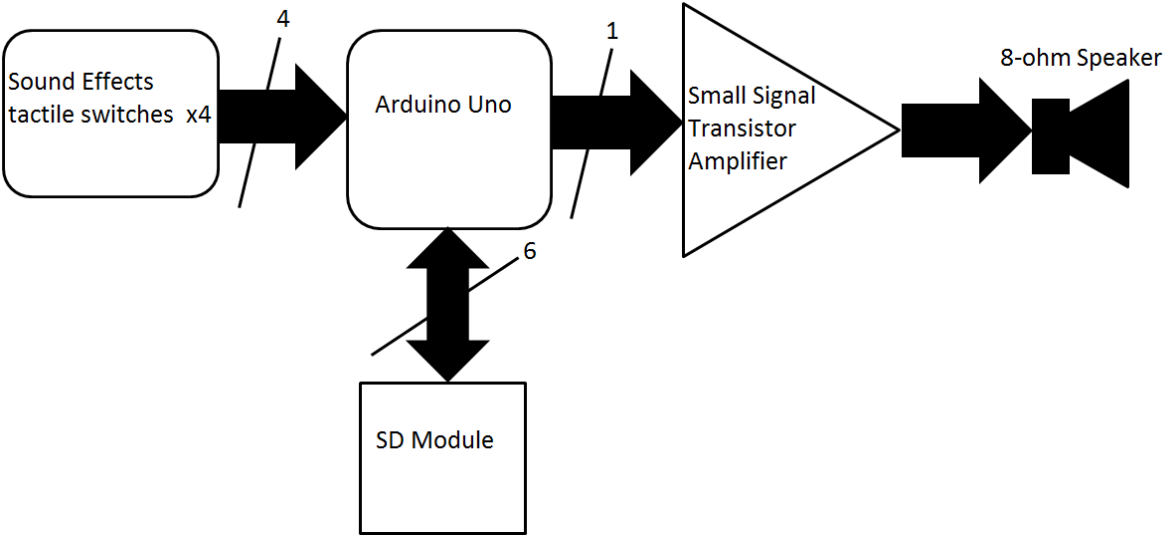
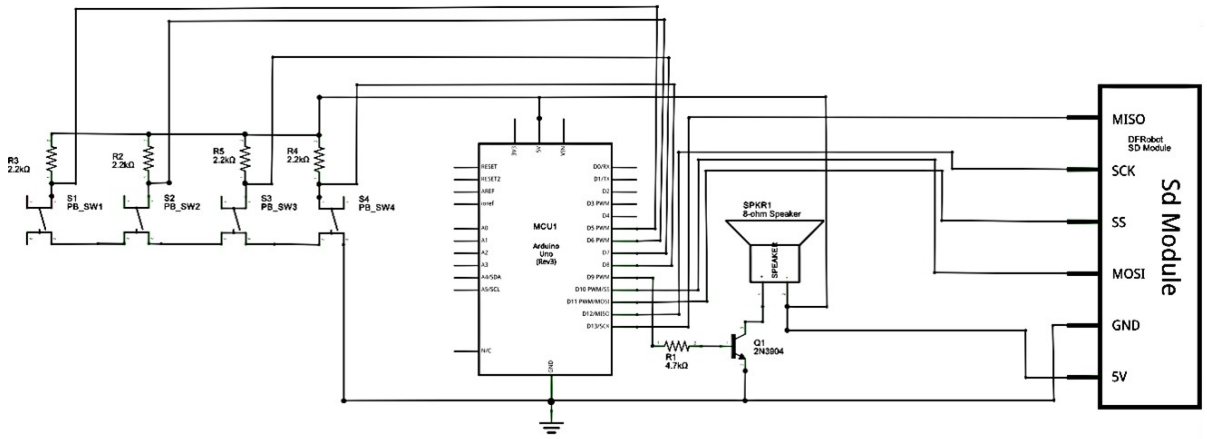
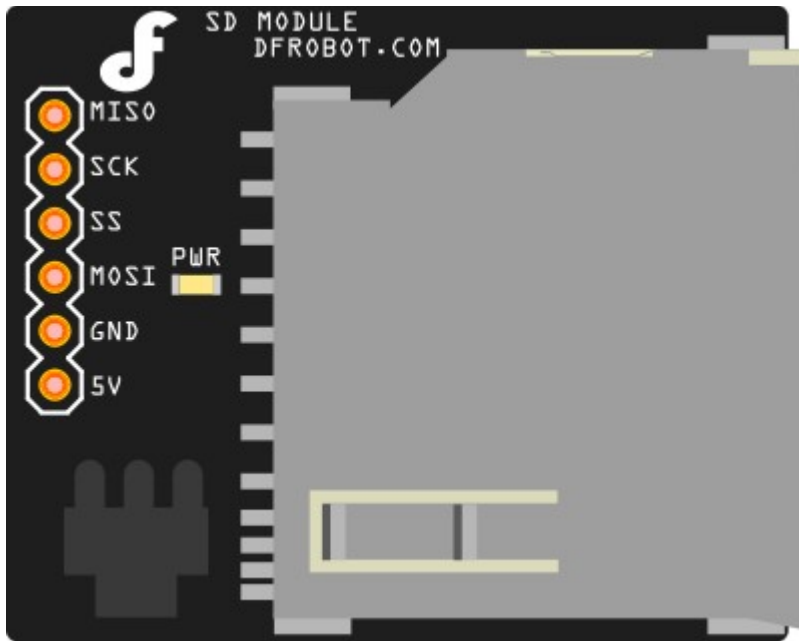
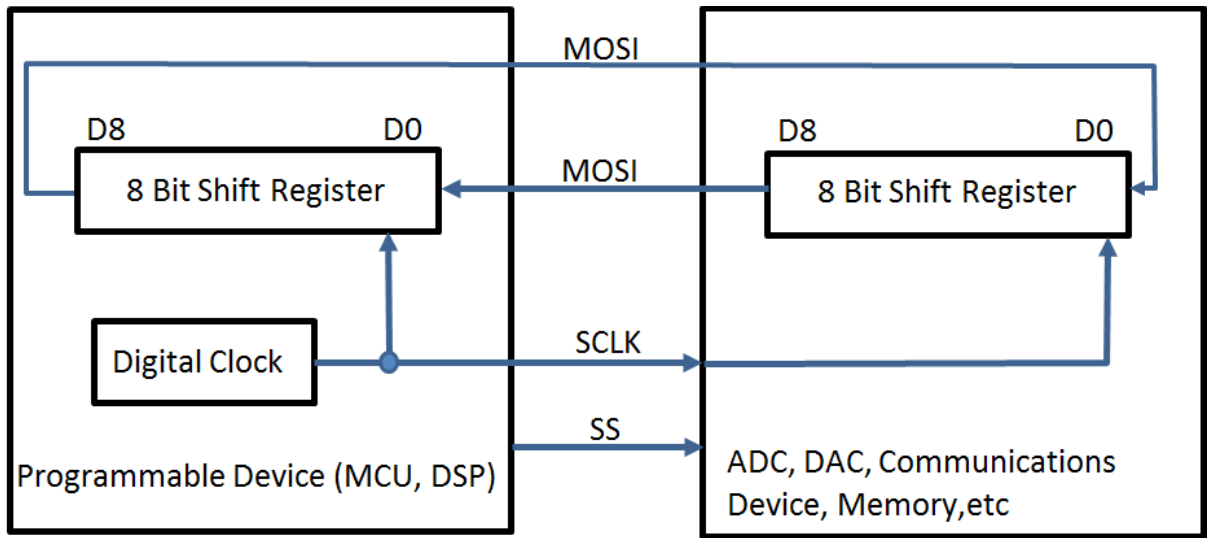
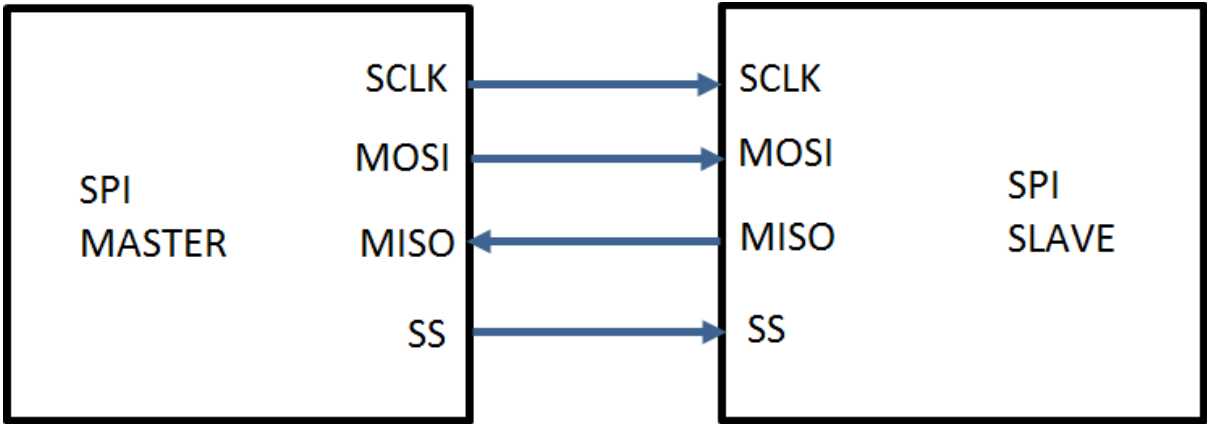
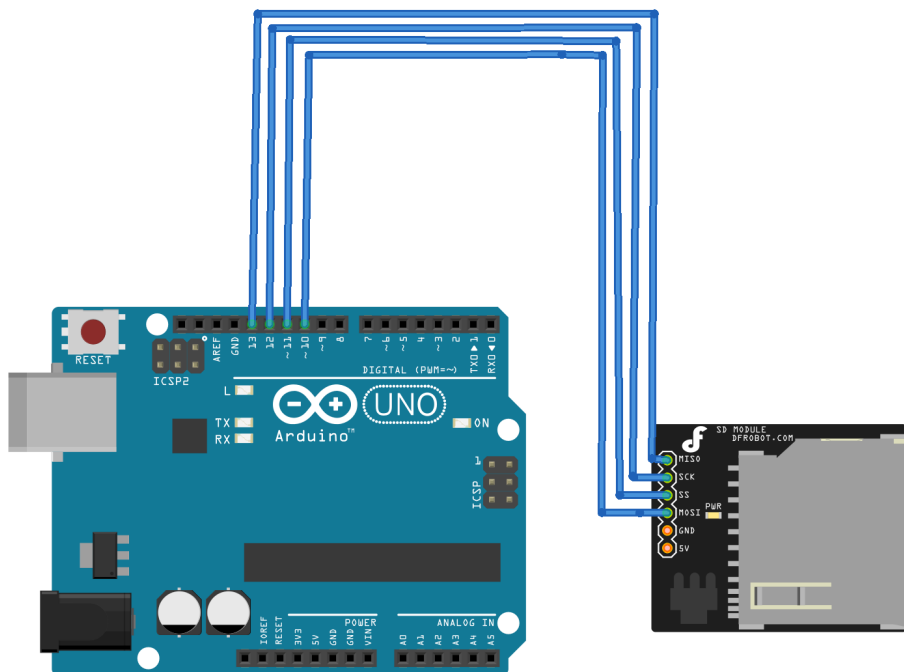
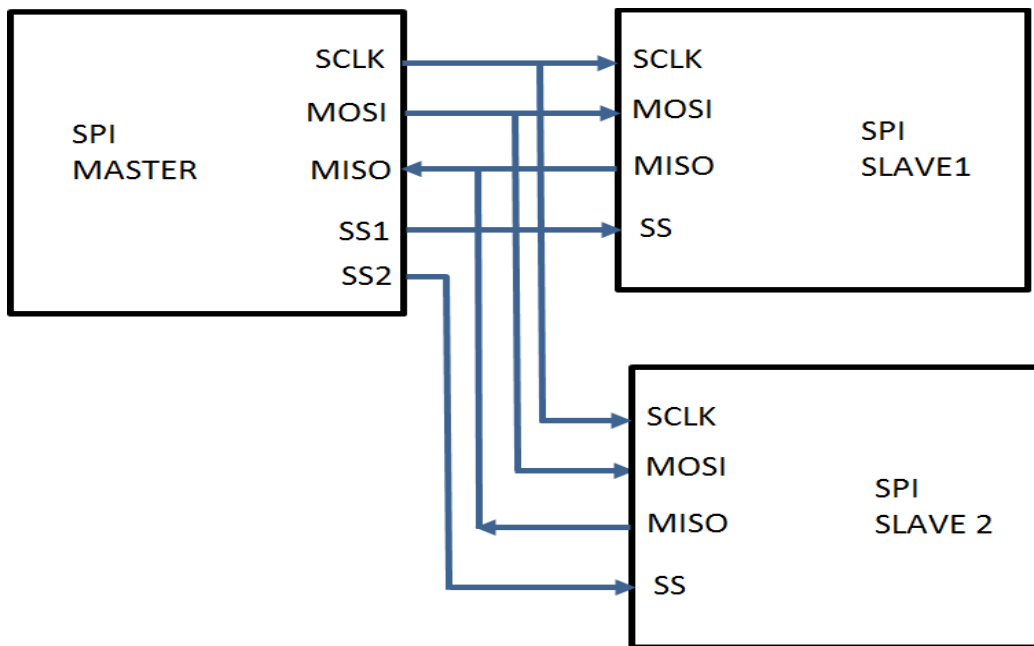


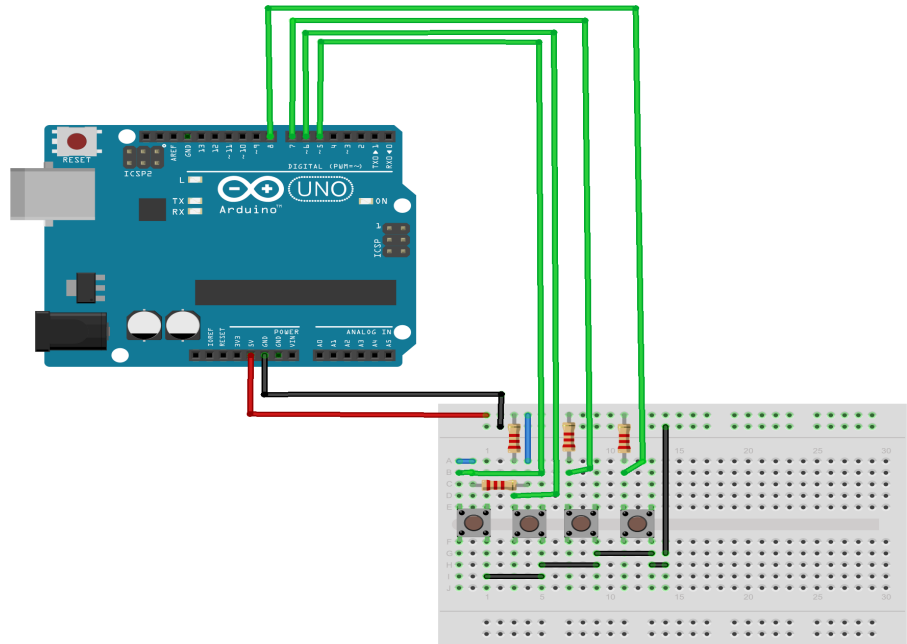
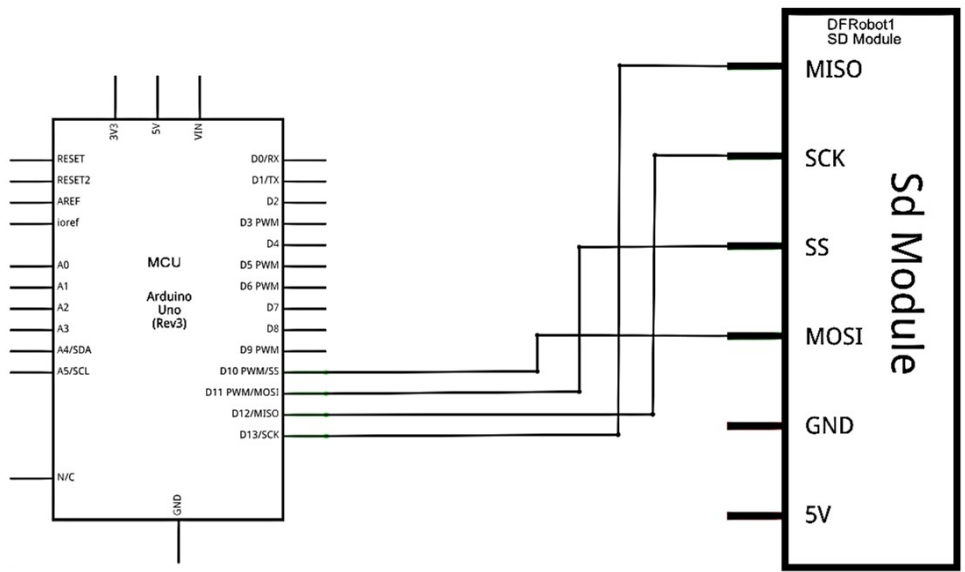
Chapter 1: A Sound Effects Machine

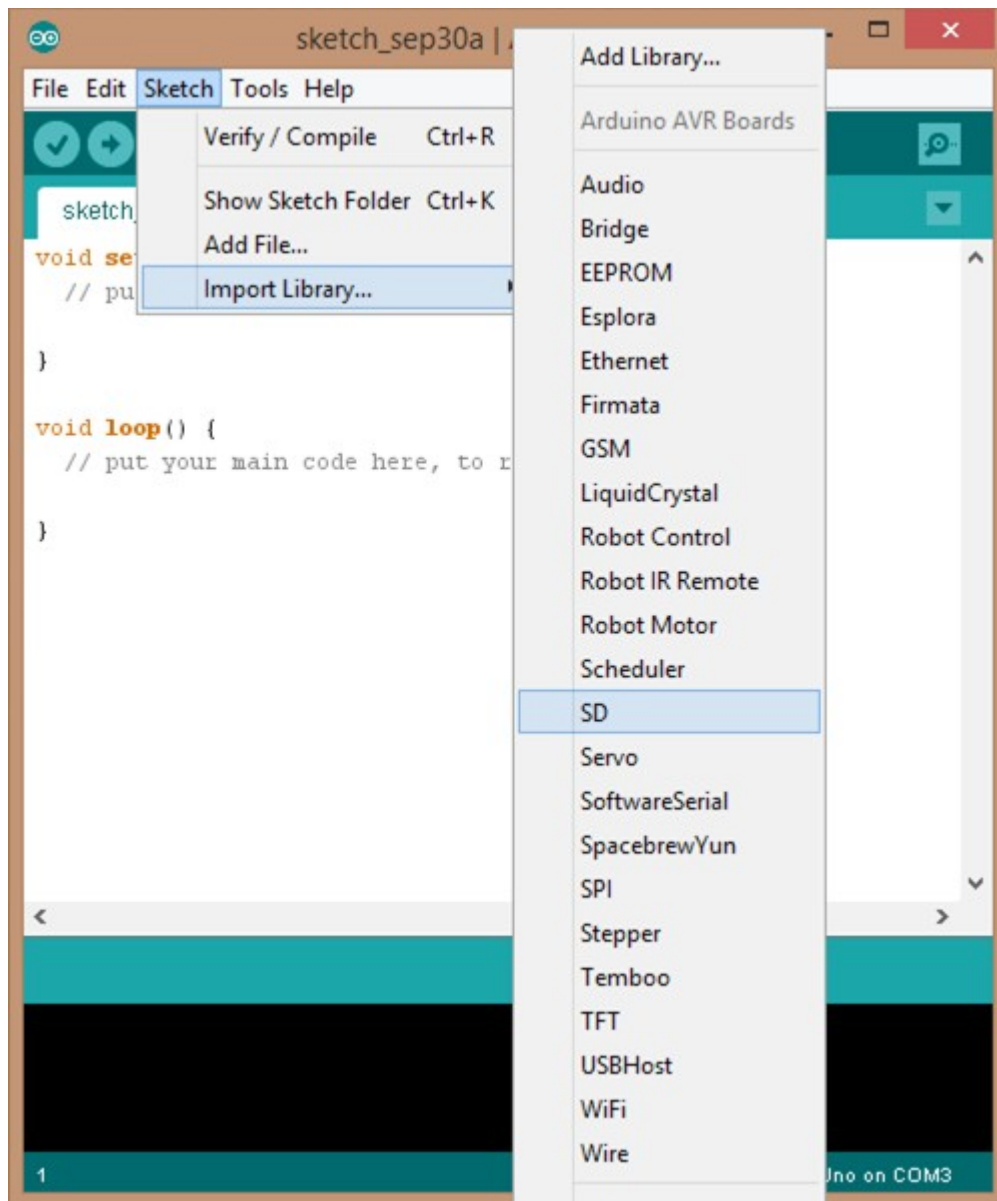


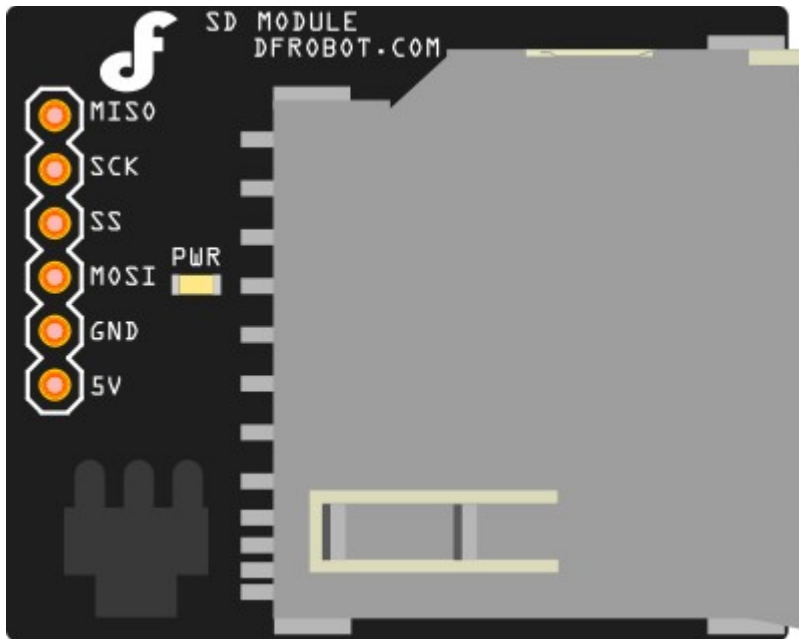












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Home

TMRh20 edited this page on Jul 31 · 15 revisions

Arduino library for asynchronous playback of PCM/WAV files direct from SD card

Utilizes standard Arduino SD library, SD card and output device (Speaker, Headphones, Amplifier, etc)

Supported Boards

All 328 based boards: Arduino Uno, Nano, Duemilanove, etc
Mega Types: 1280, 2560, etc
No Due support currently.

Recent Updates

Many new features have recently been added, and are in development. See the [Advanced Features wiki page](#)

Features

- PCM/WAV playback direct from SD card
- Main formats: WAV files, 8-bit, 8-32khz Sample Rate, mono.
- Asynchronous Playback: Allows code in main loop to run while audio

Pages

- Advanced Features
- Home

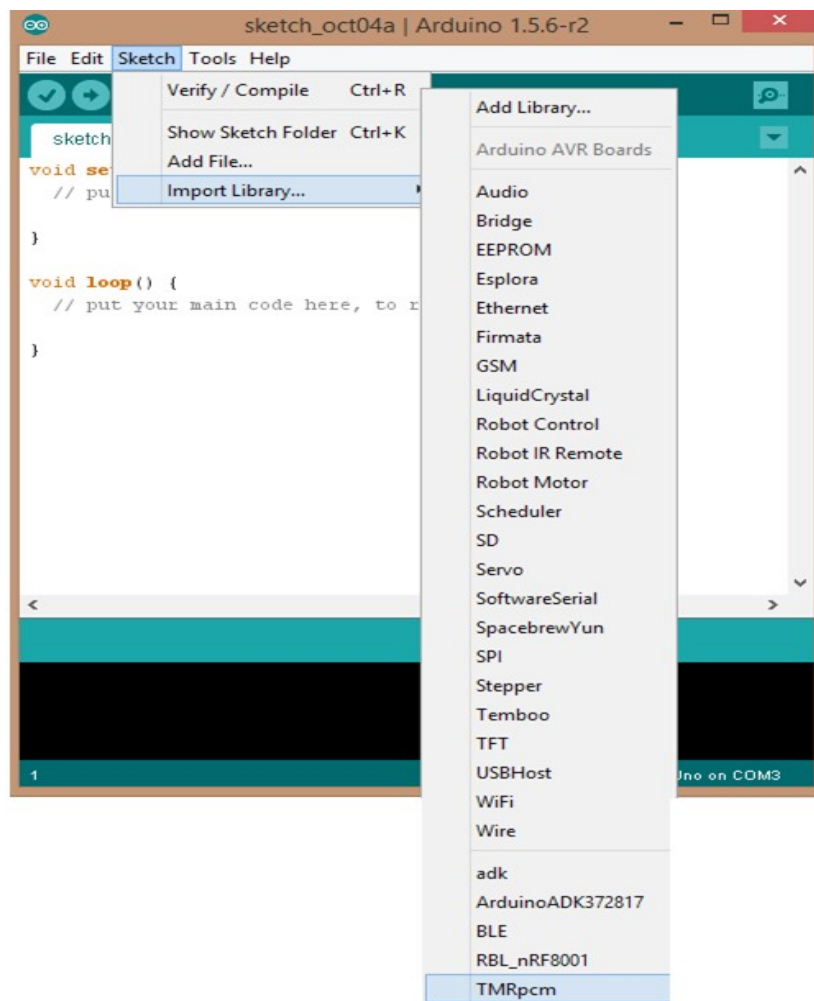
Clone this wiki locally

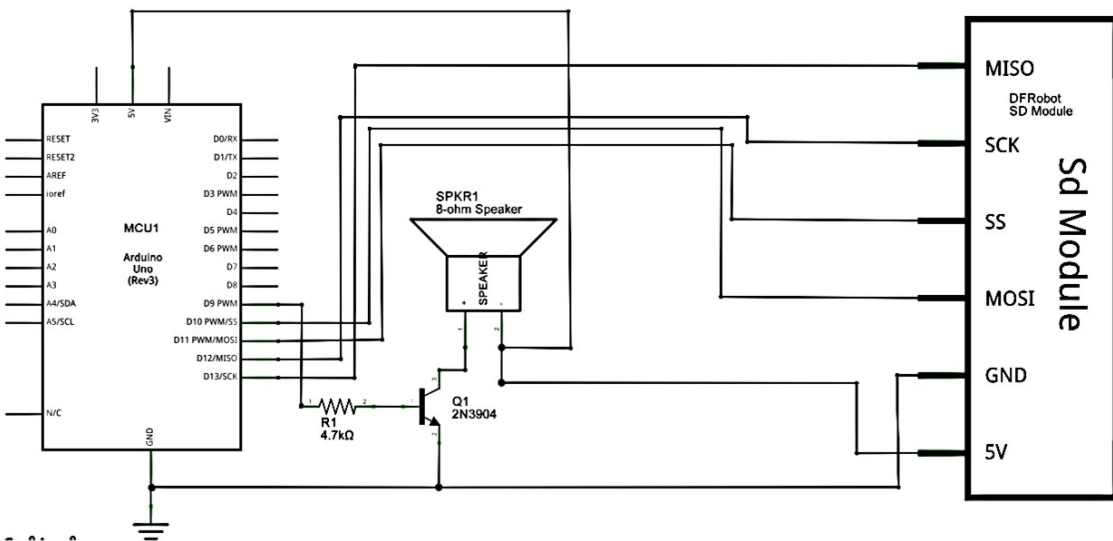
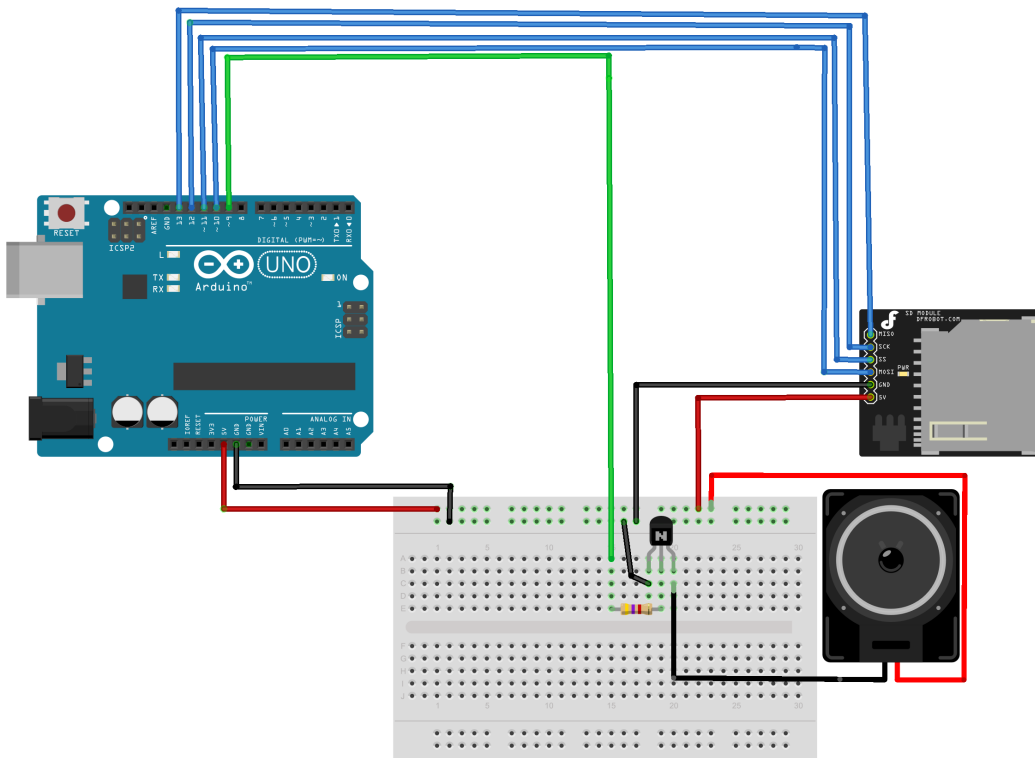
<https://github.com/TMRh20/TMRpcm>

Clone in Desktop

Installation

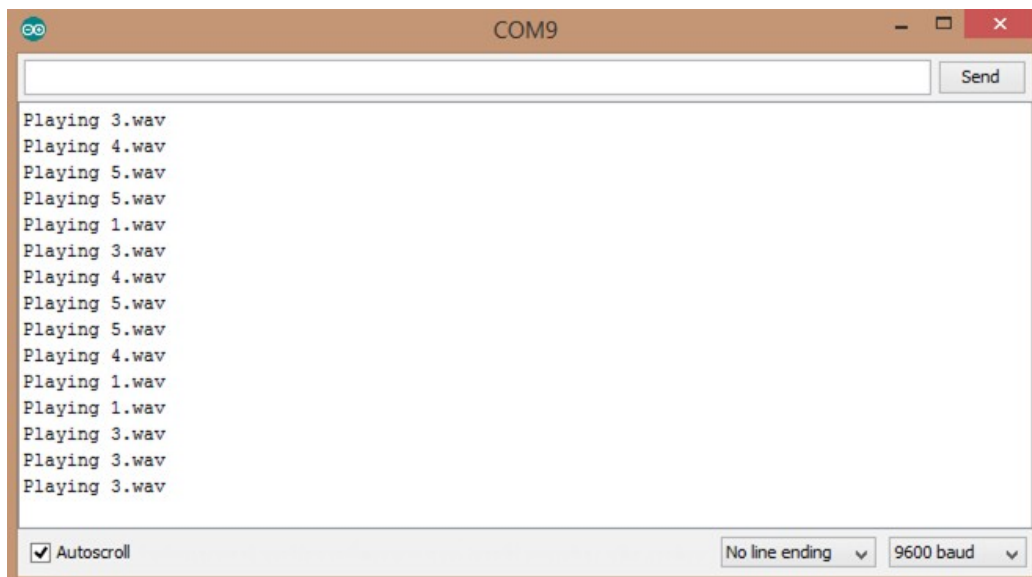
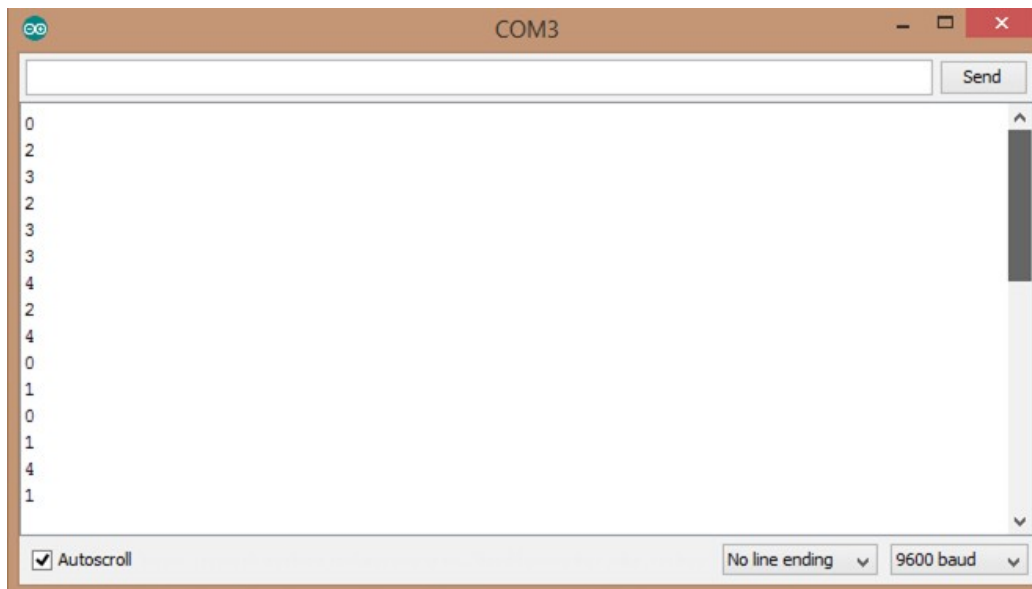
1. Download current package:
<https://github.com/TMRh20/TMRpcm/archive/master.zip>
2. See the Manual Installation section at: <http://arduino.cc/en/Guide/Libraries>

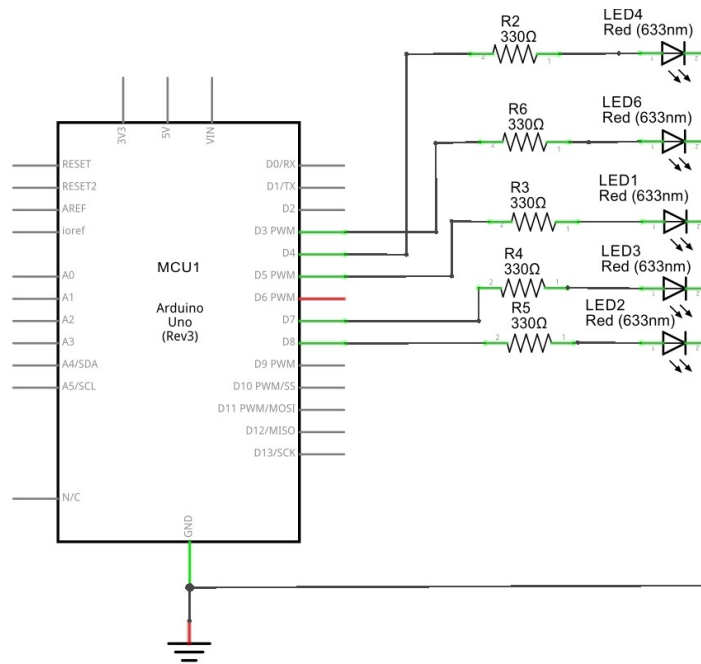
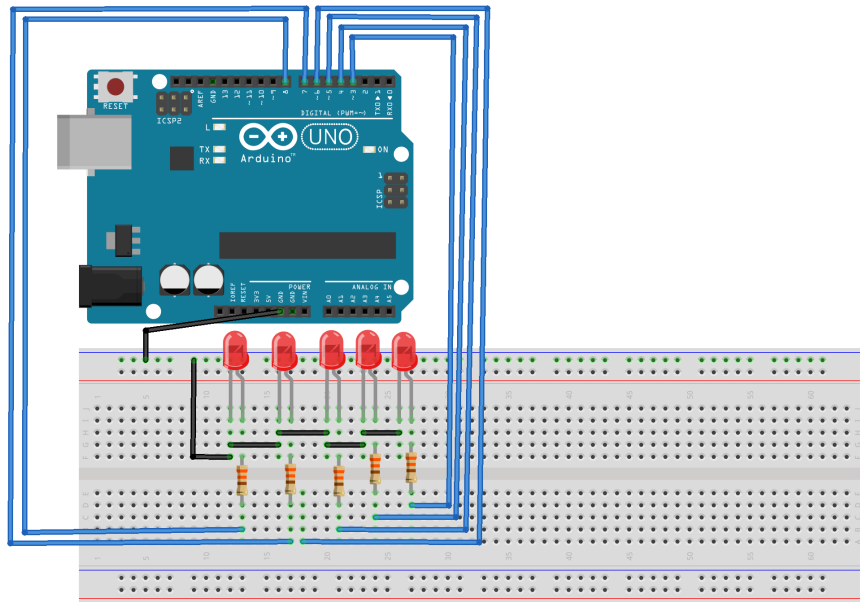


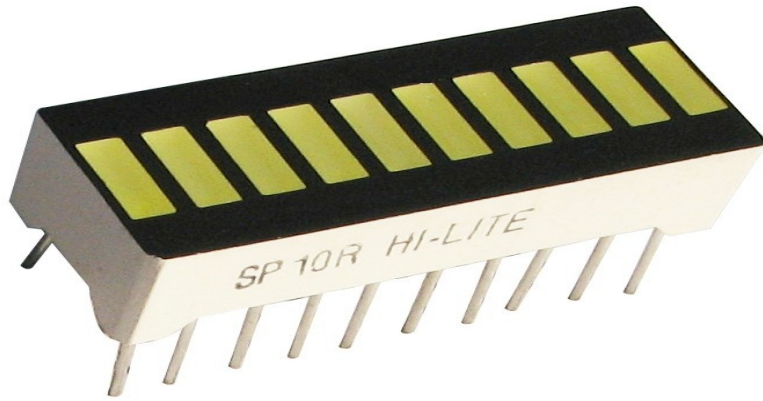


Description

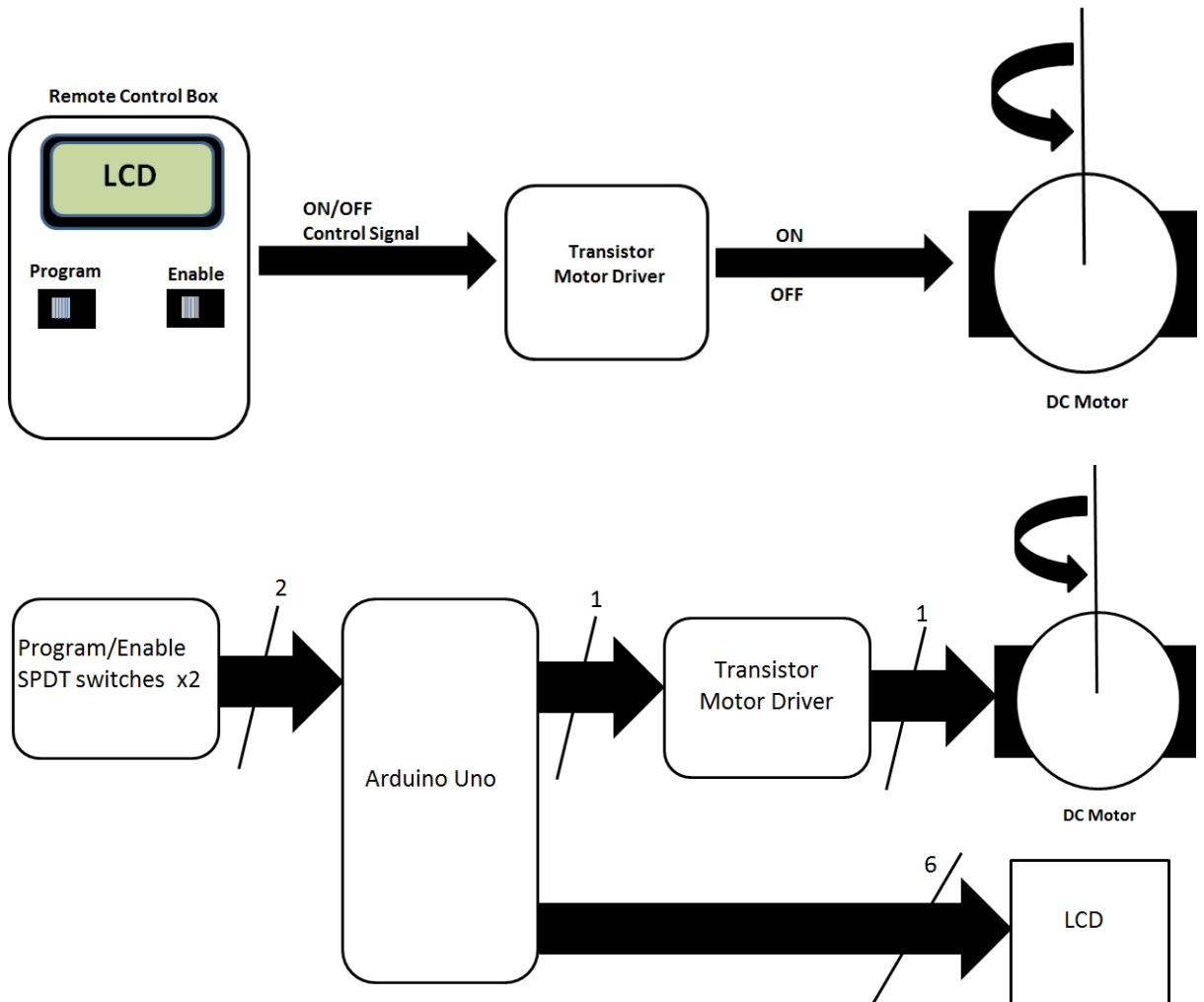
The random function generates pseudo-random numbers.

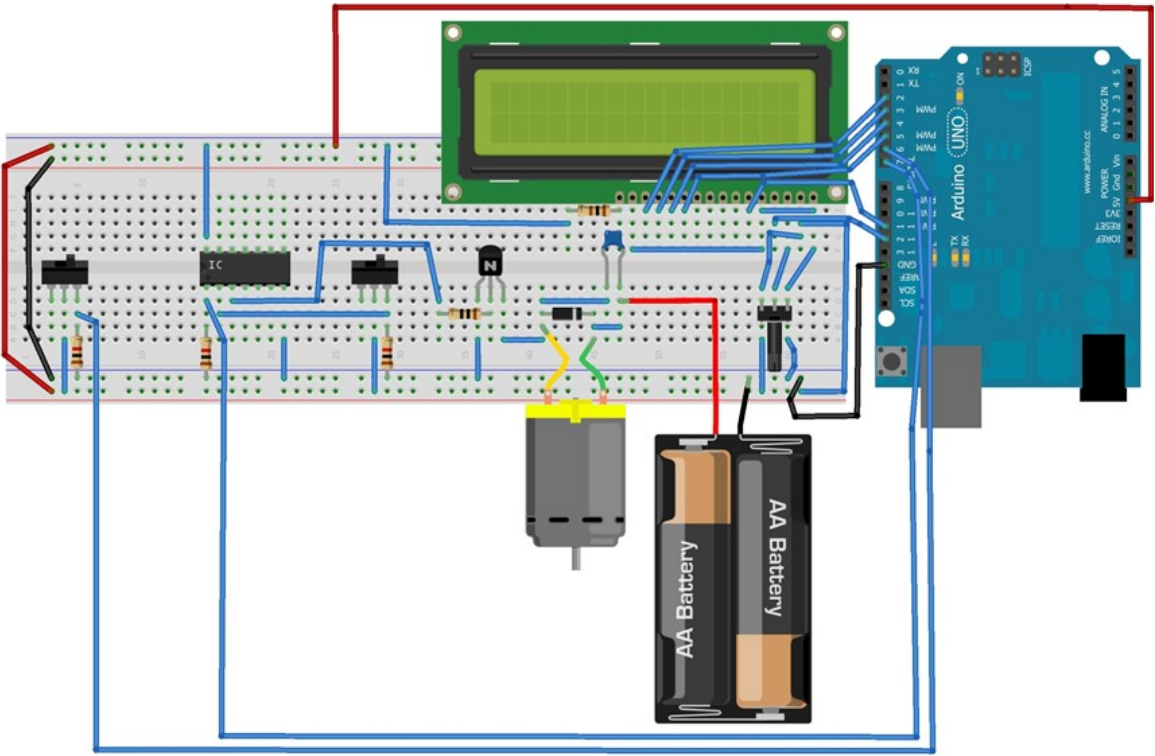


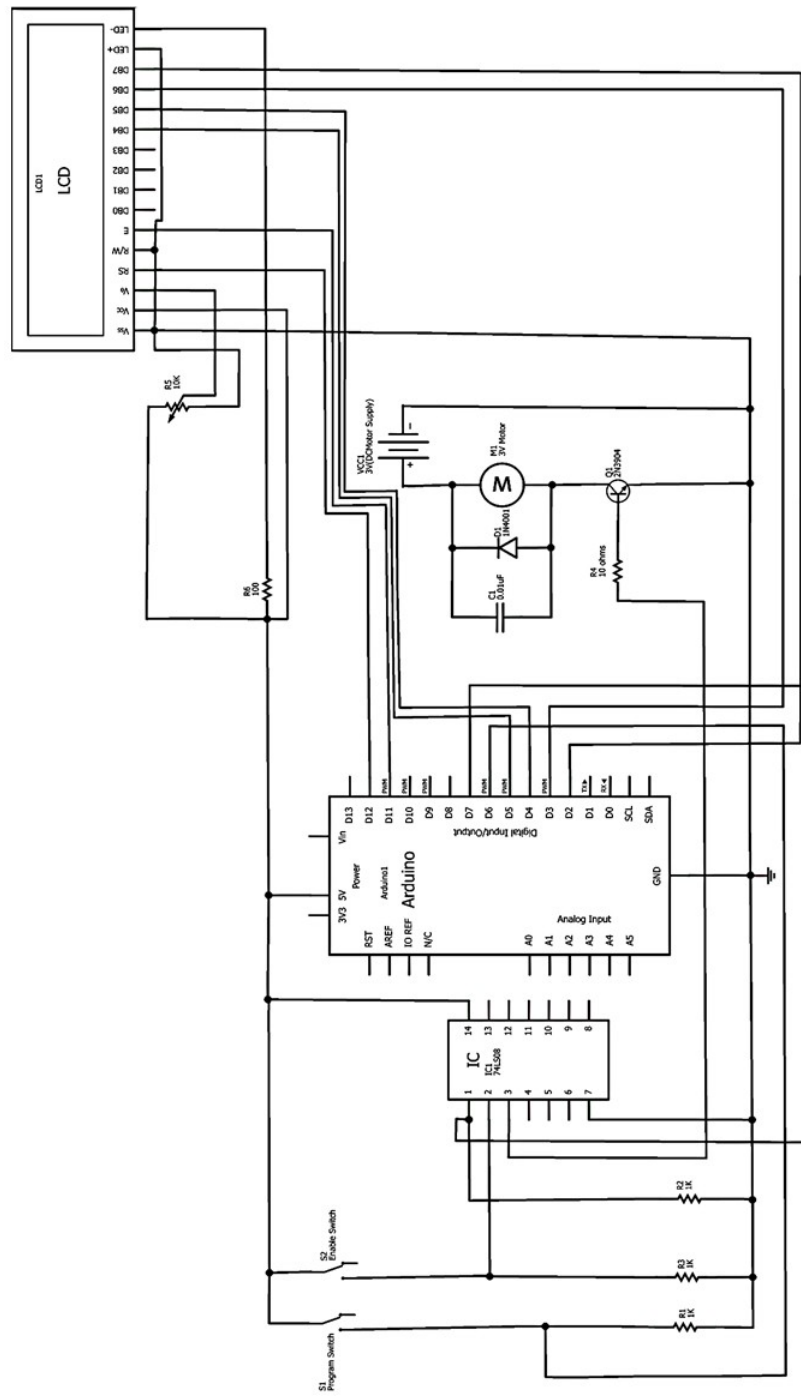


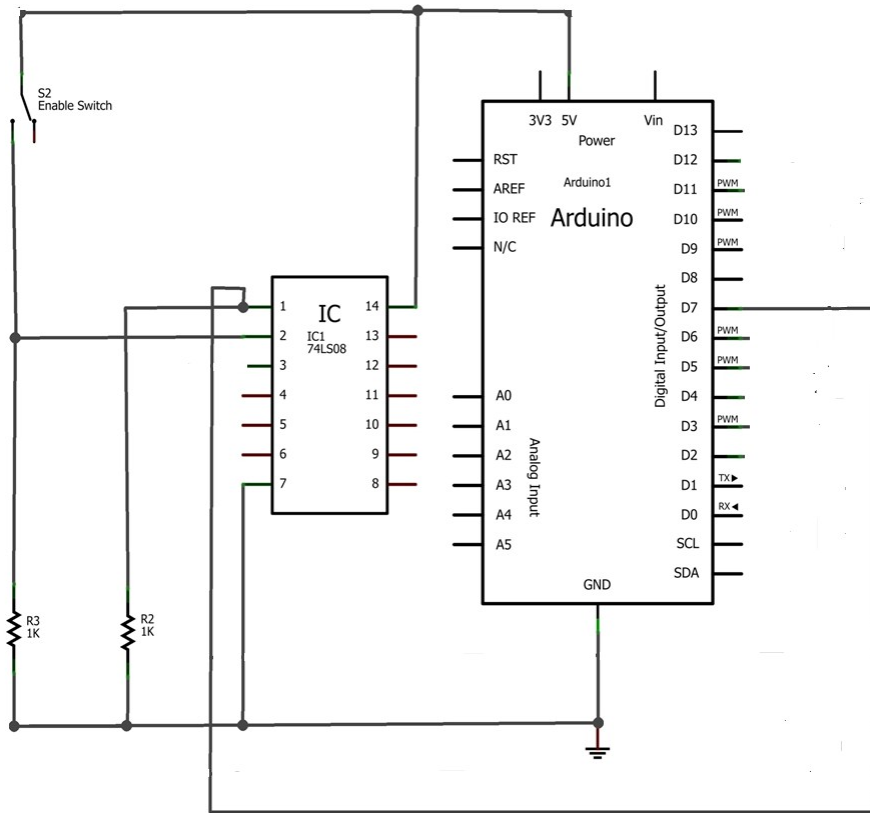


Chapter 2: Programmable DC Motor Controller with an LCD

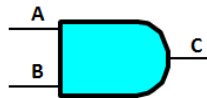








AND LOGIC GATE SYMBOL

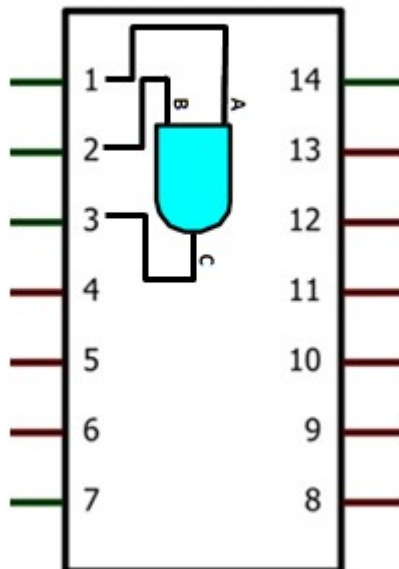


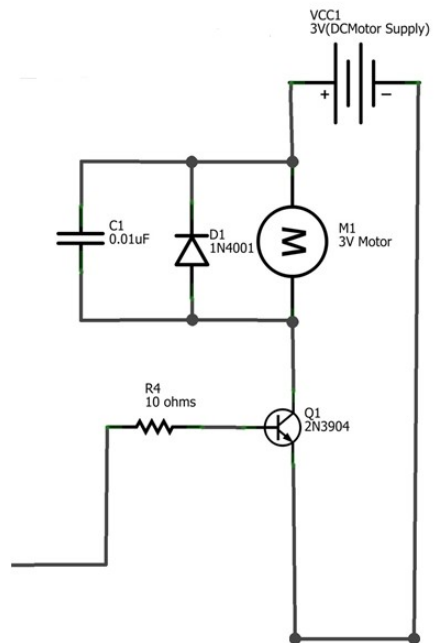
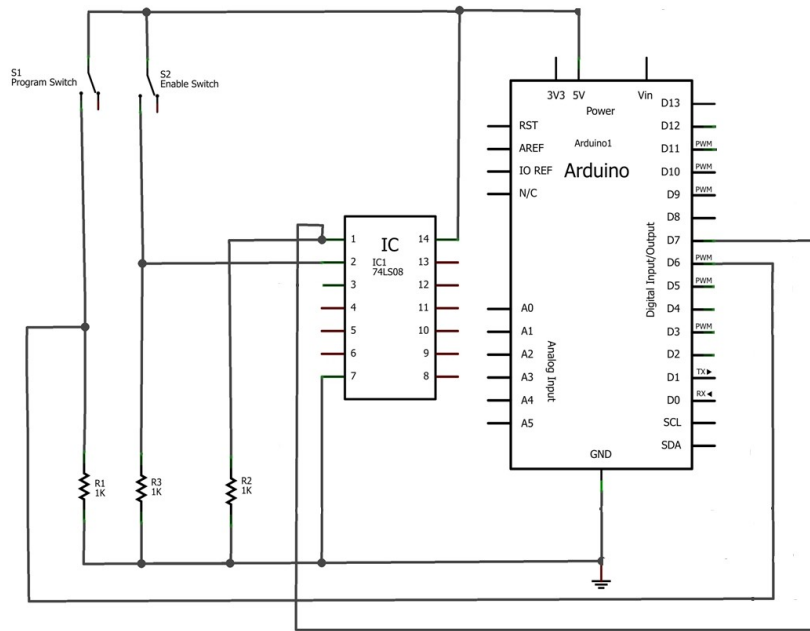
INPUTS		OUTPUT
A	B	C
0	0	0
0	1	0
1	0	0
1	1	1

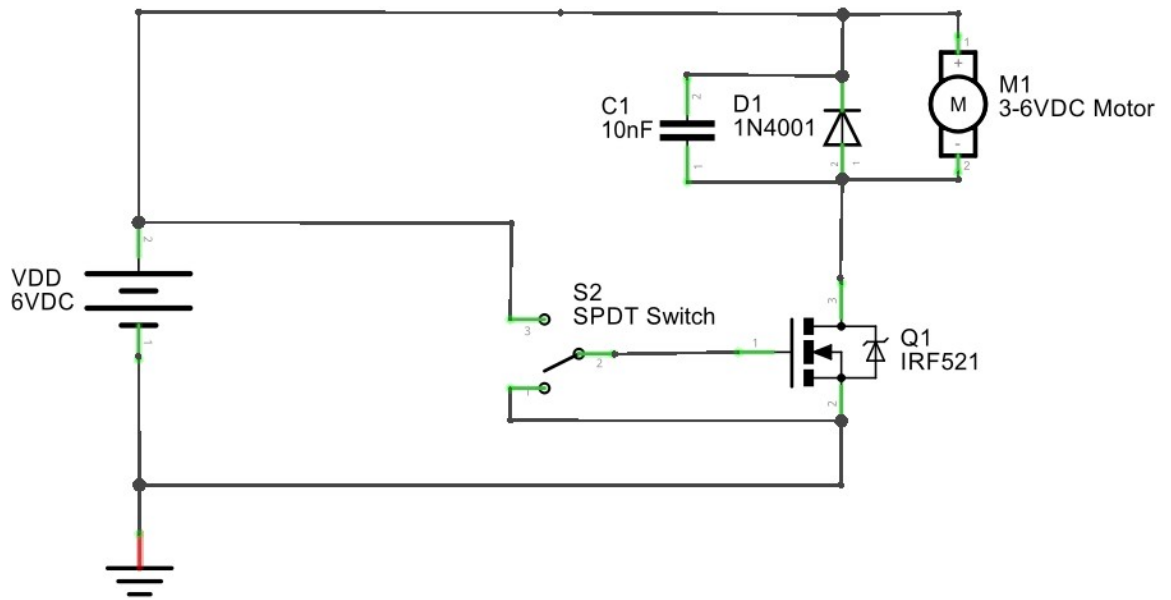
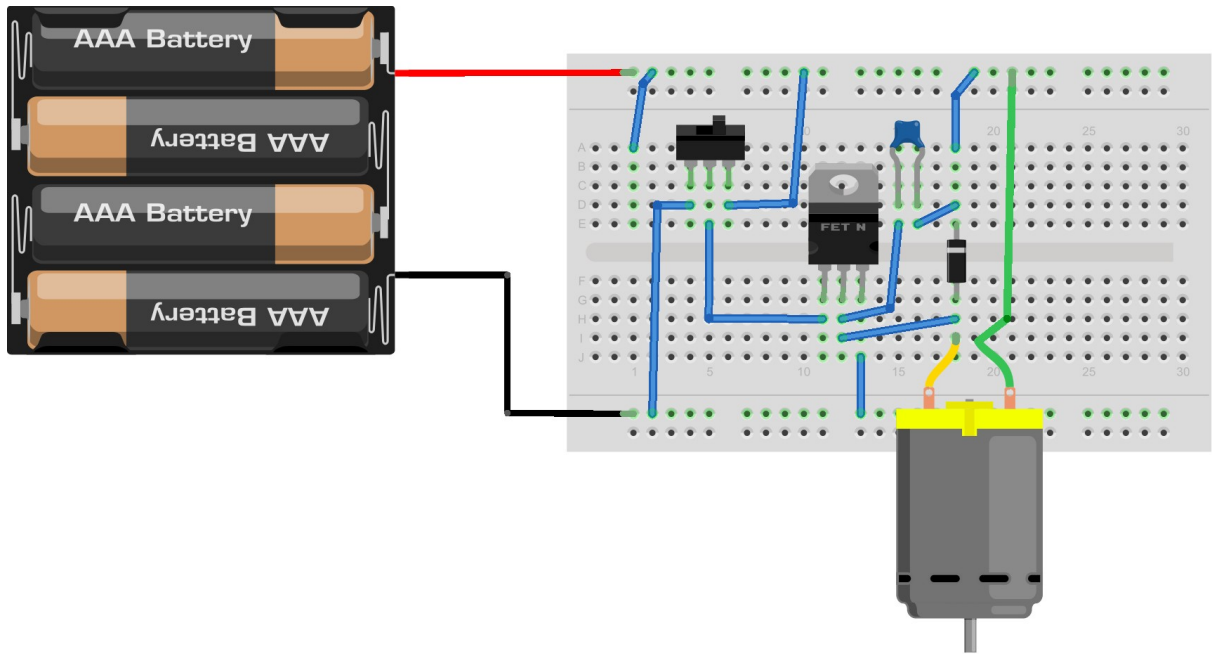
C = AB (BOOLEAN LOGIC EXPRESSION)

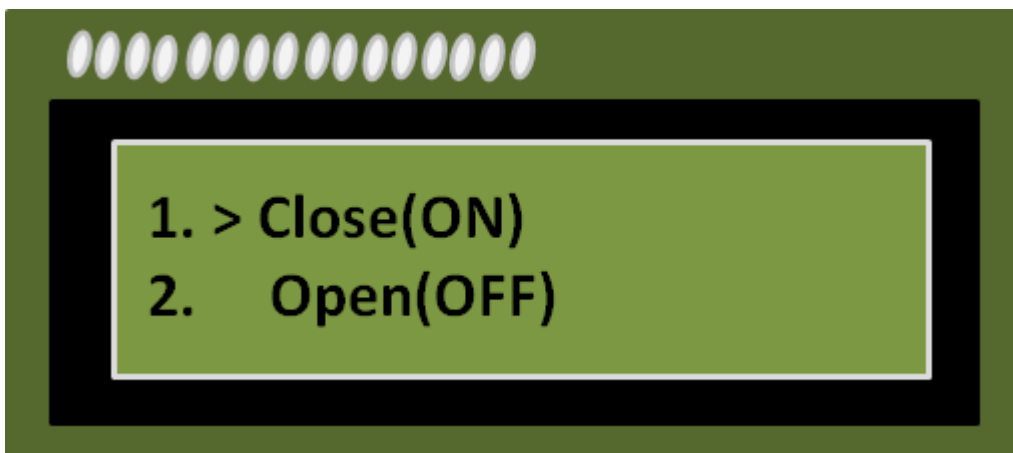
INPUTS		OUTPUT
Enable Switch	D7	DC Motor
Open	0V	OFF
Open	+5V	OFF
Closed	0V	OFF
Closed	+5V	ON

74LS08 AND Logic Gate IC

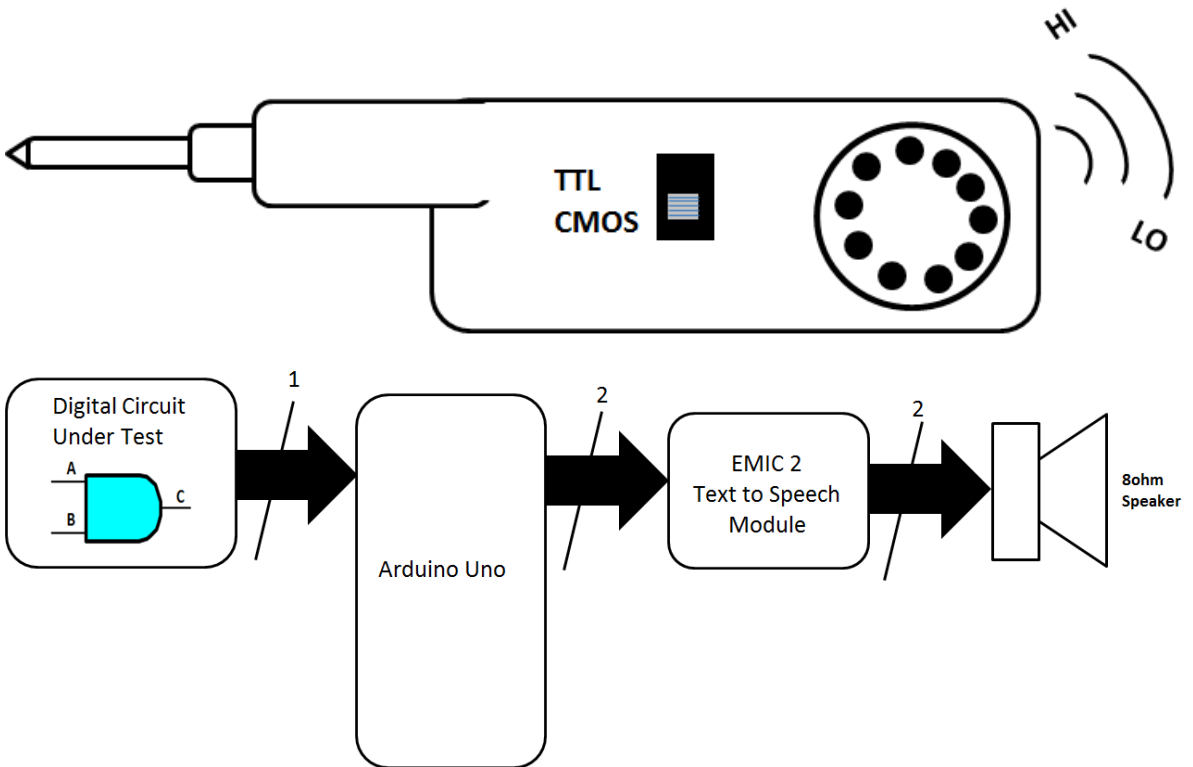


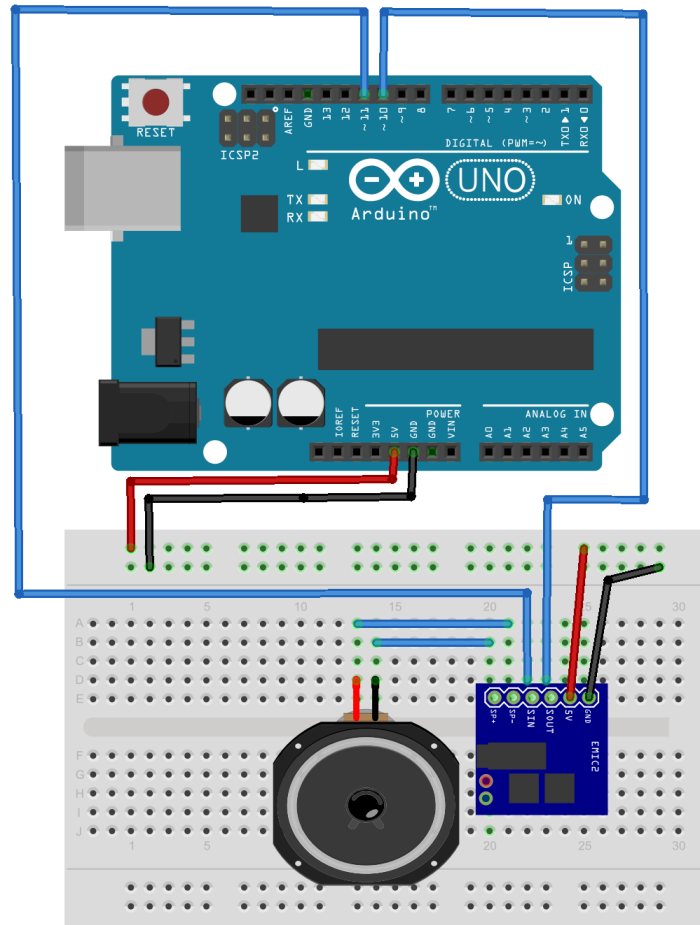


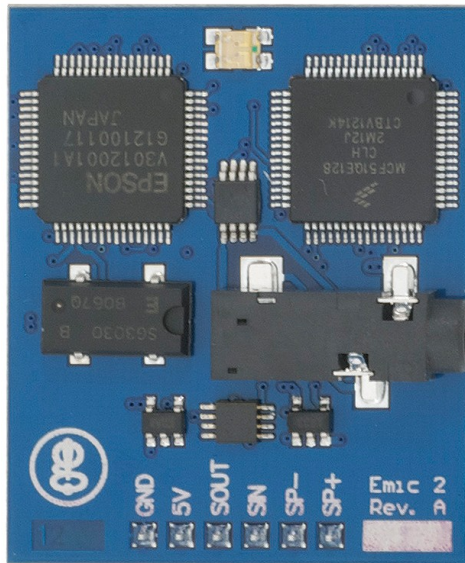
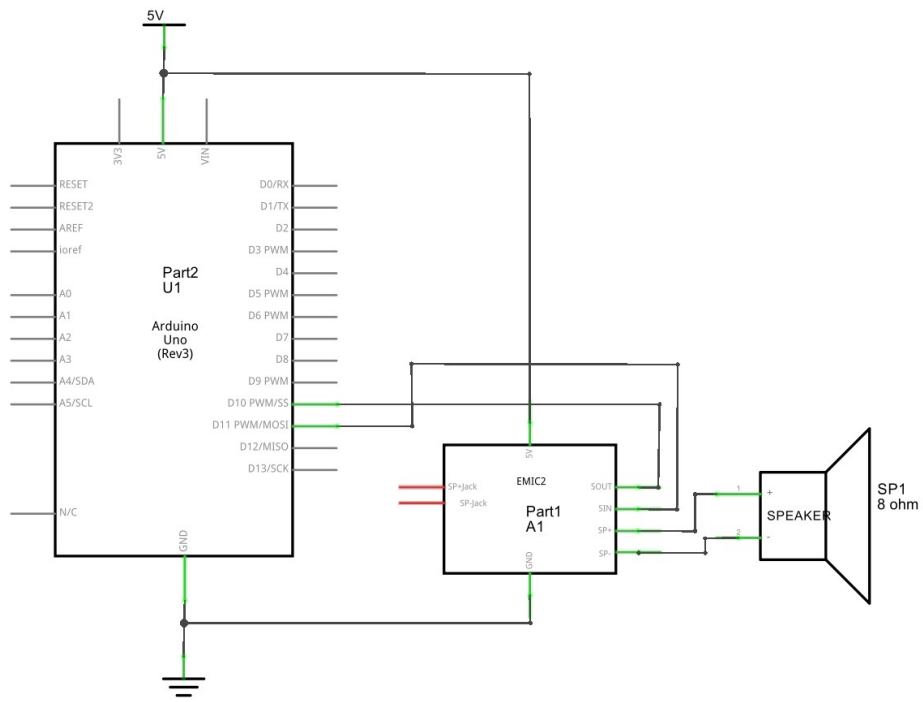


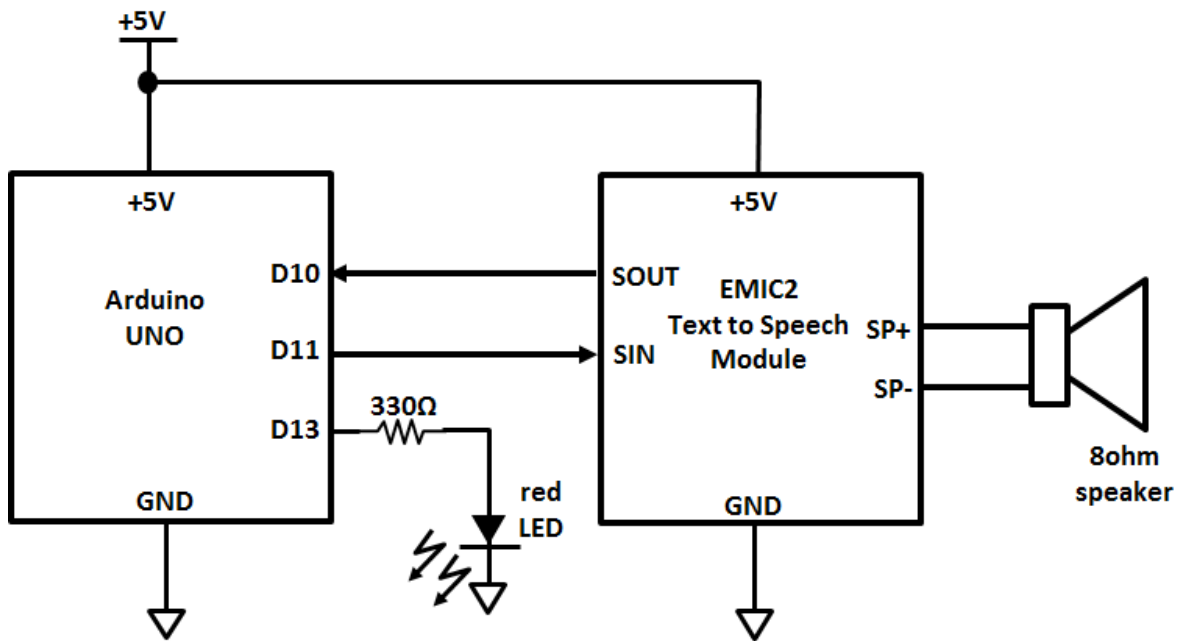
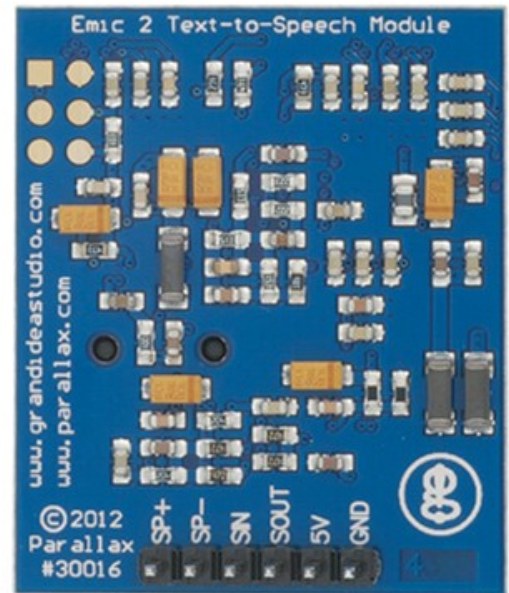


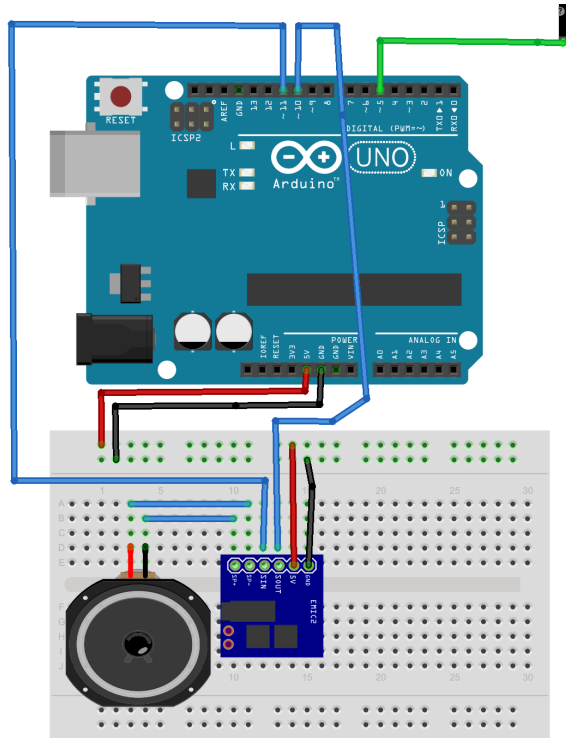
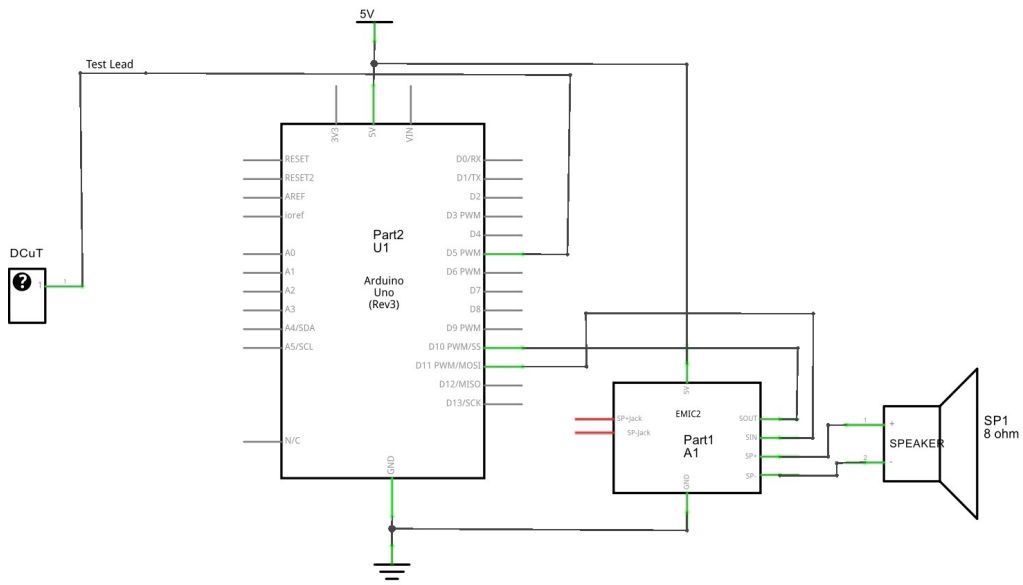
Chapter 3: A Talking Logic Probe

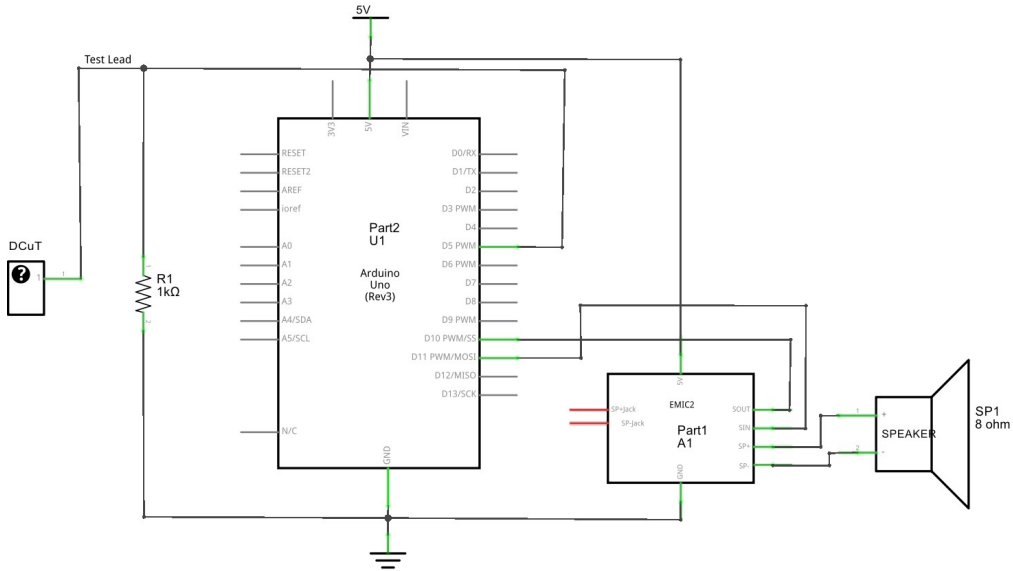
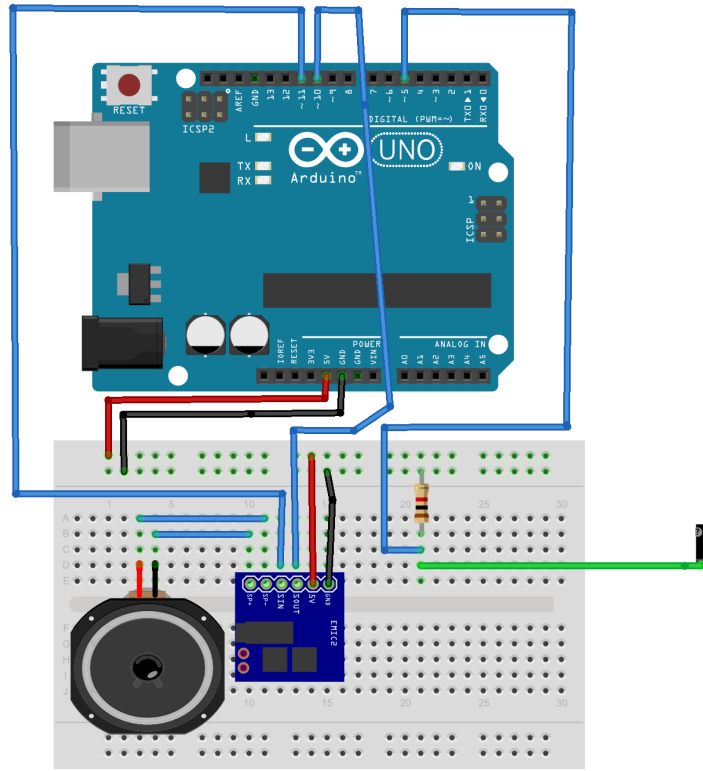


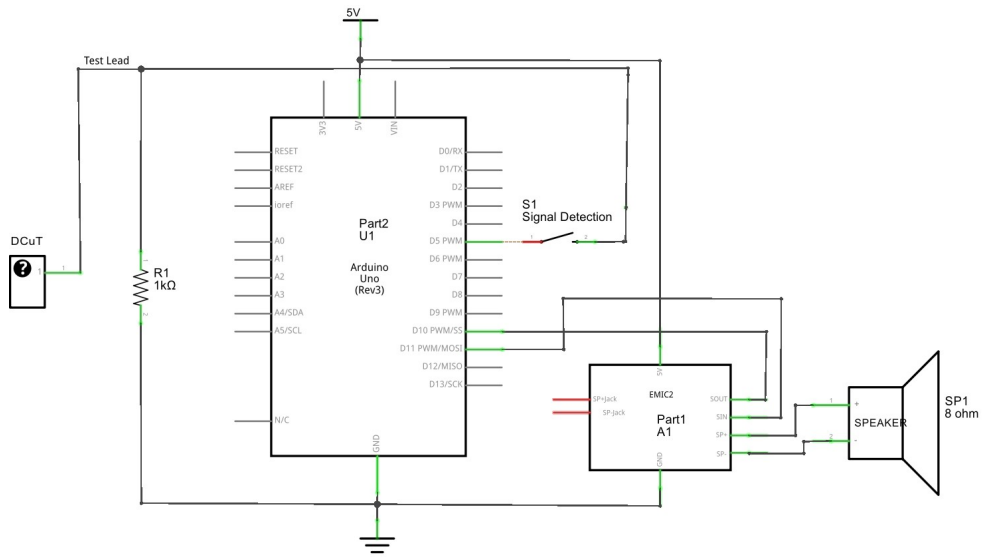
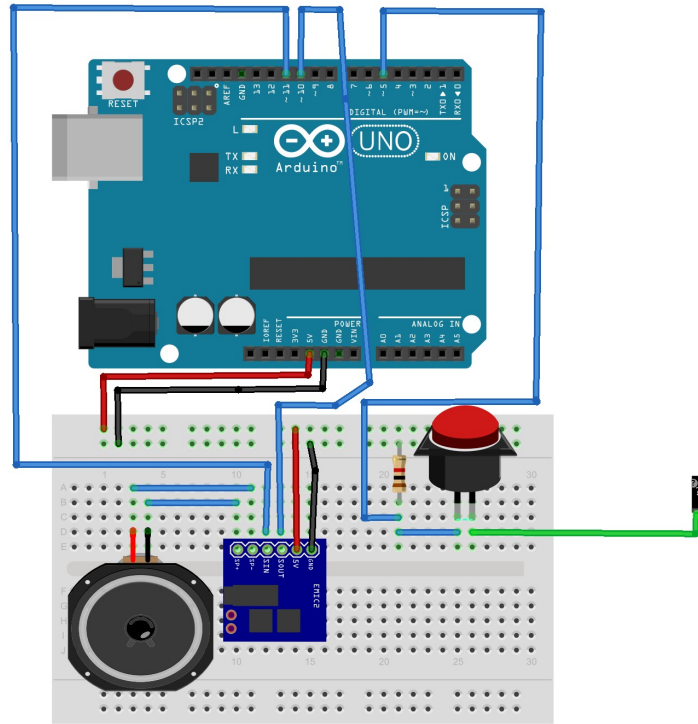






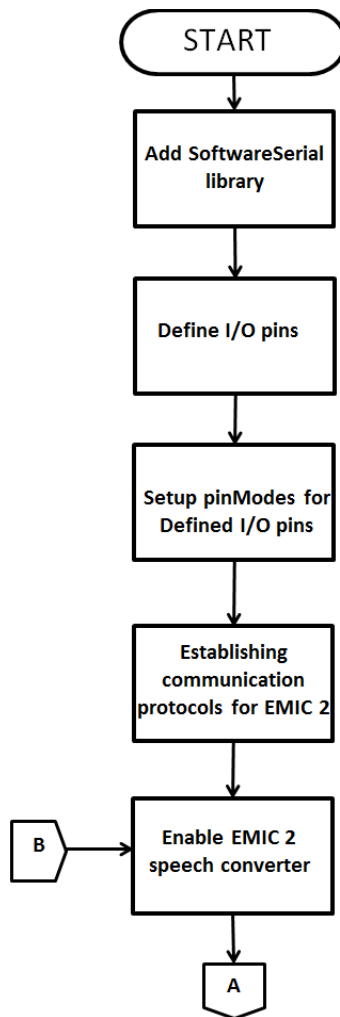


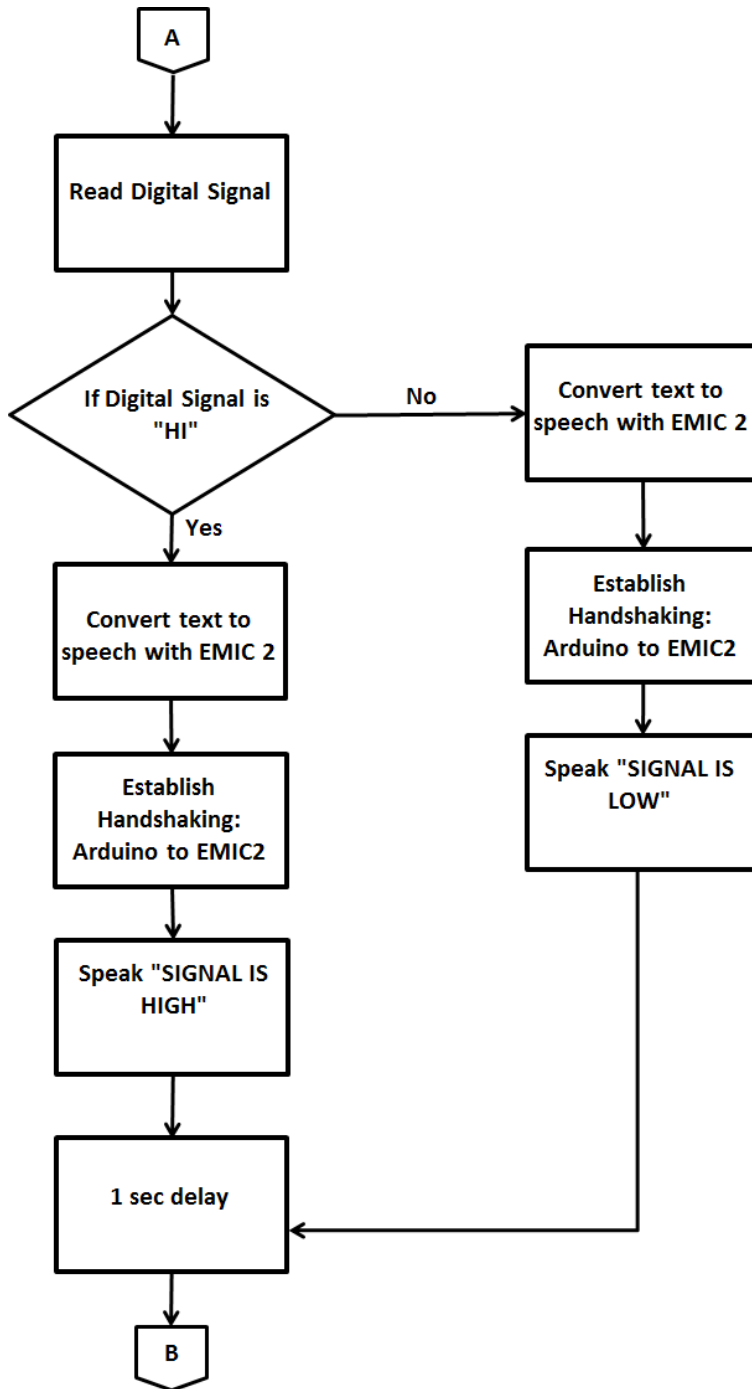


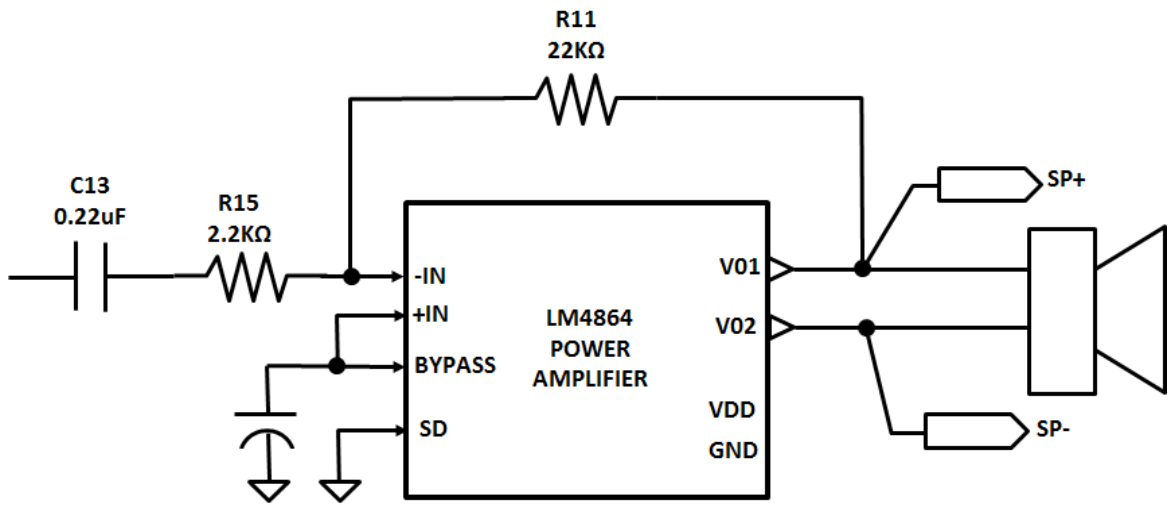


```
Uploading...
18 32,200 bytes.
Global variables use 153 bytes (7%) of dynamic memory, leaving
1,895 bytes for local variables. Maximum is 2,048 bytes.
avrdude: stk500_getsync(): not in sync: resp=0x00
```

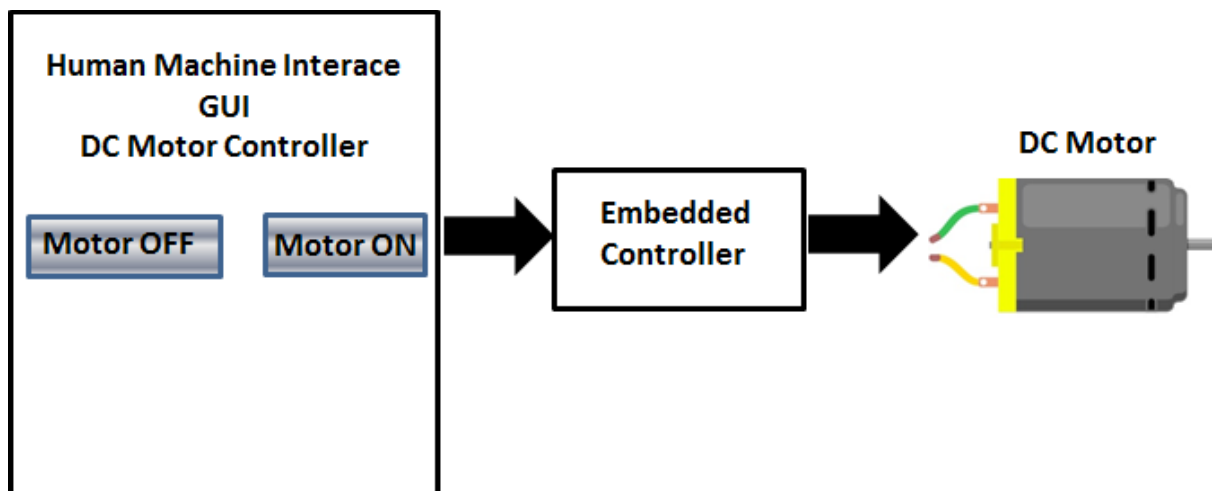
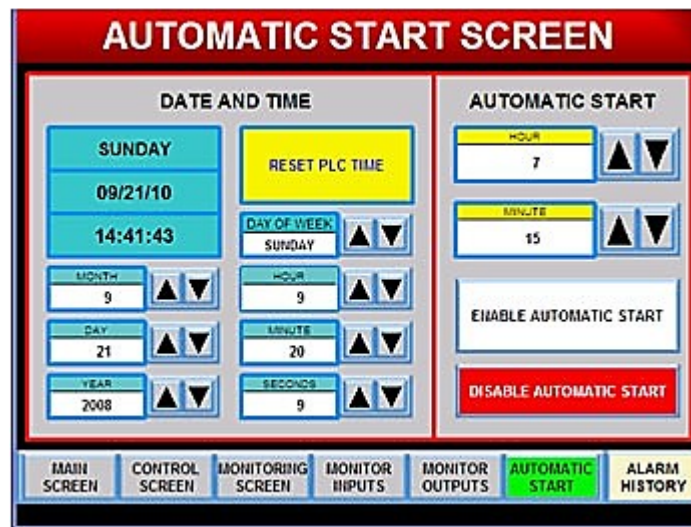
20 Arduino Uno on COM5

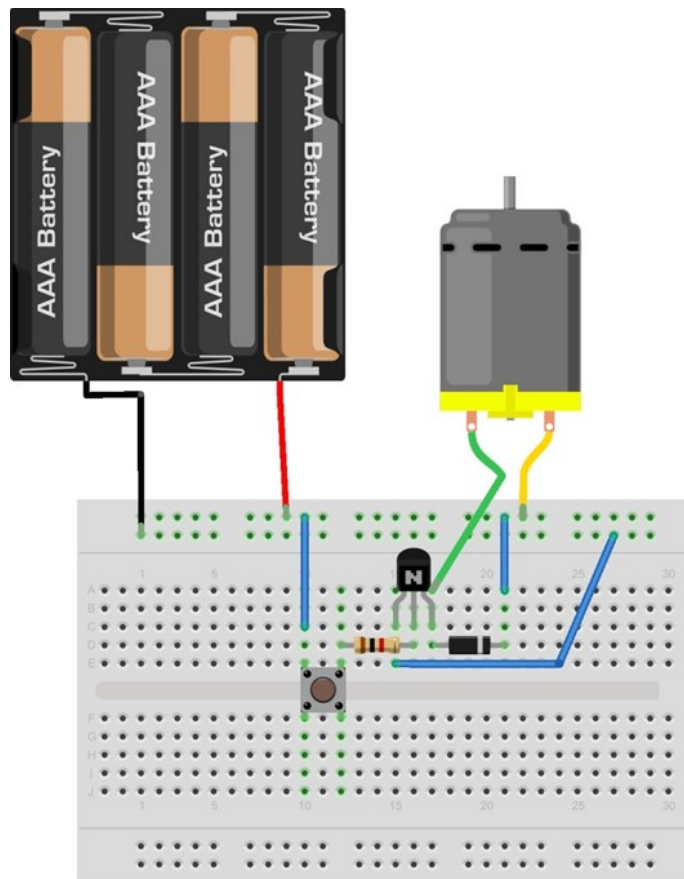
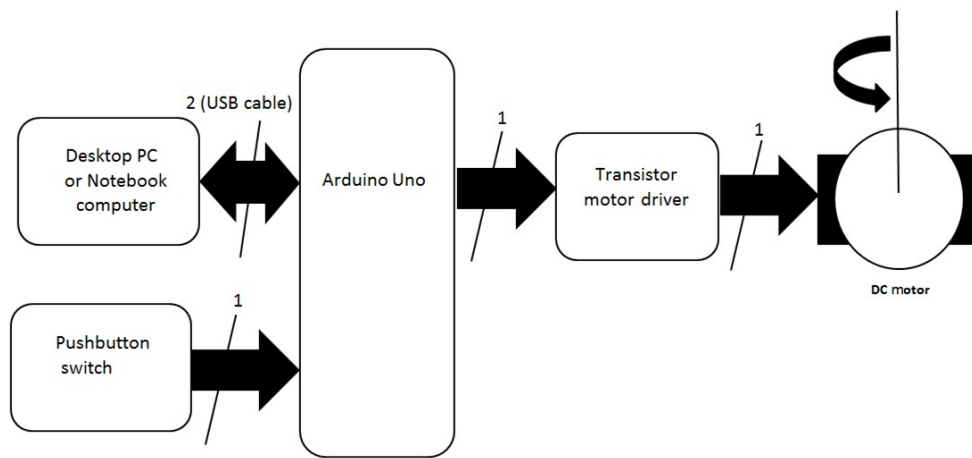


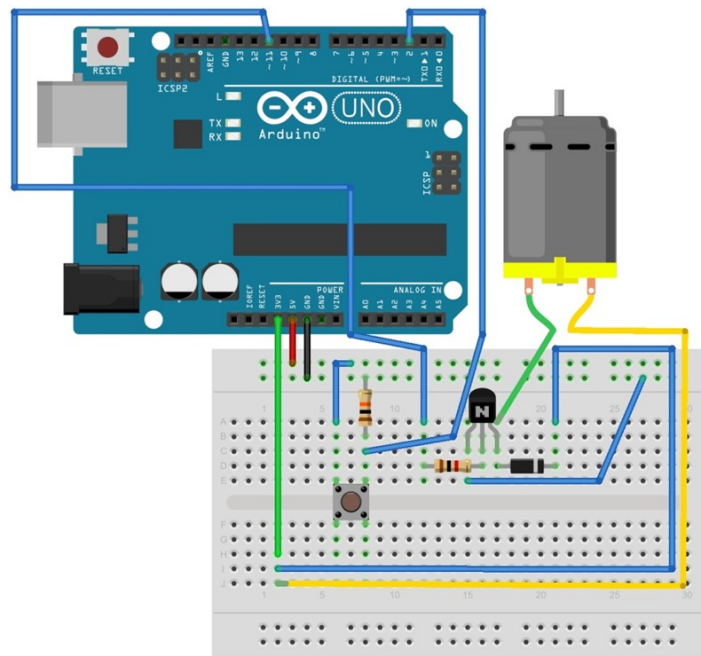
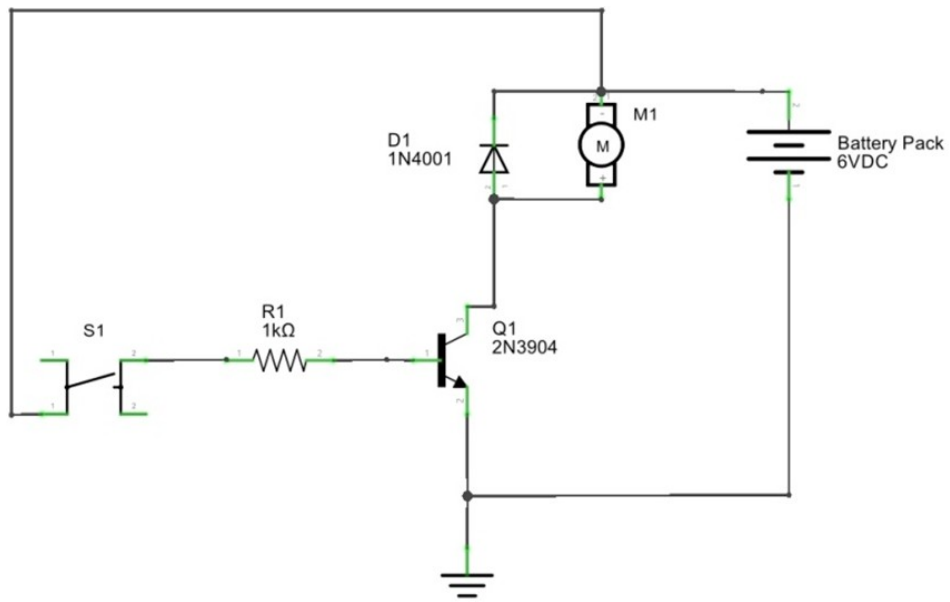


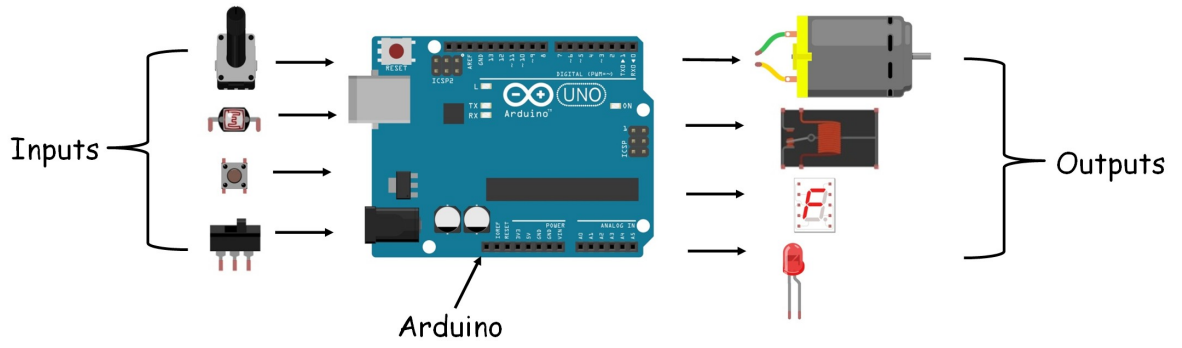
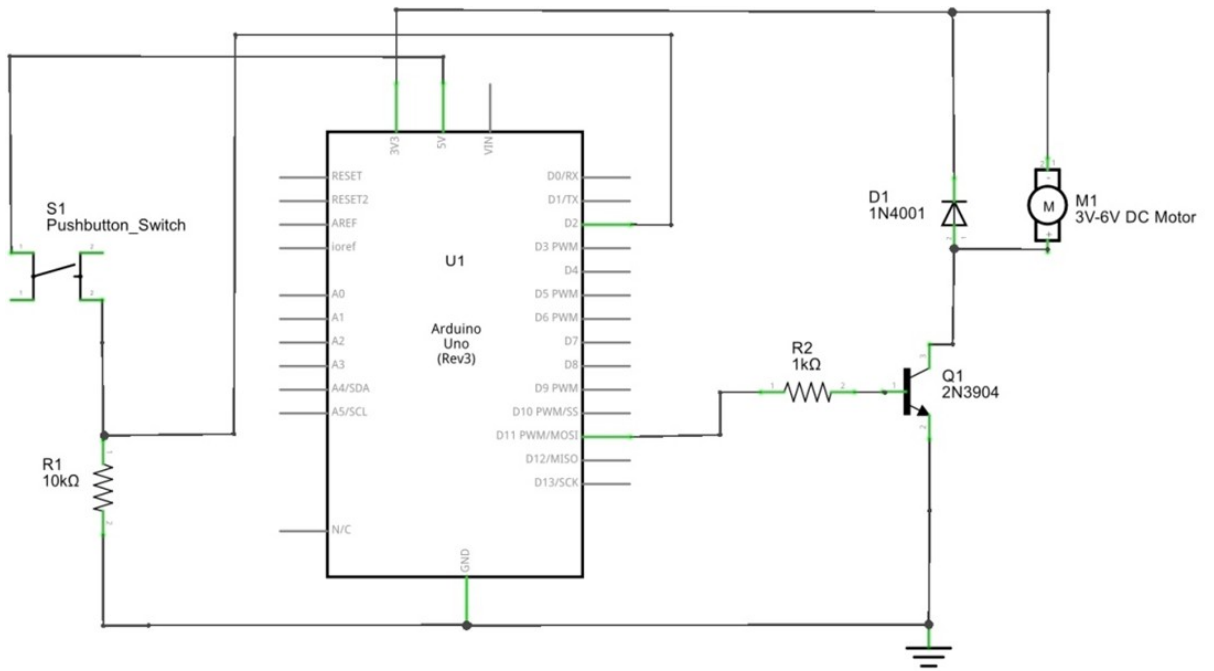


Chapter 4: Human Machine Interface

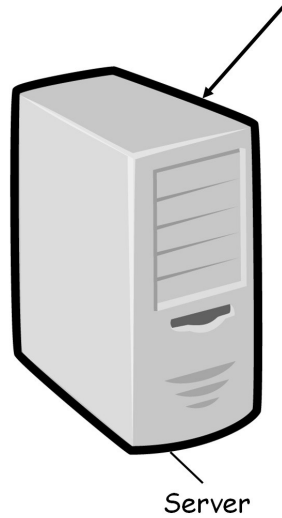




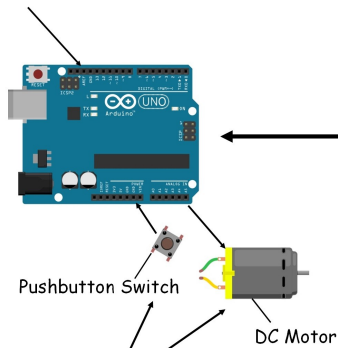




Server takes the electrical signals from the Arduino and sends them to a web browser



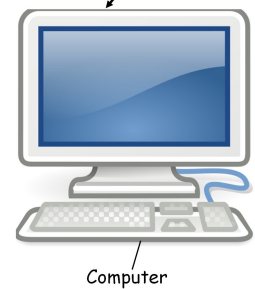
Arduino can be used to provide web-based automation for robotics, electronic development board, and other electronic kits.



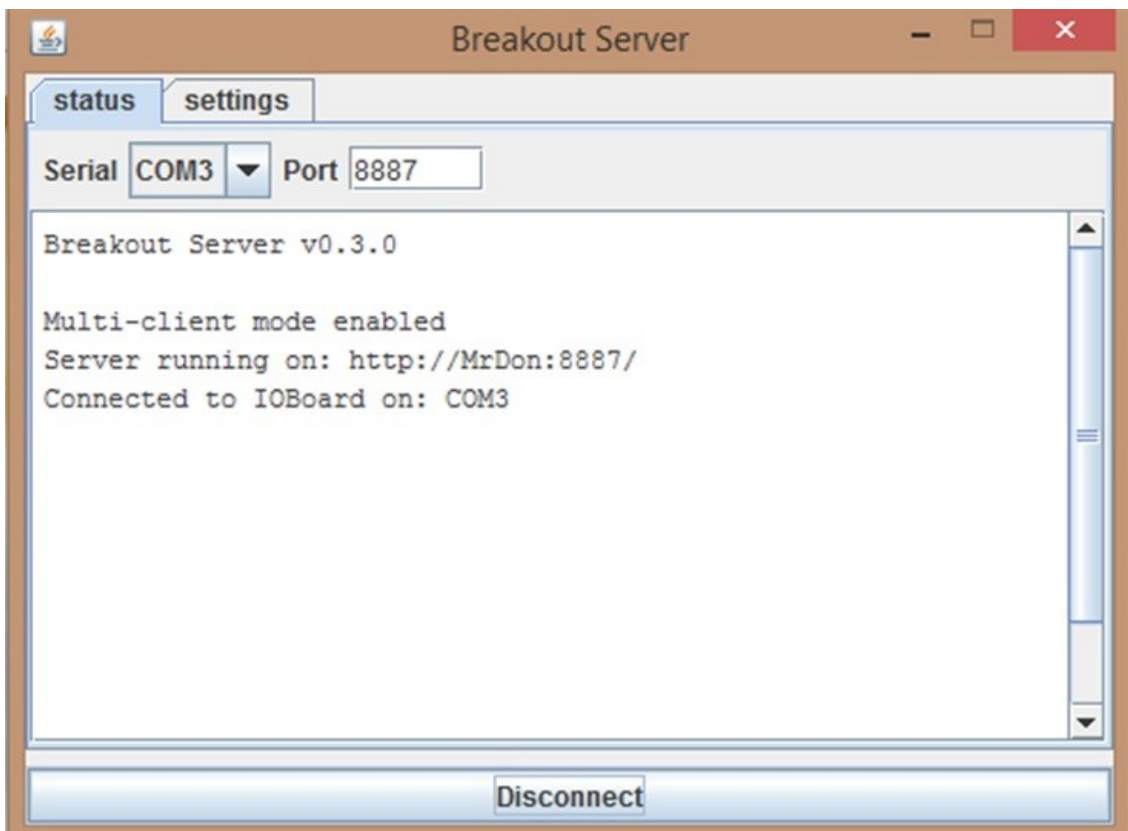
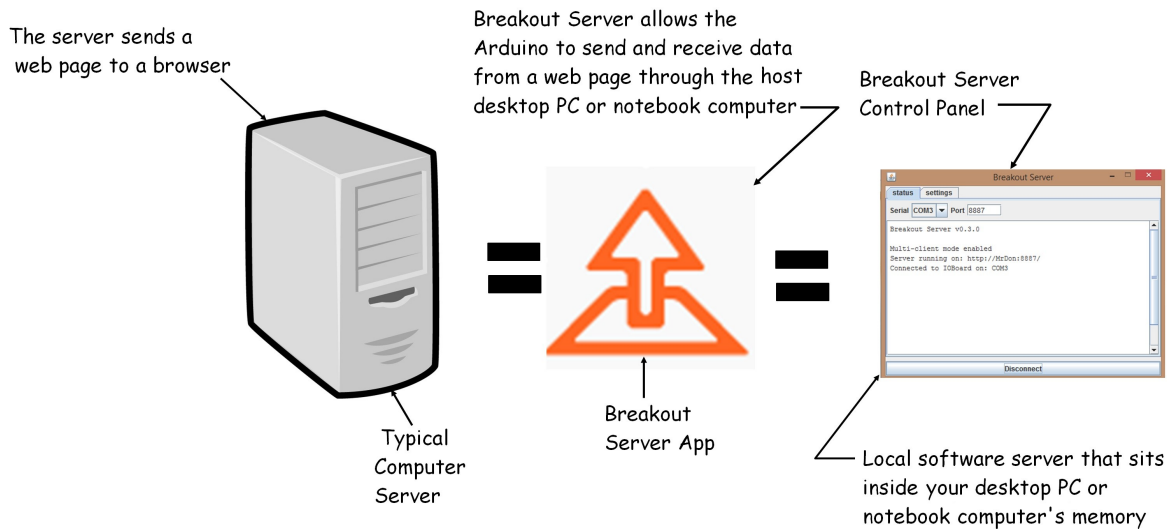
Server takes the electrical signals from the Arduino and sends them to a web browser

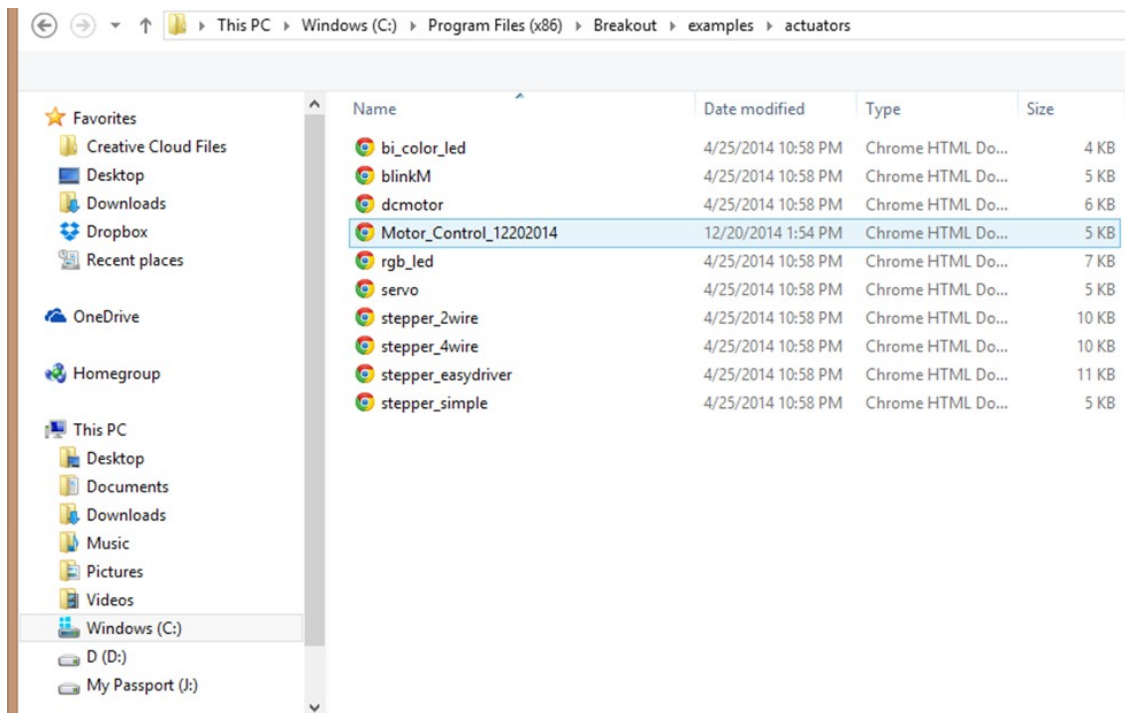


Web Browser will display an interactive panel app for controlling devices and monitoring electrical signals from the Arduino.



Pushbutton switches and sensors can provide electrical signals to the Arduino. The server reads these electrical signals from the Arduino and sends them to the web browser app on the computer. Also, the Arduino receives control signals from the web app sent by the server to operate DC motors, relays, LEDs, and other electrical devices.





Motor Control Example

Output: Use the buttons below to turn the motor on the breadboard ON or OFF.

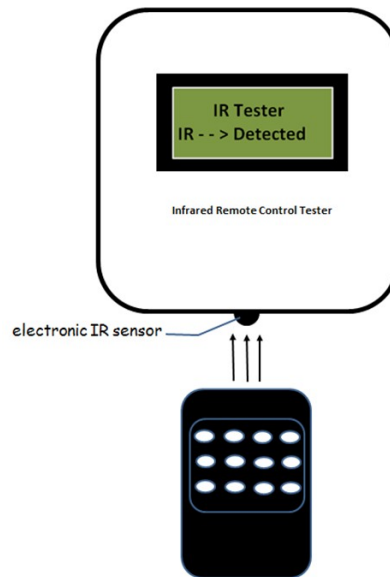
Motor Off

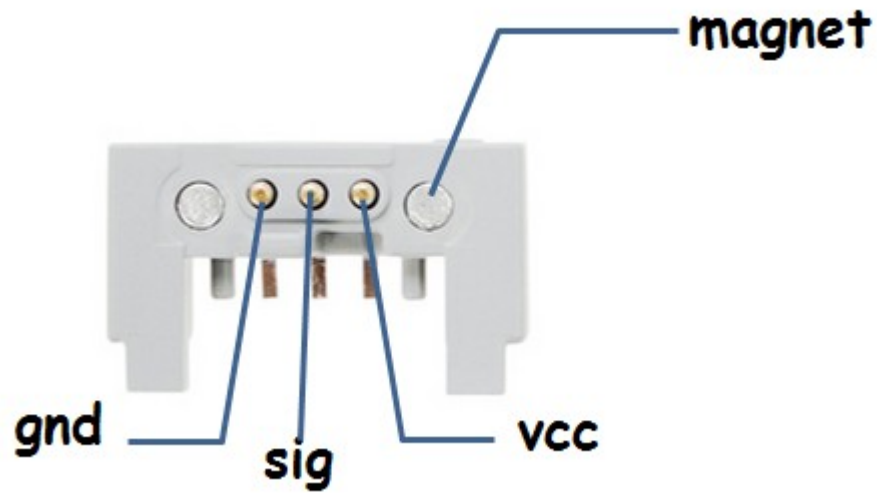
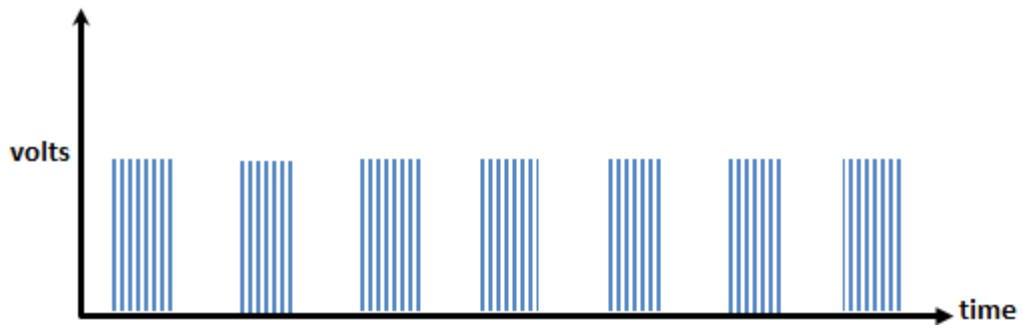
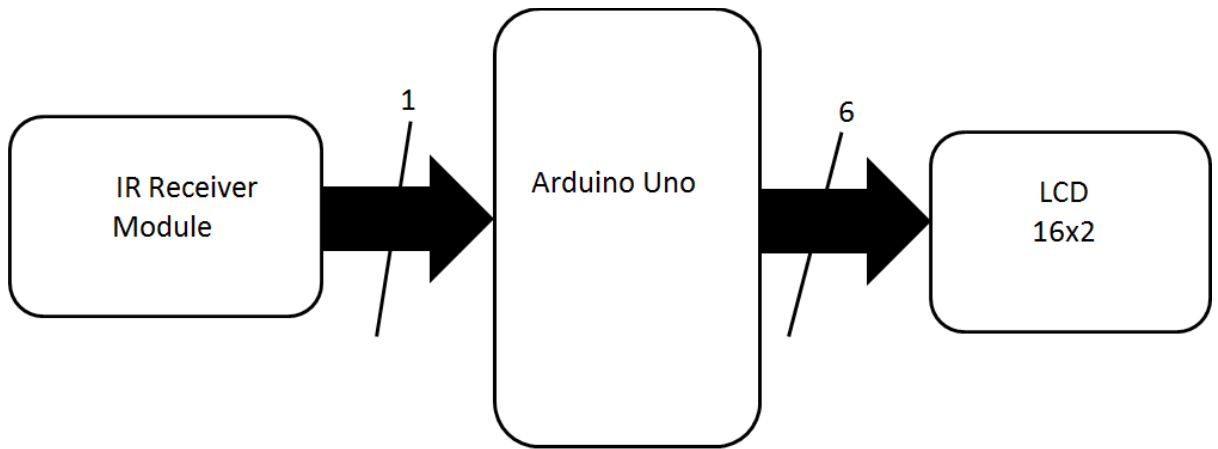
Motor On

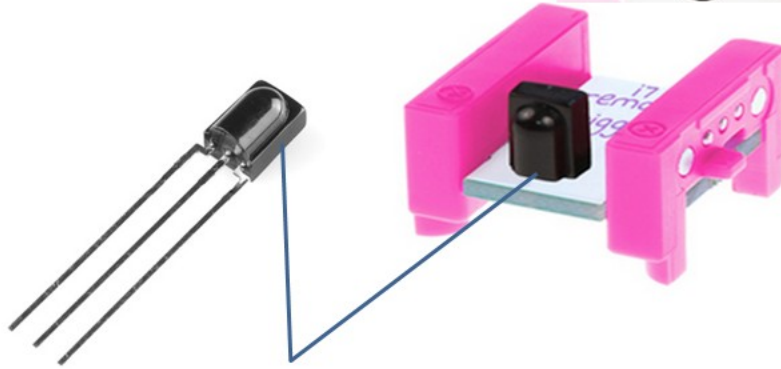
Input: Press the button on the breadboard to display the state below.

Button 2 state: Released

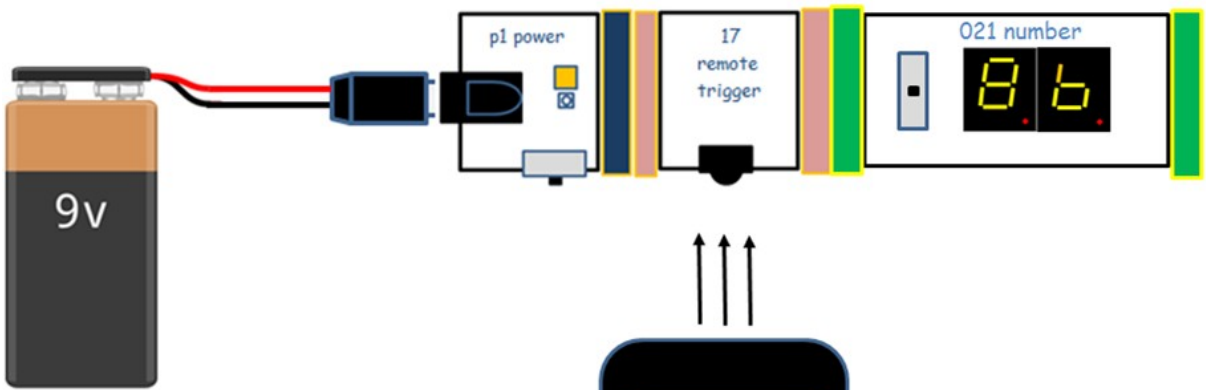
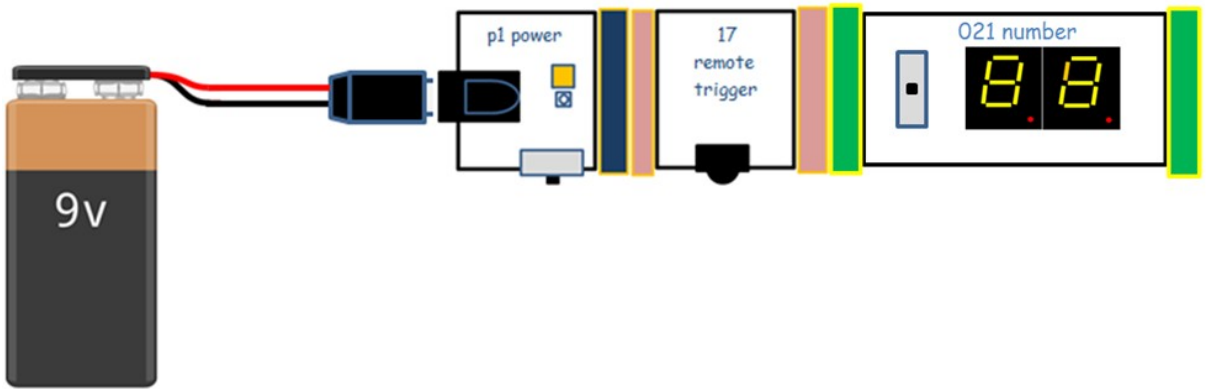
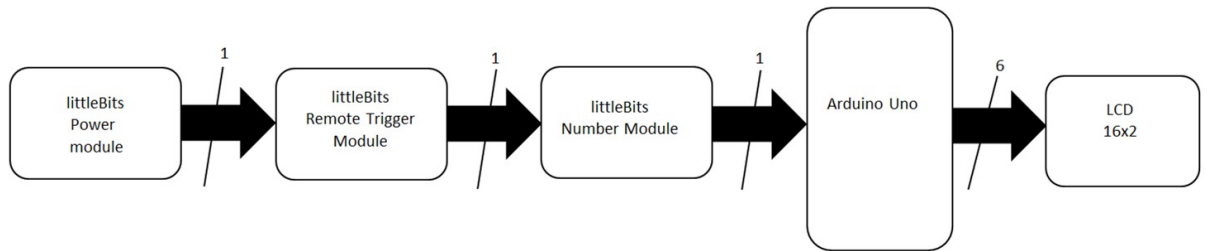
Chapter 5: IR Remote Control Tester

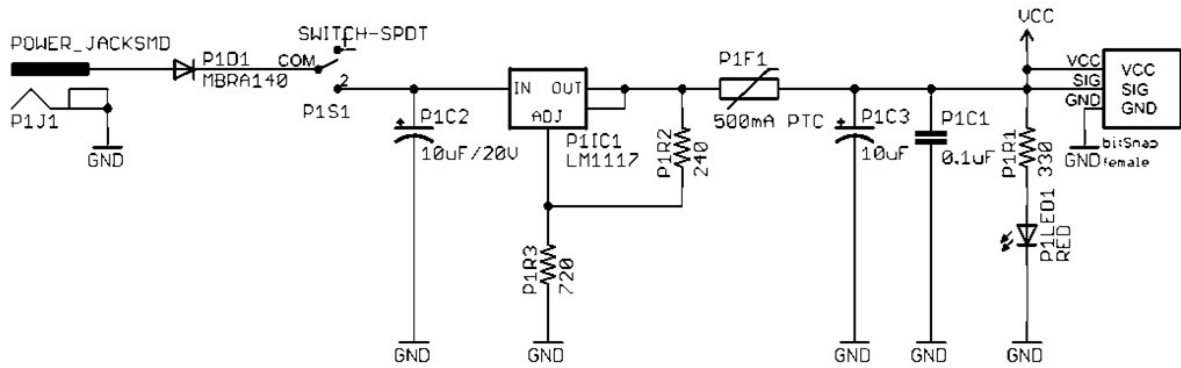


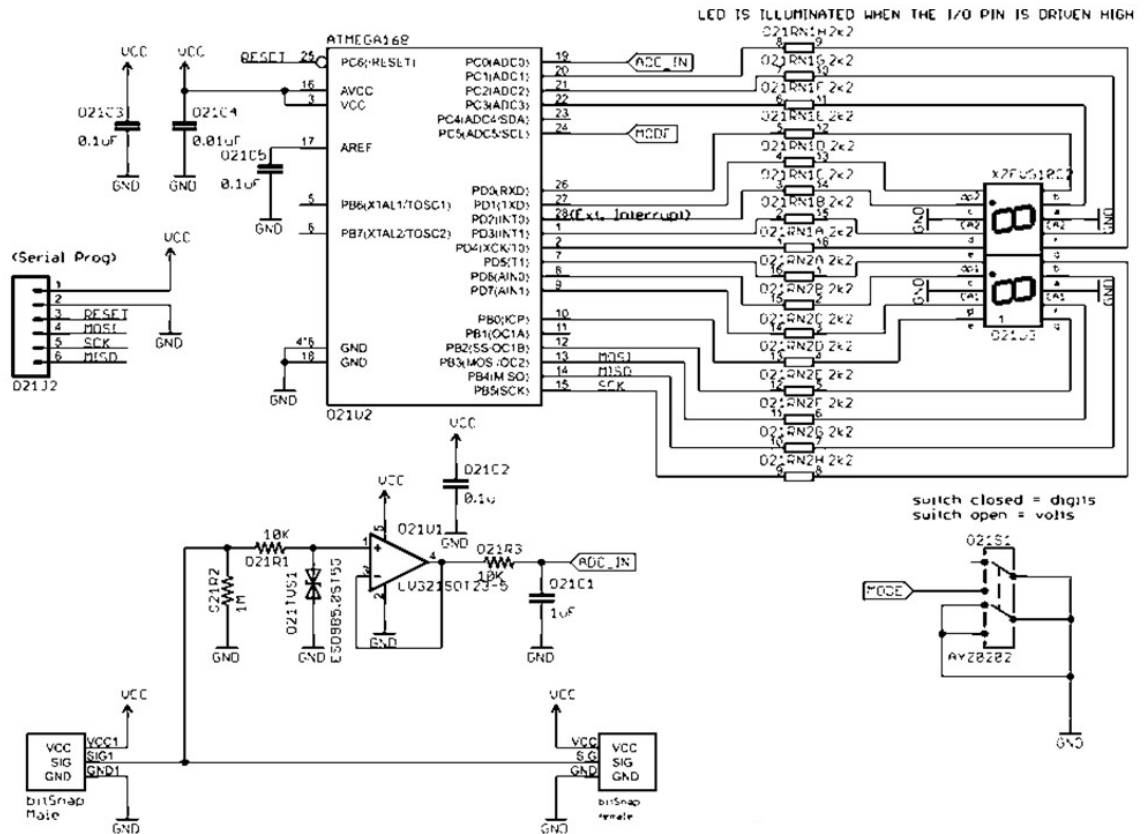
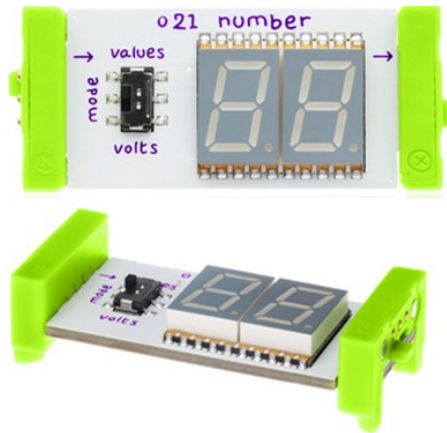


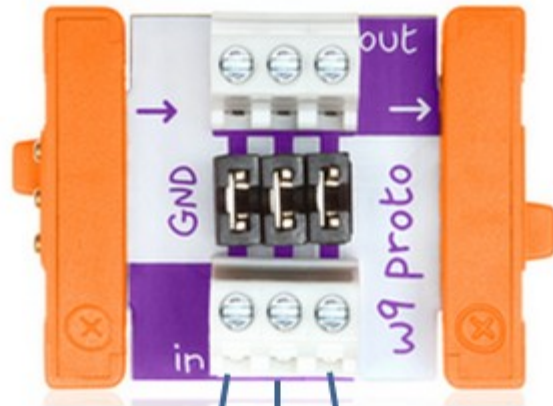


TSOP382
IR sensor

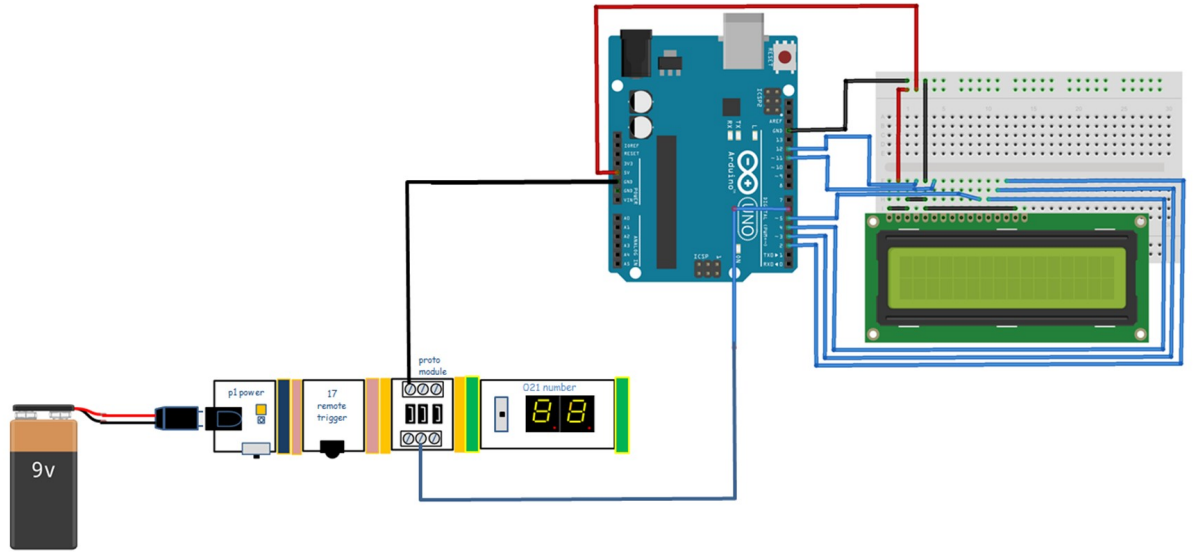


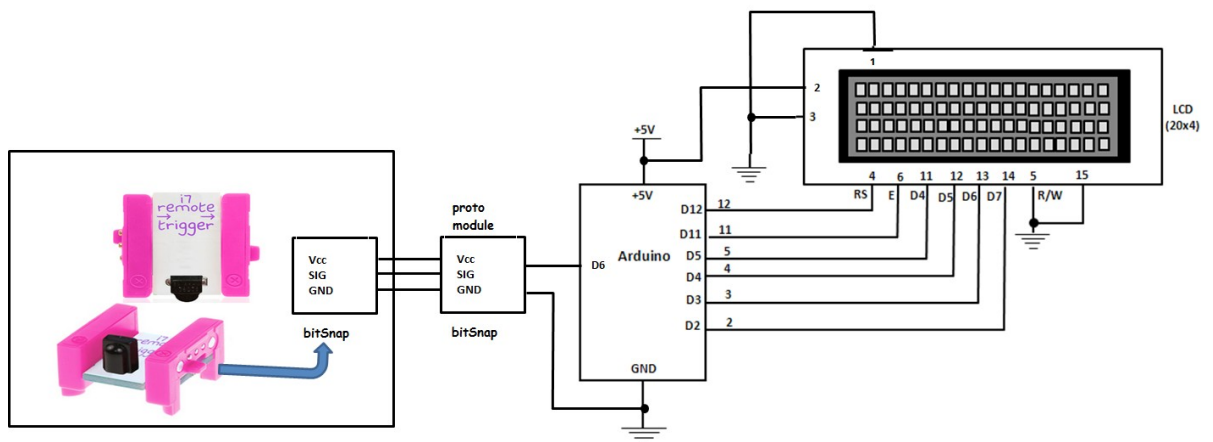
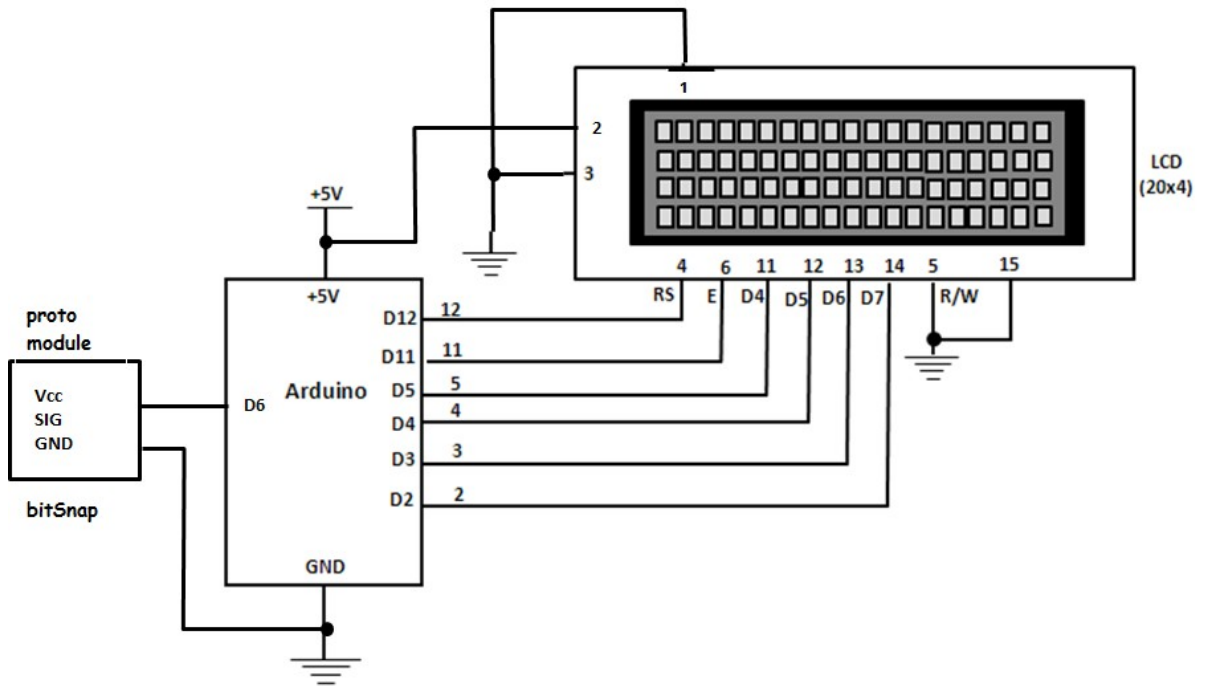


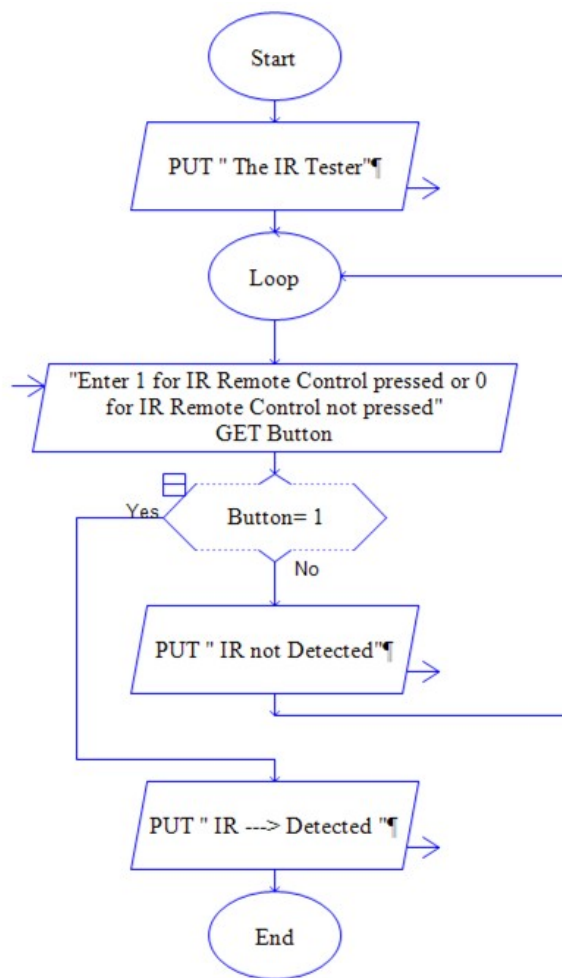


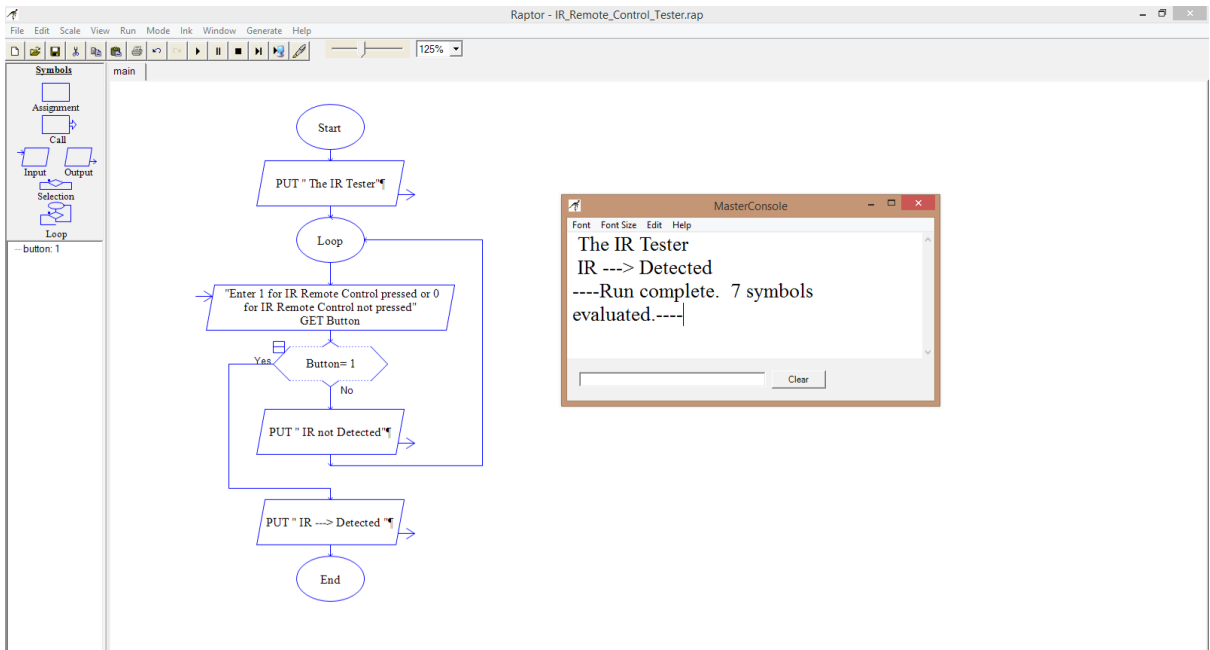
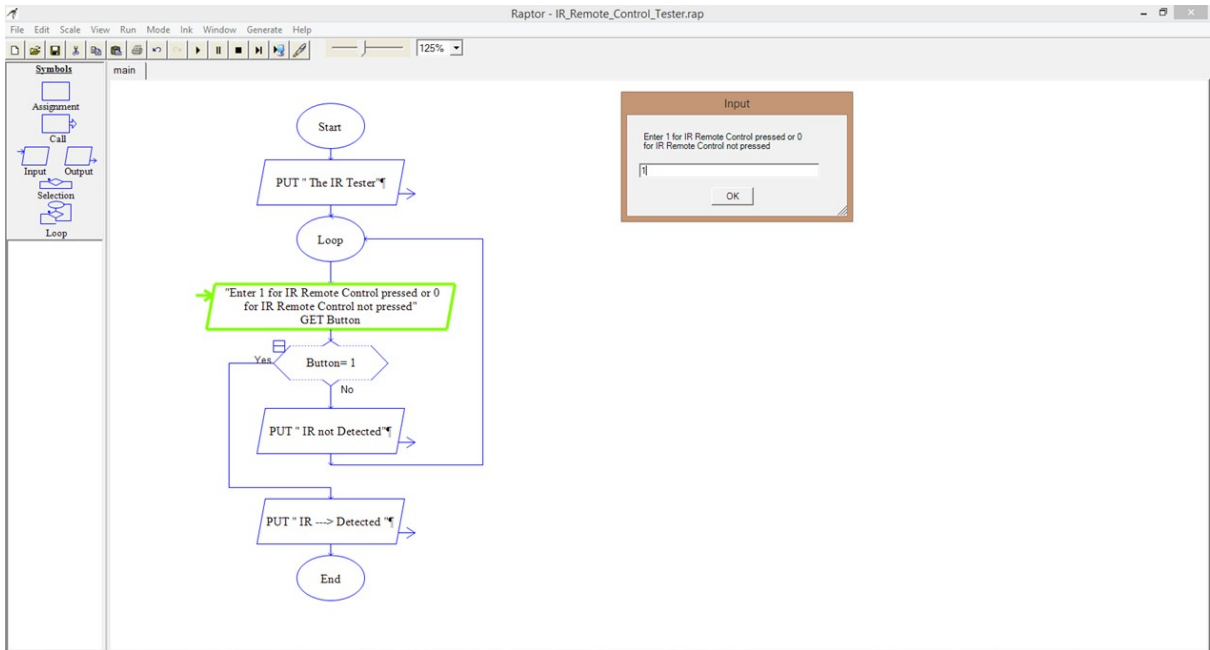


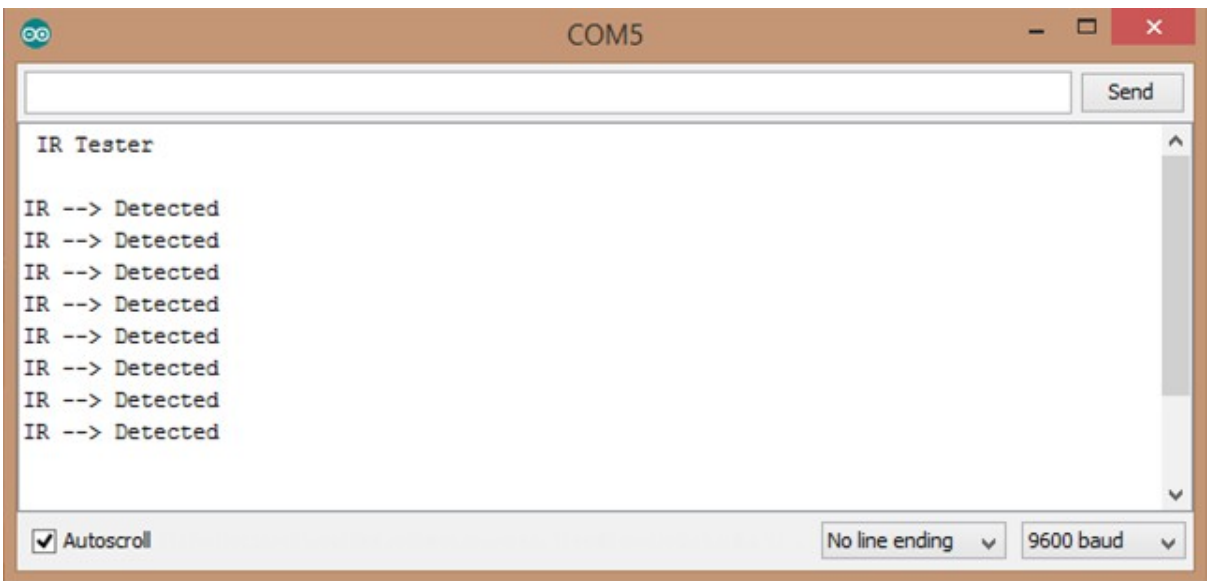
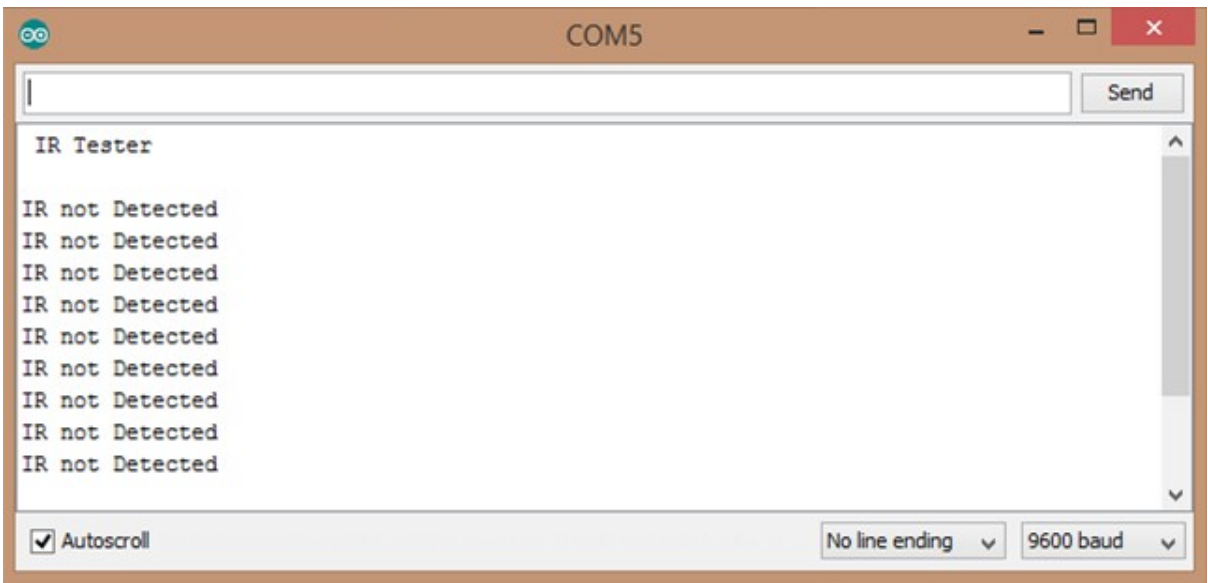
gnd sig vcc





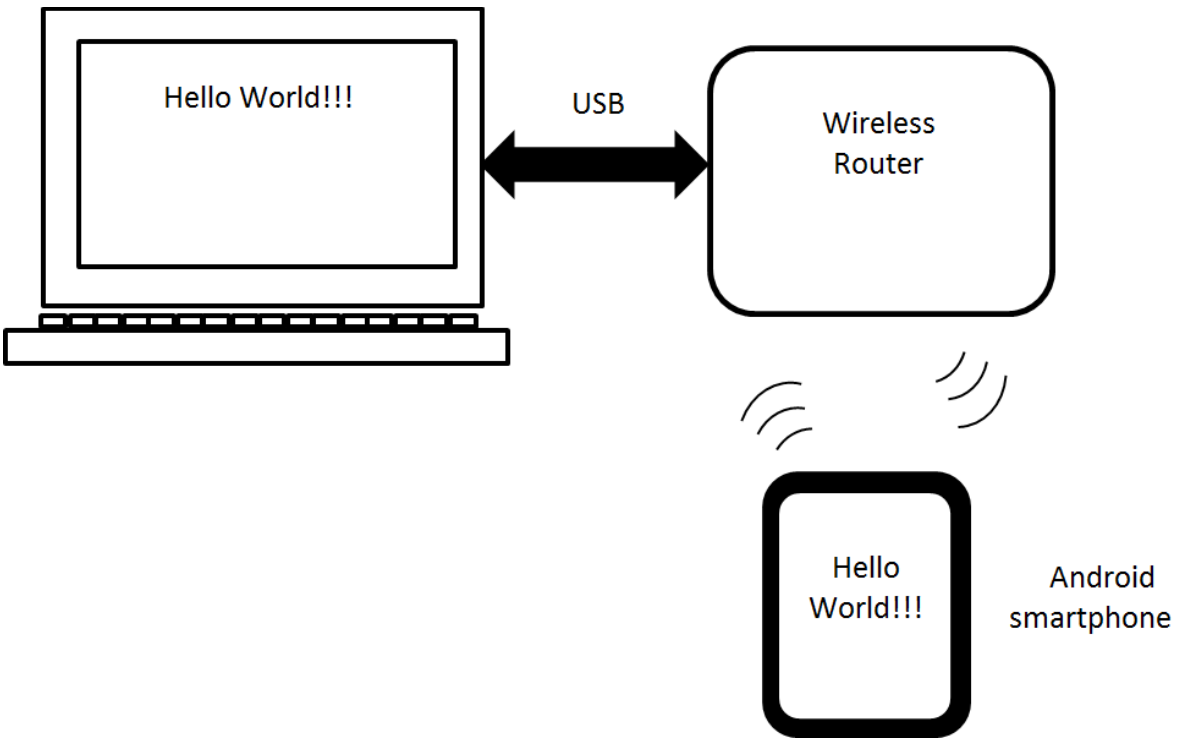
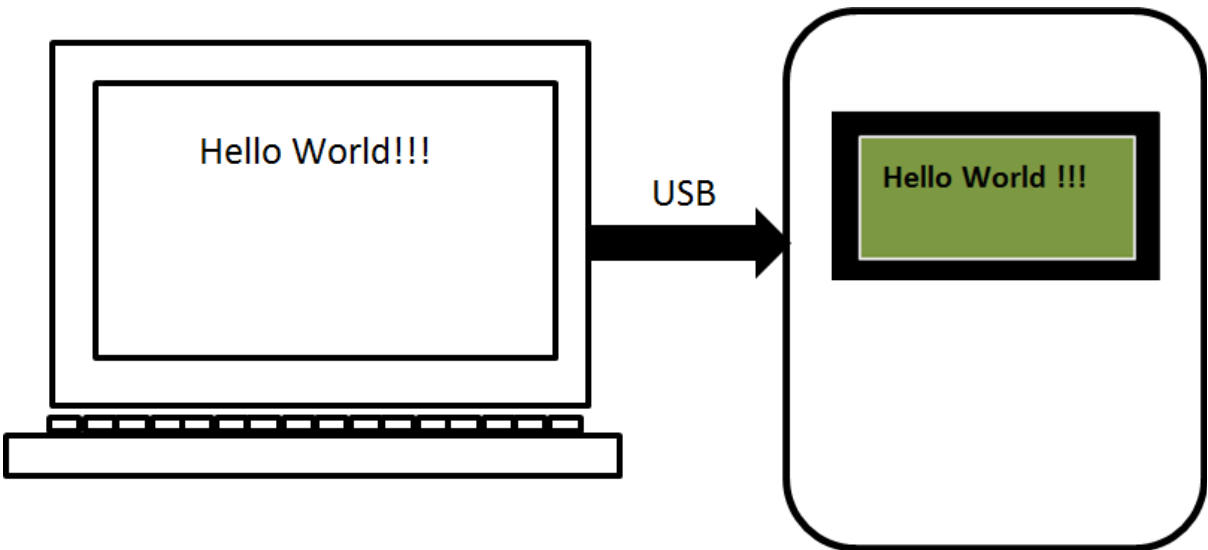


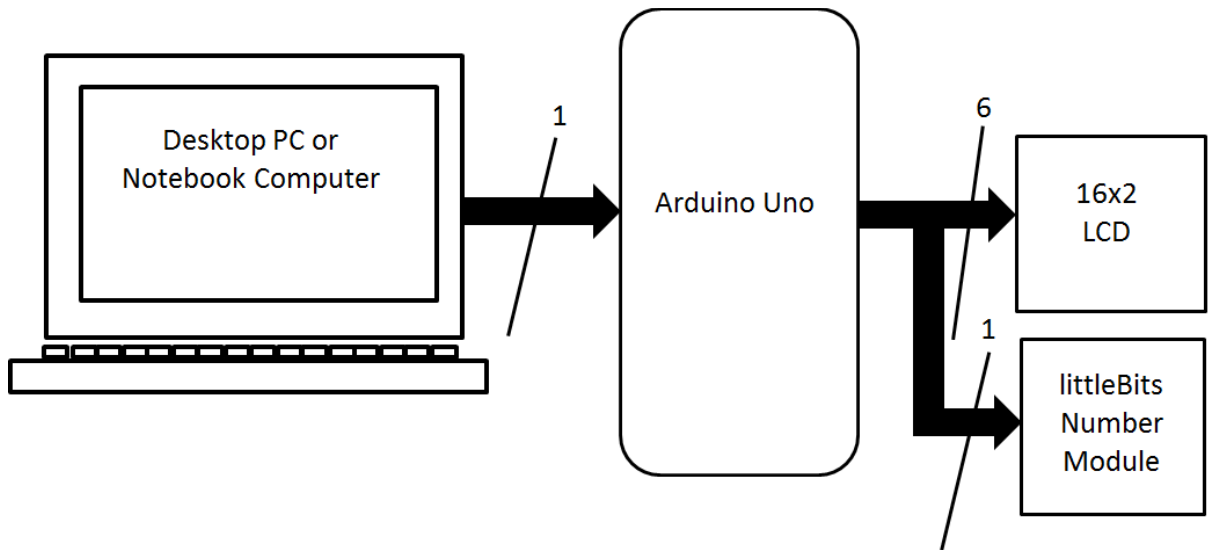


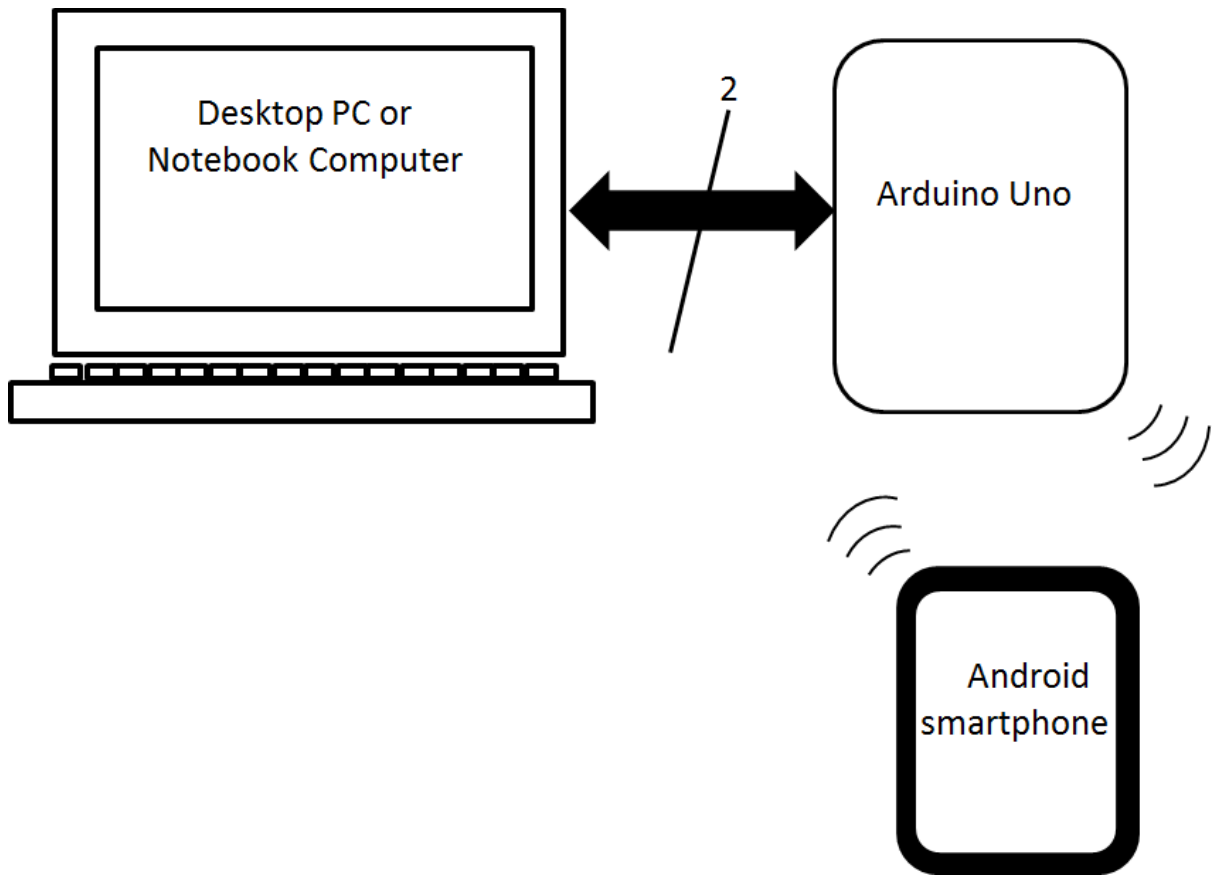


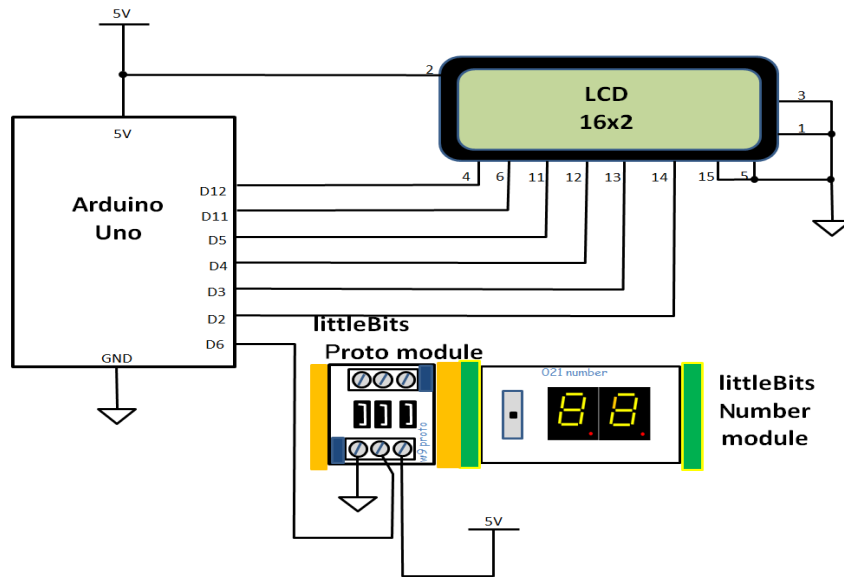
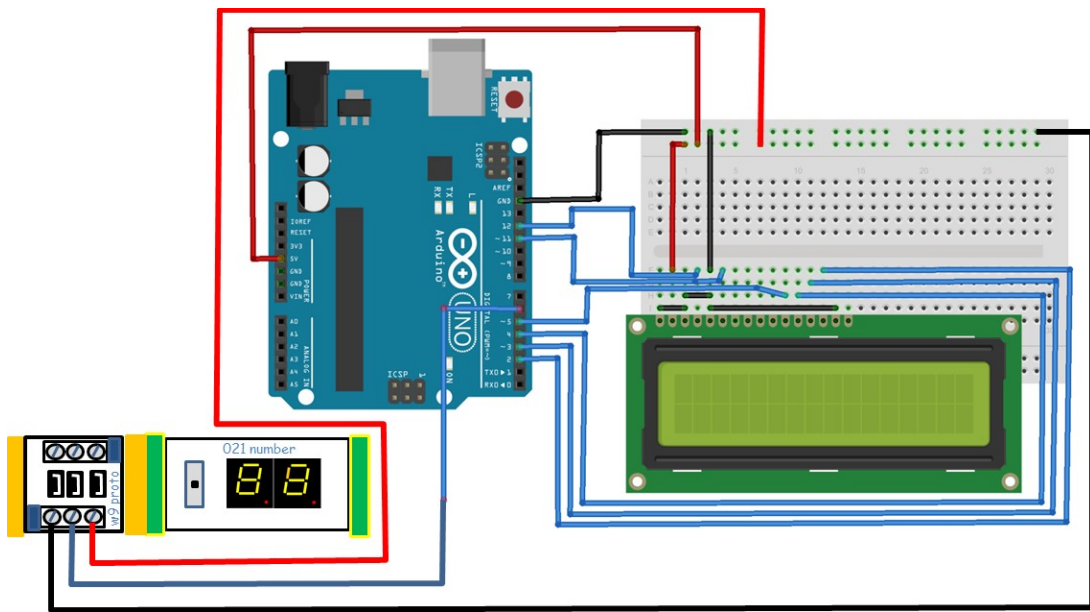
Chapter 6: A Simple Chat Device with LCD

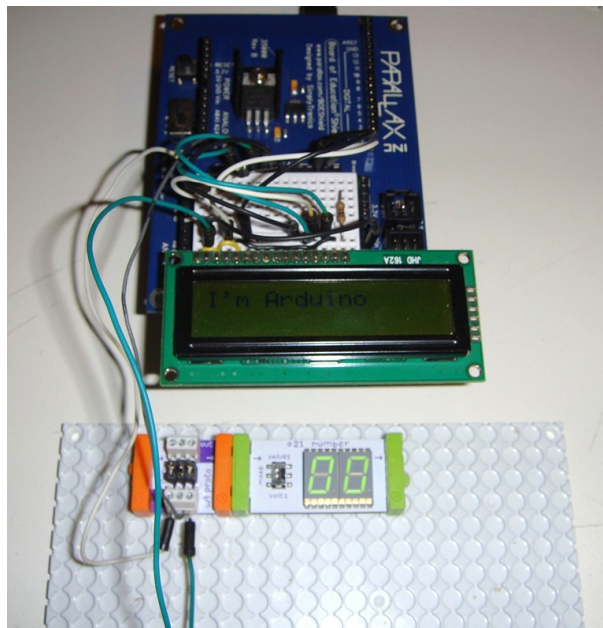
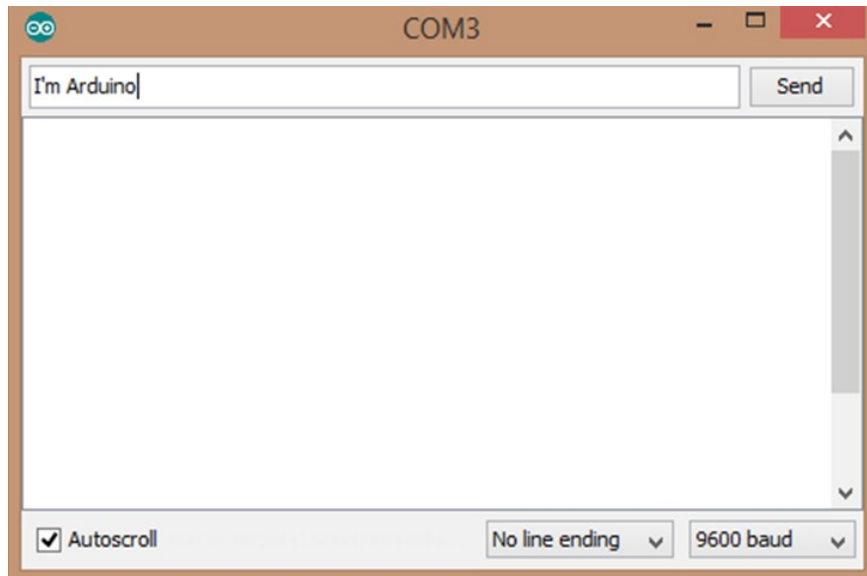


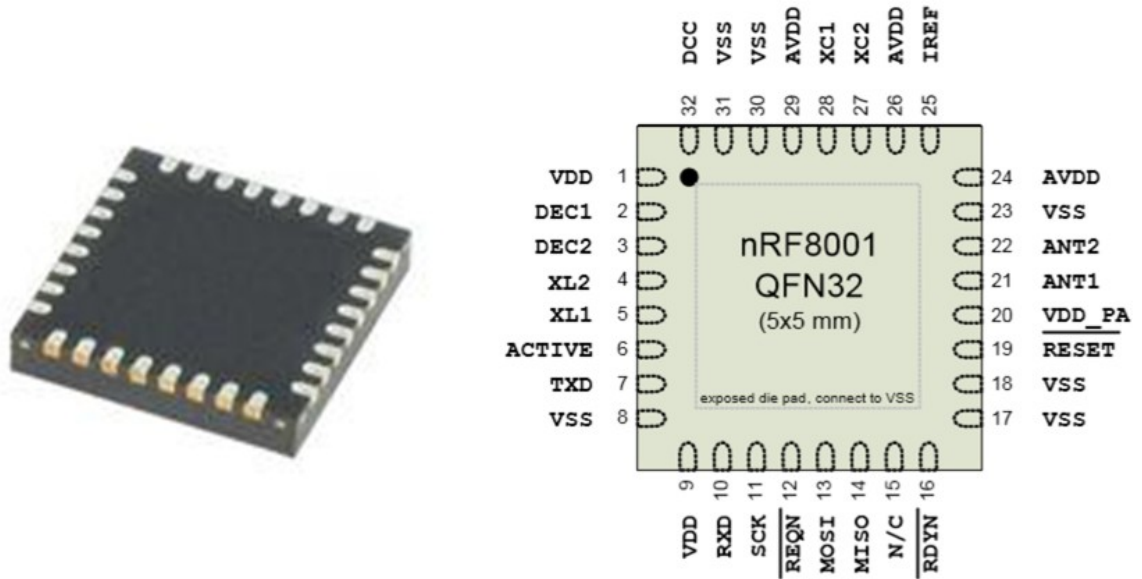
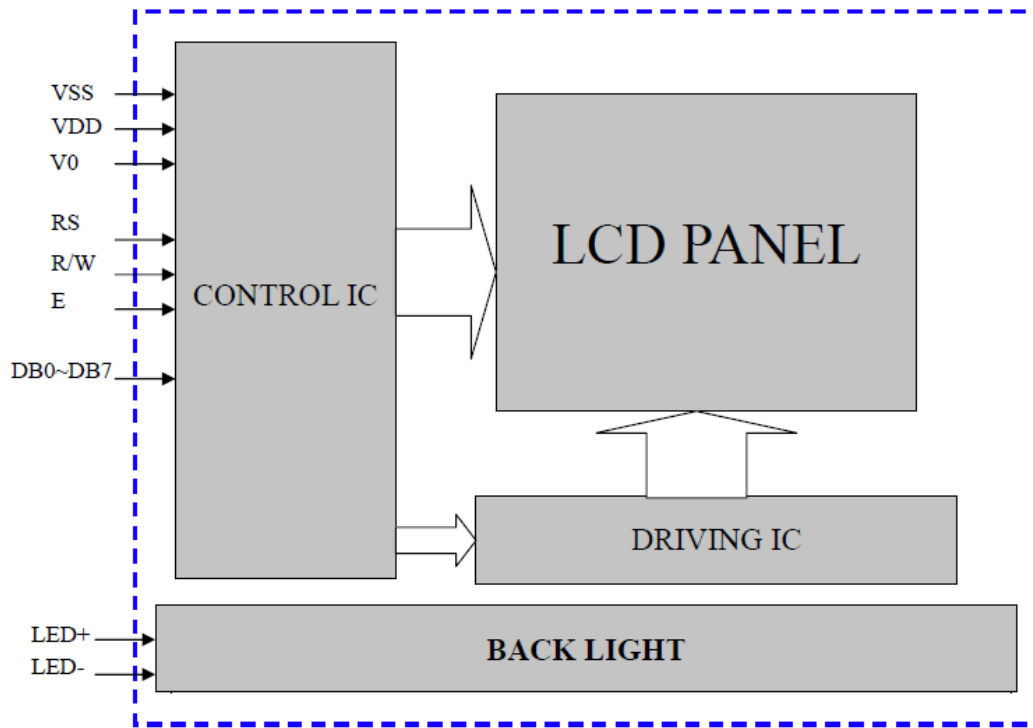


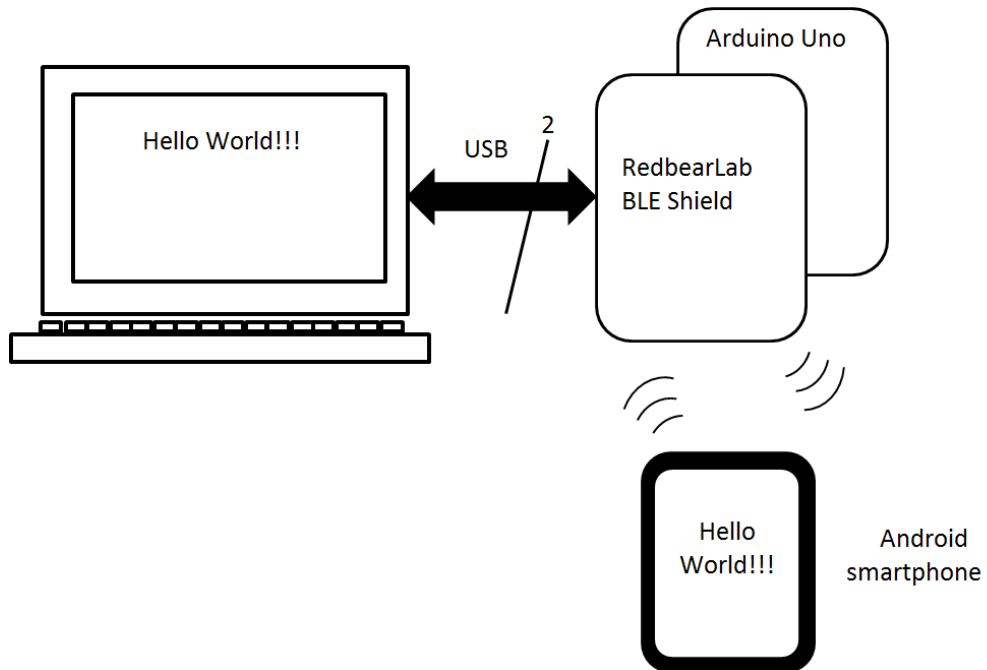
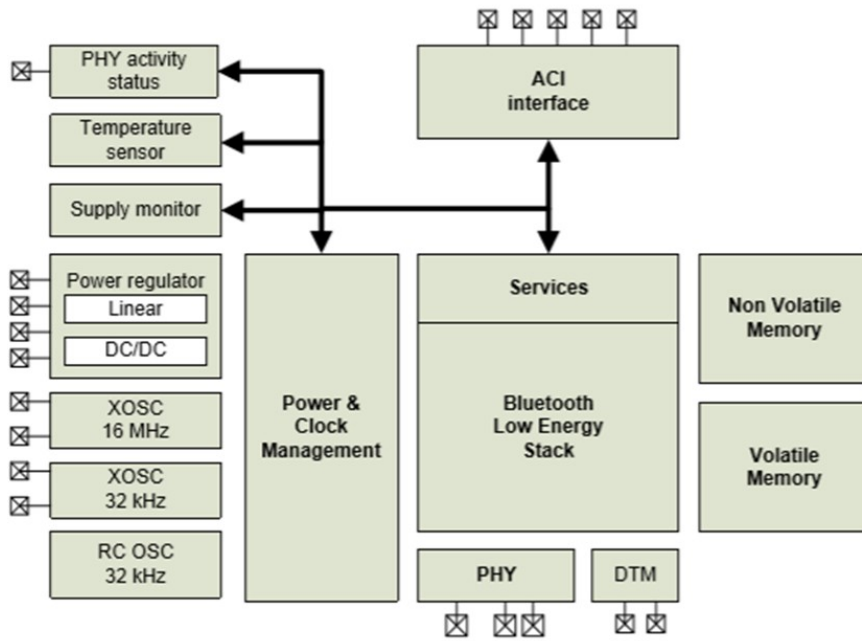


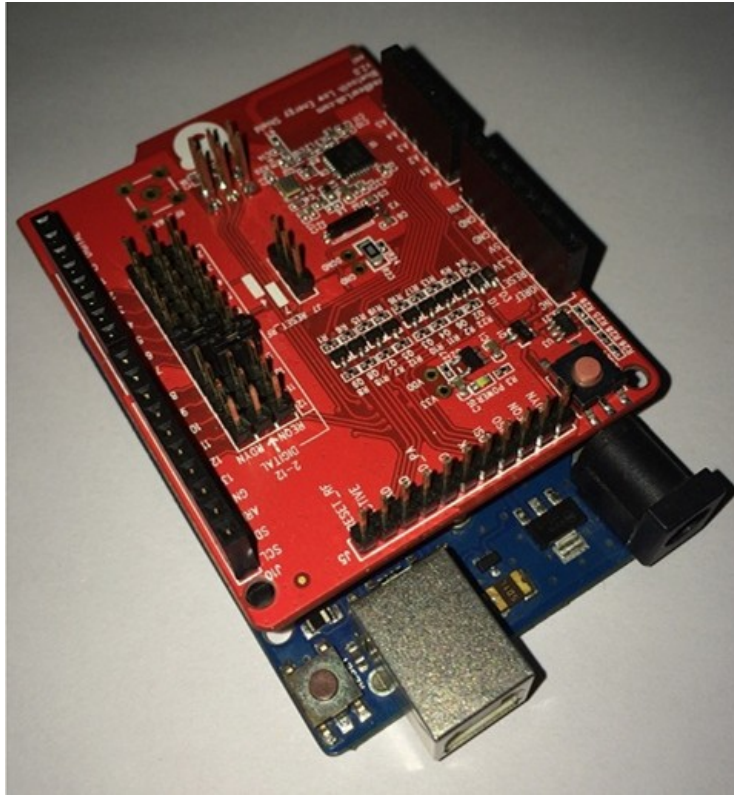
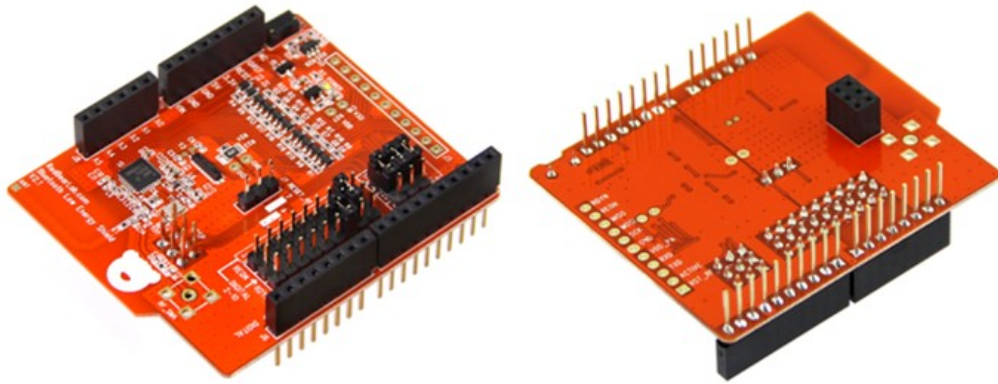












- BLE Nano
- RedBearLab nRF51822
- Blend Micro
- Blend
- BLE Shield
- BLE Mini
- iBeacon

Introducing BLE and WiFi boards



redbearlab.com/bleshield/

RedBearLab / nRF8001

Watch 17 Star 22 Fork 14

Provides simple API for nRF8001 BLE chip.

28 commits 1 branch 4 releases 4 contributors

branch: master nRF8001 / +

- Add SD example
- zoujixing authored on Jan 14 latest commit 25643e7b1b
- Arduino/libraries/RBL_nRF8001 Add SD example a month ago
- README.md Update README.md 2 months ago

README.md

nRF8001

Last updated: 2014/7/30 18:17:53

Provides simple API for nRF8001 BLE chip such as BLE Shield and Blend Micro to exchange data via the RBL TxRx Service to BLE Central device (e.g. iPhone 5).

Other 3rd party breakout breads may also be workable.

Installation

- Code
- Issues 1
- Pull Requests 4
- Pulse
- Graphs

HTTPS clone URL https://github.com/

You can clone with HTTPS or Subversion.

Clone in Desktop

Download ZIP

Installation

Step 1: Get latest release of Nordic nRF8001 SDK for Arduino here:

<https://github.com/NordicSemiconductor/ble-sdk-arduino/releases>

The library folder is "BLE" in this package.

Step 2: Get latest release of RBL nRF8001 API here:

<https://github.com/RedBearLab/nRF8001/releases>

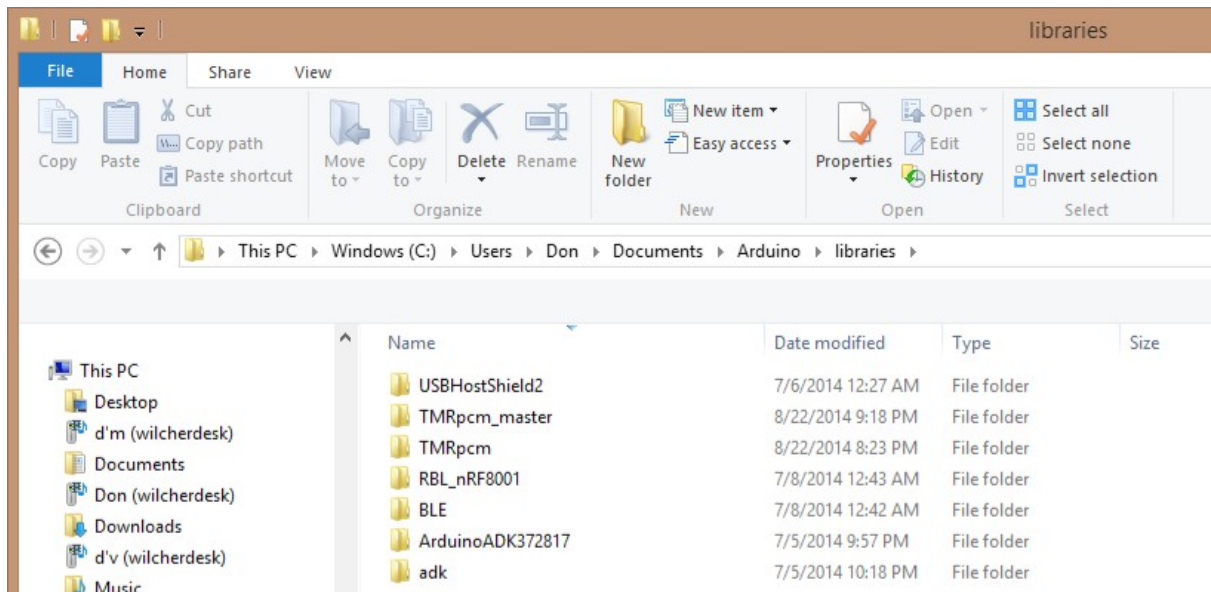
The library folder is "RBL_nRF8001" in this package.

Step 3: Unzip these two packages, import or copy these two libraries, with folder named "BLE" and "RBL_nRF8001" to your Arduino sketchbook folder.

If you do not know how to do, read this:

<http://arduino.cc/en/Guide/Libraries>

Step 4: Load an example to your Arduino board.



BLEControllerSketch |

File Edit Sketch Tools Help

- New Ctrl+N
- Open... Ctrl+O
- Sketchbook
- Examples
- Close Ctrl+W
- Save Ctrl+S
- Save As... Ctrl+Shift+S
- Upload Ctrl+U
- Upload Using Programmer Ctrl+Shift+U
- Page Setup Ctrl+Shift+P
- Print Ctrl+P
- Preferences Ctrl+Comma
- Quit Ctrl+Q

```
#include <RBL_nRF8001.h>
#include <services.h>
#include "Boards.h"
```

- 01.Basics
- 02.Digital
- 03.Analog
- 04.Communication
- 05.Control
- 06.Sensors
- 07.Display
- 08.Strings
- 09.USB
- 10.StarterKit
- ArduinoISP
- Audio
- Bridge
- EEPROM
- Esplora
- Ethernet
- Firmata
- GSM
- LiquidCrystal
- Robot Control
- Robot Motor
- Scheduler
- SD
- Servo
- SoftwareSerial
- SPI
- Stepper
- TFT
- USBHost
- WiFi
- Wire
- adk

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IND, EX

- BLE_RGB
- BLEControllerSketch
- BLEControllerSketch_wLCD
- BLEFirmataSketch
- HelloWorld



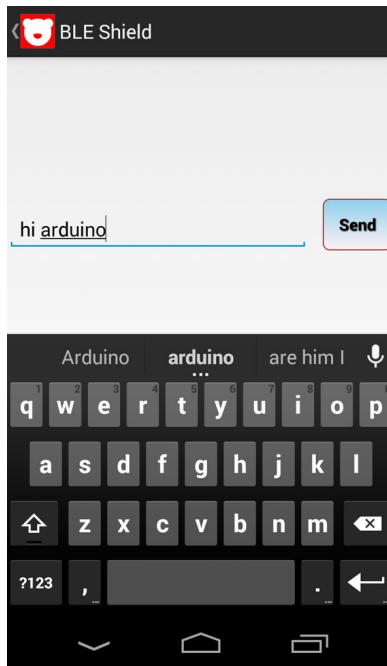
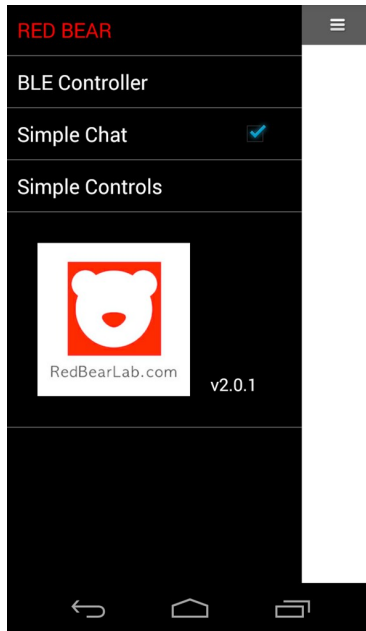
RedBearLab.com

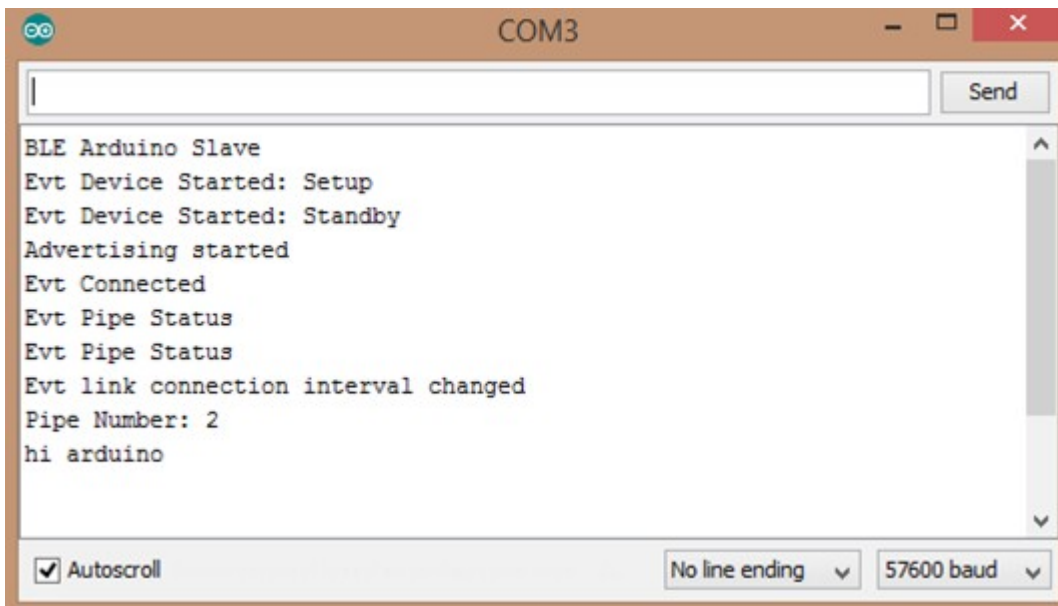
Scan



BLE Shield 
RSSI: -49
Address: C1:89:A8:8A:12:13
Local Name: BLE Shield

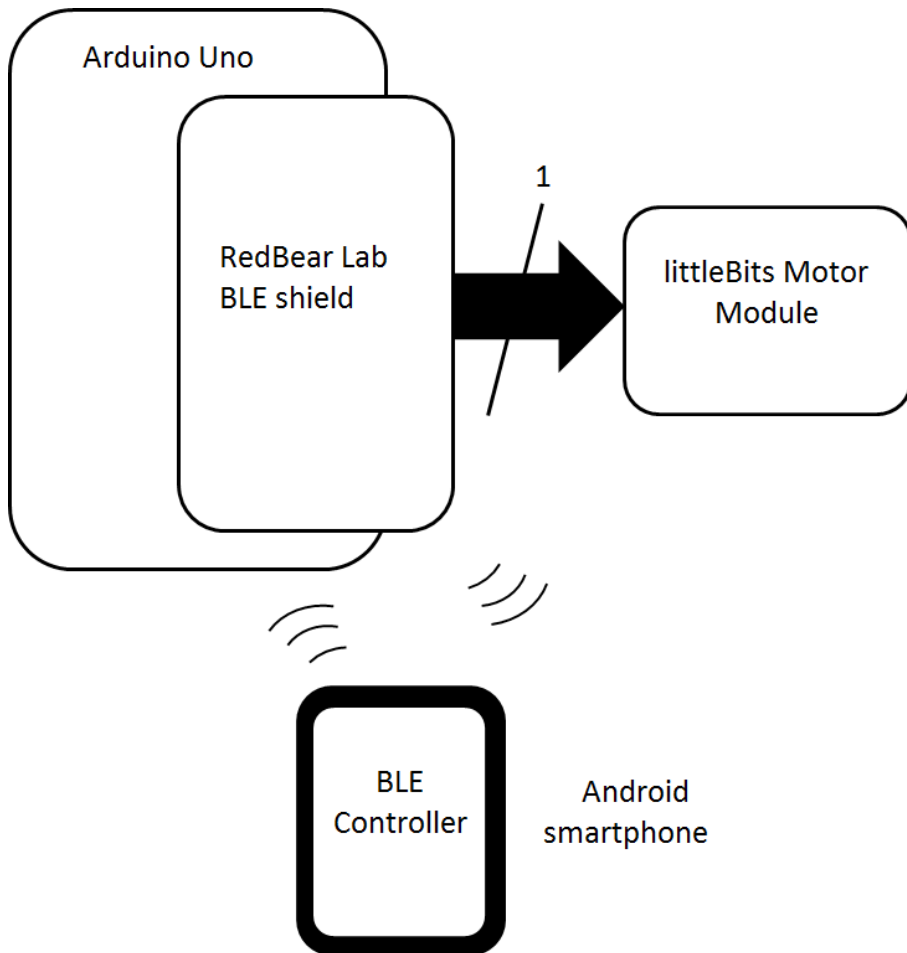
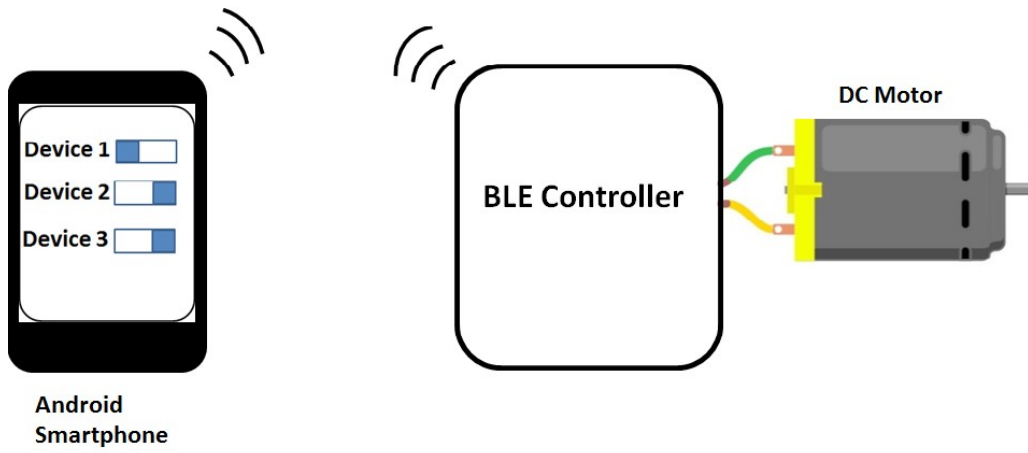


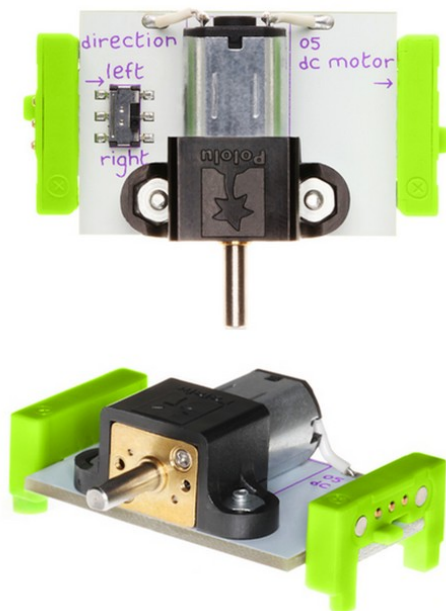
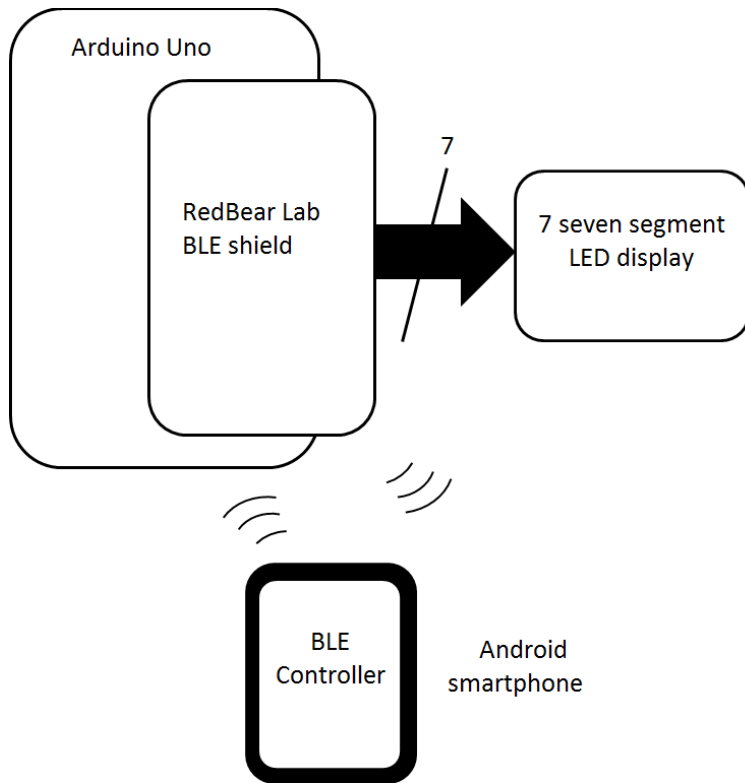


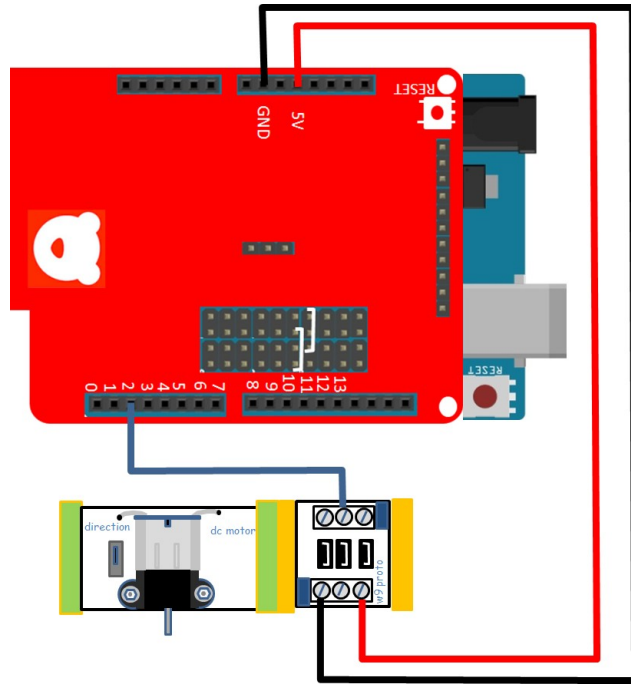
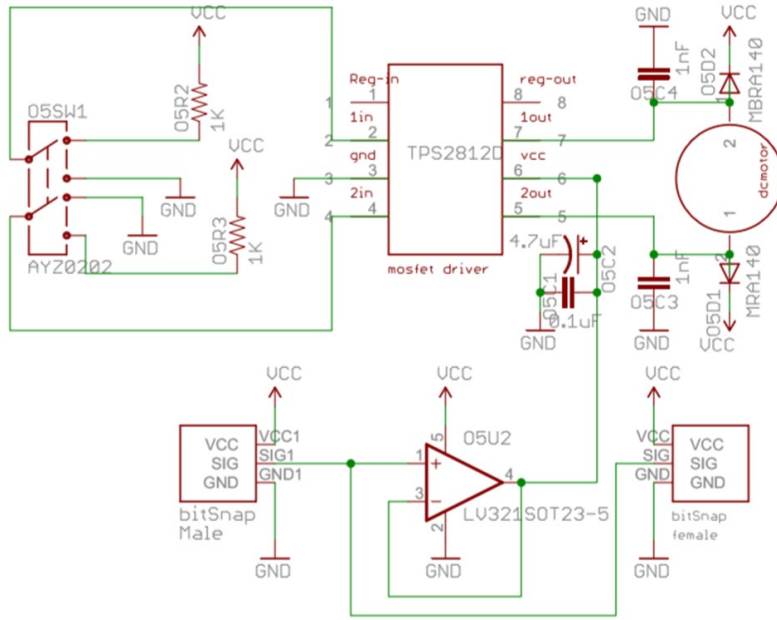


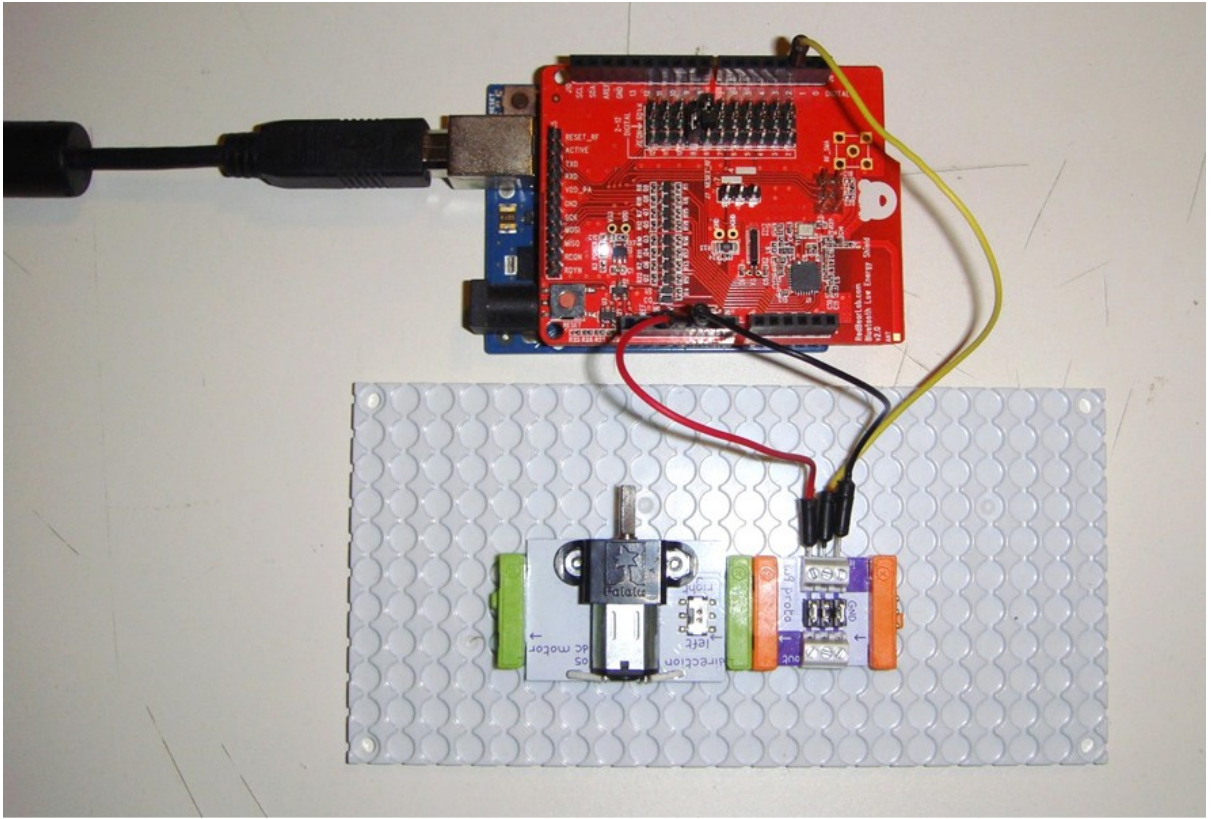
Chapter 7: Bluetooth Low Energy Controller

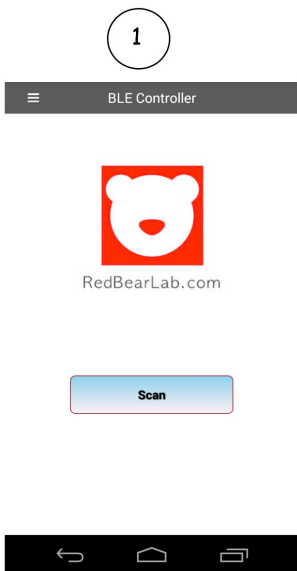




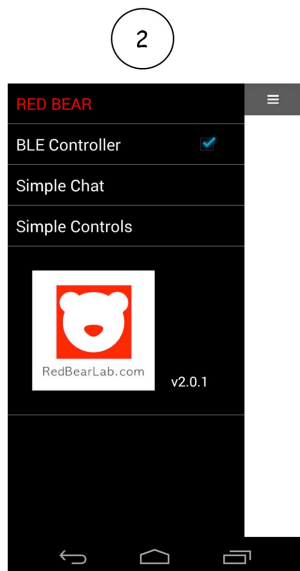




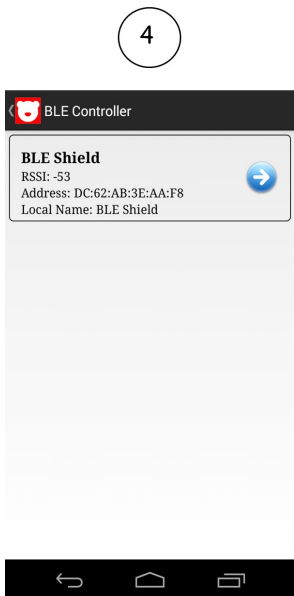
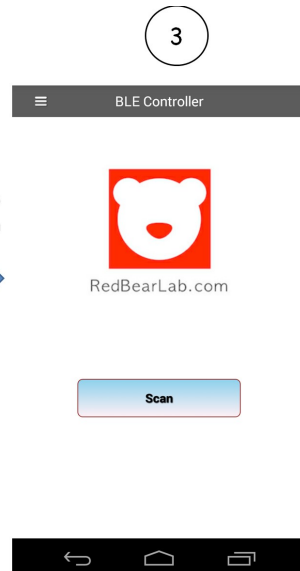




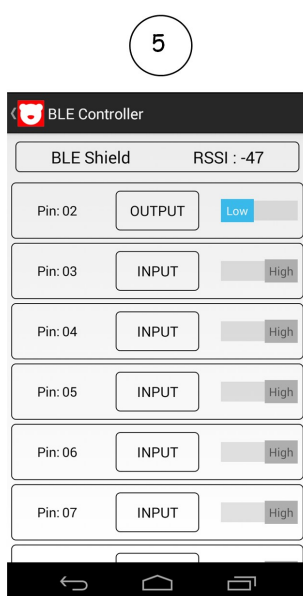
Advanced to next screen



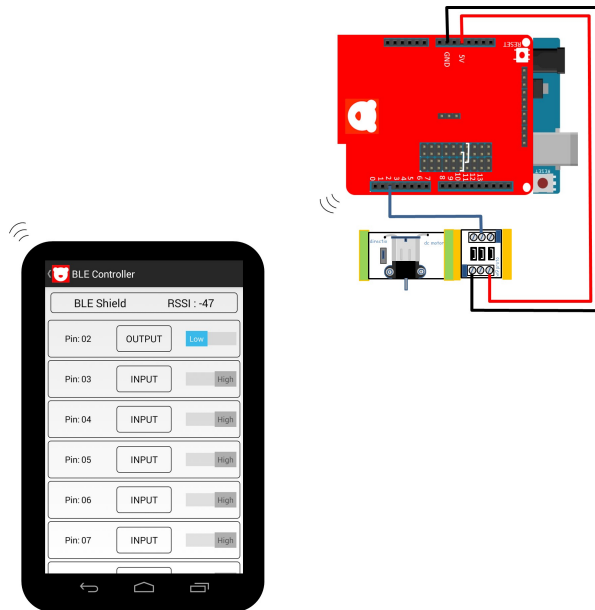
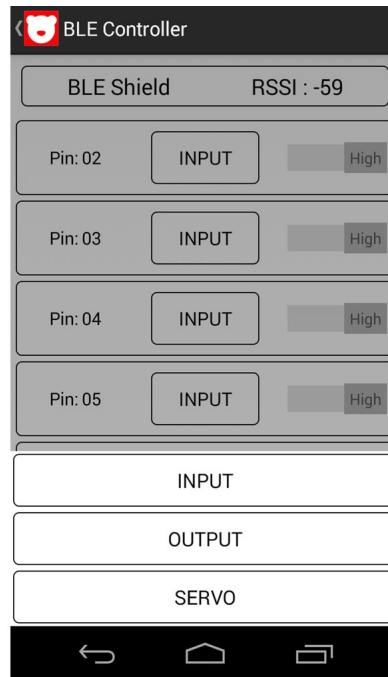
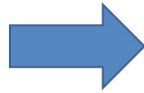
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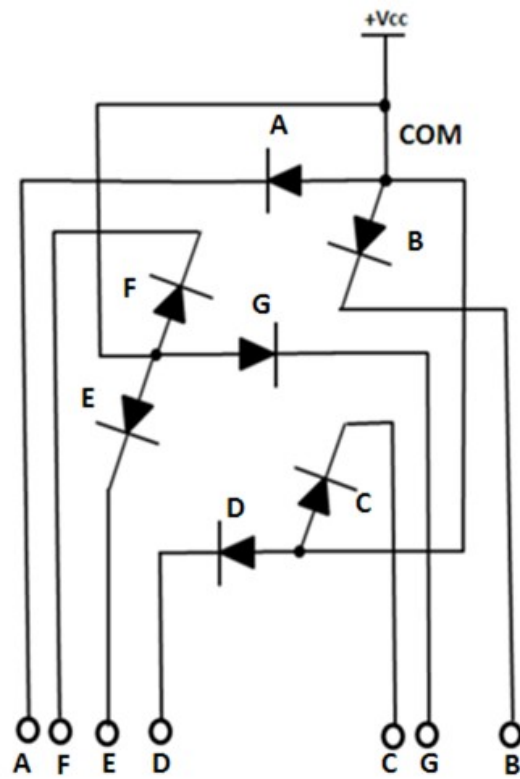
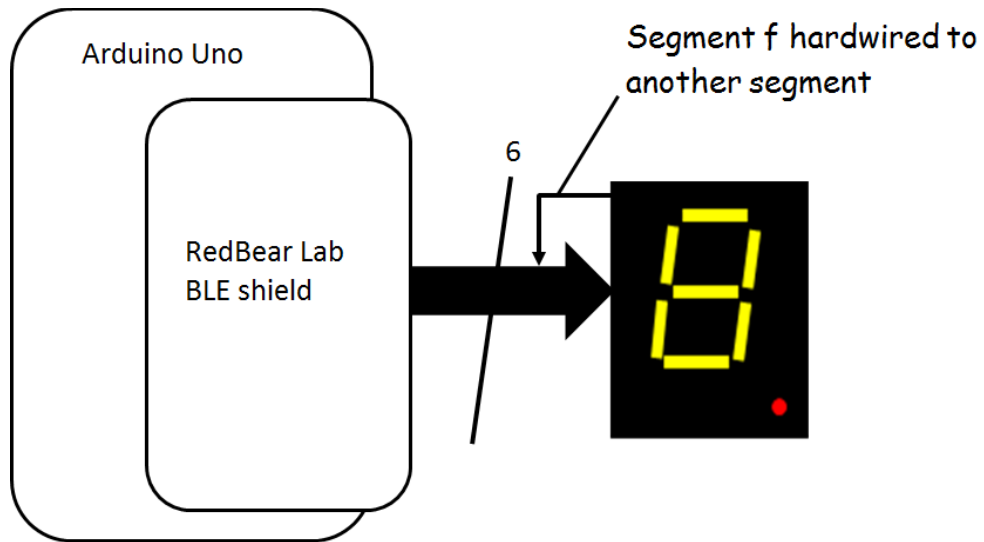


Advanced to next screen

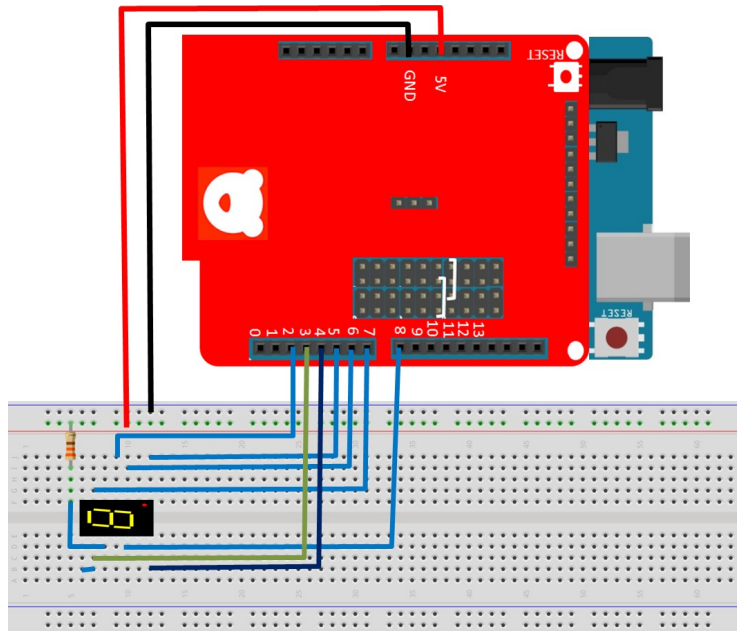
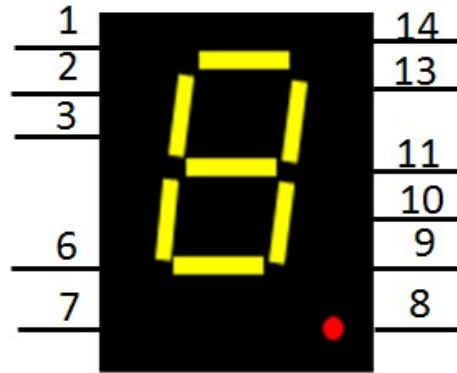


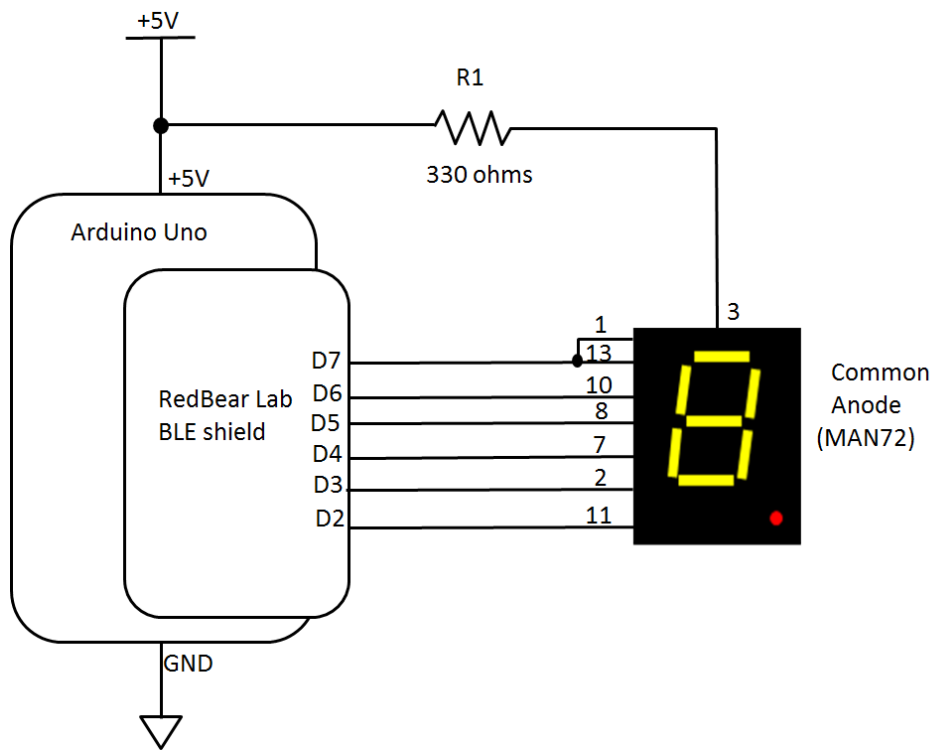
Touch here to change Pin:02 to an OUTPUT

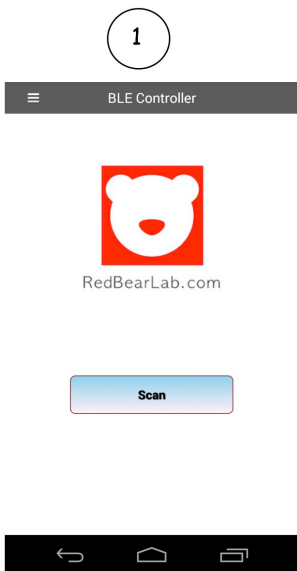




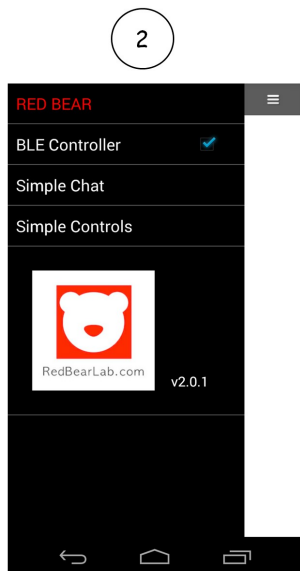
Pin no.	Electrical connection
1	Cathode A
2	Cathode F
3	Common Anode
4	No Pin
5	No Pin
6	Cathode D. P.
7	Cathode E
8	Cathode D
9	No Connection
10	Cathode C
11	Cathode G
12	No Pin
13	Cathode B
14	Common Anode



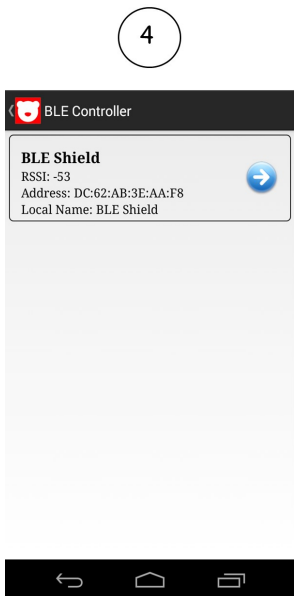
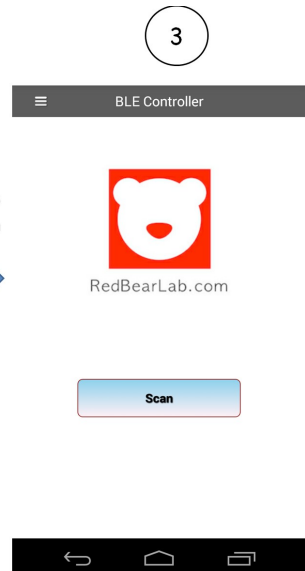




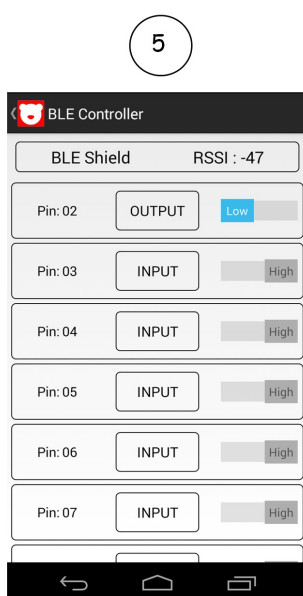
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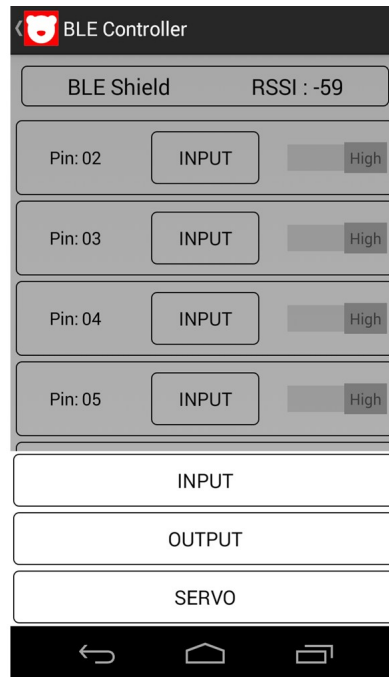


Advanced to next screen

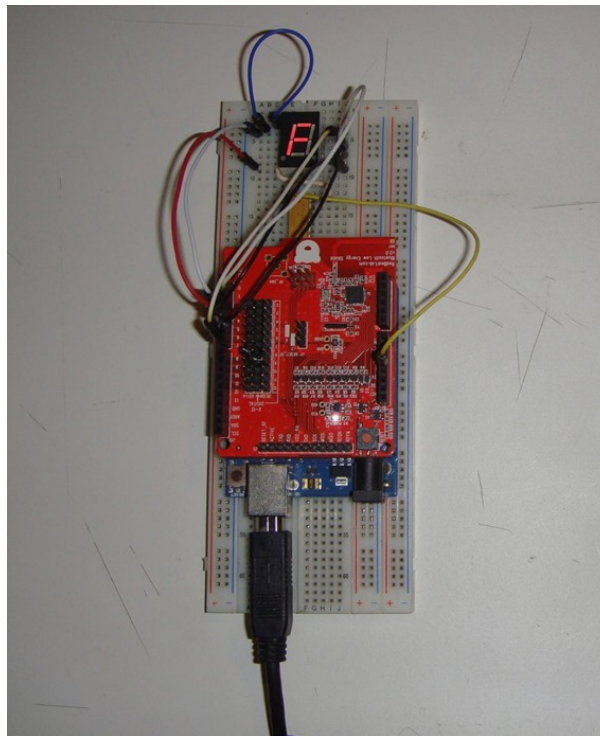
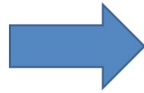


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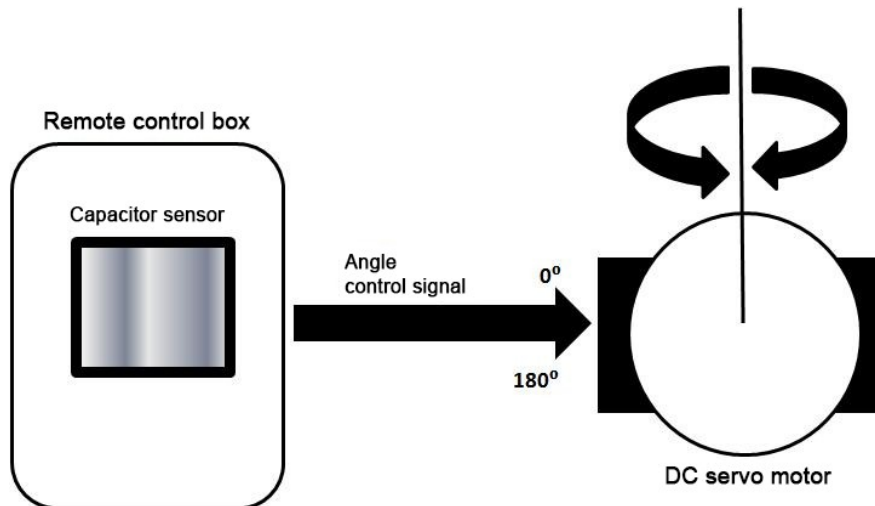


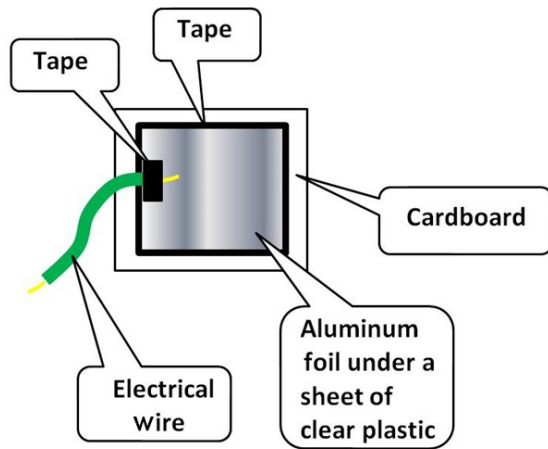
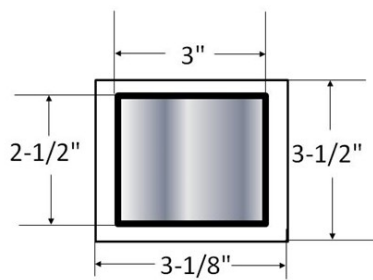
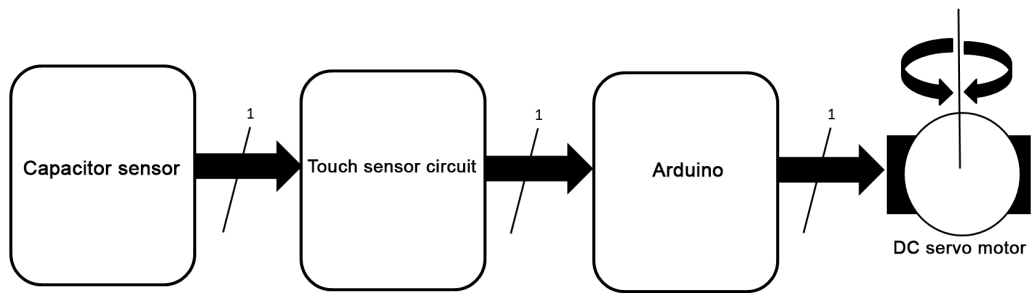


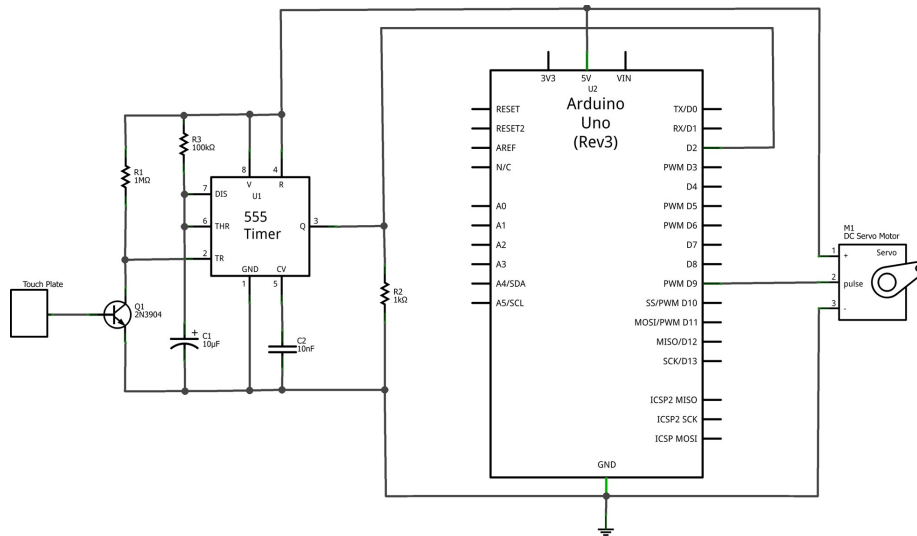
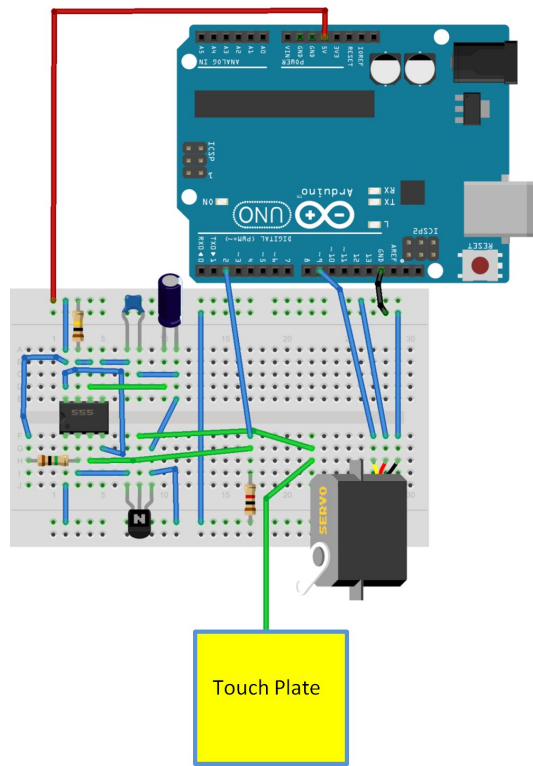
Touch here to change Pin:02 to an OUTPUT

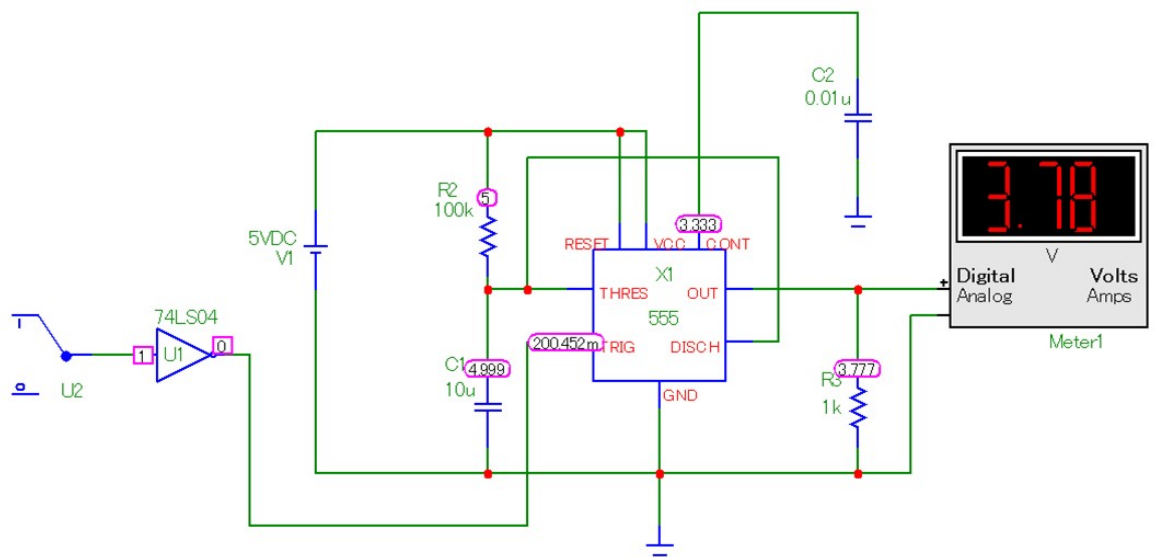
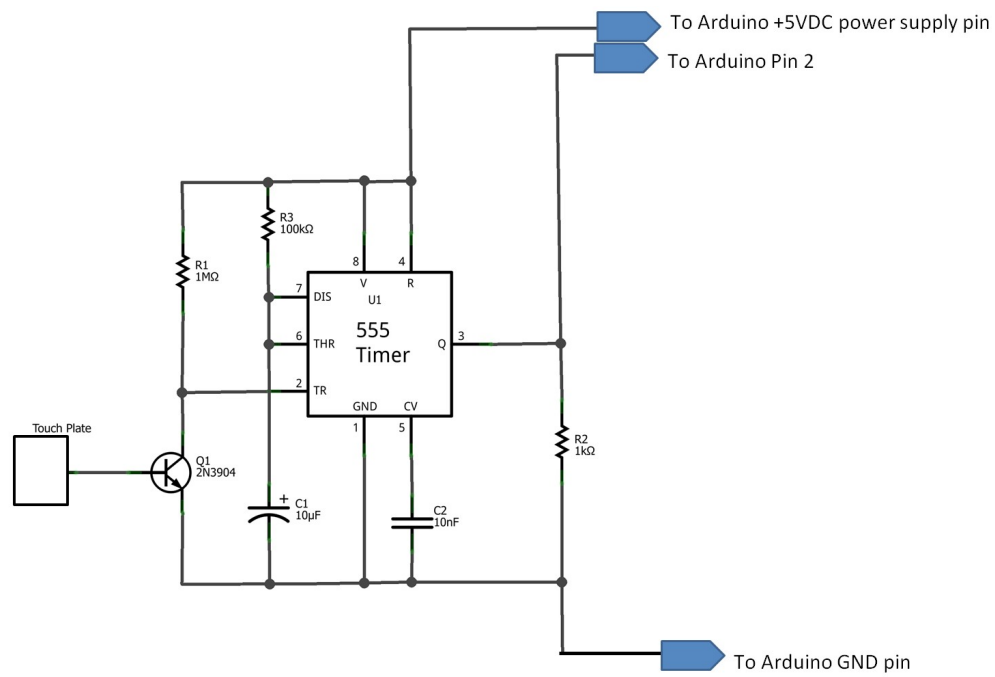


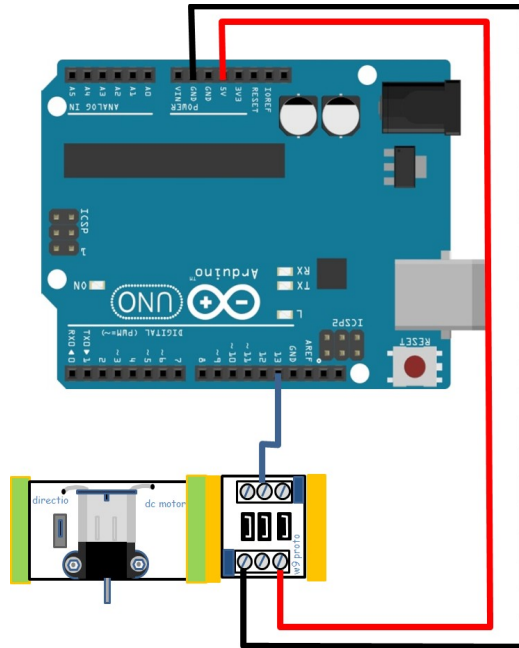
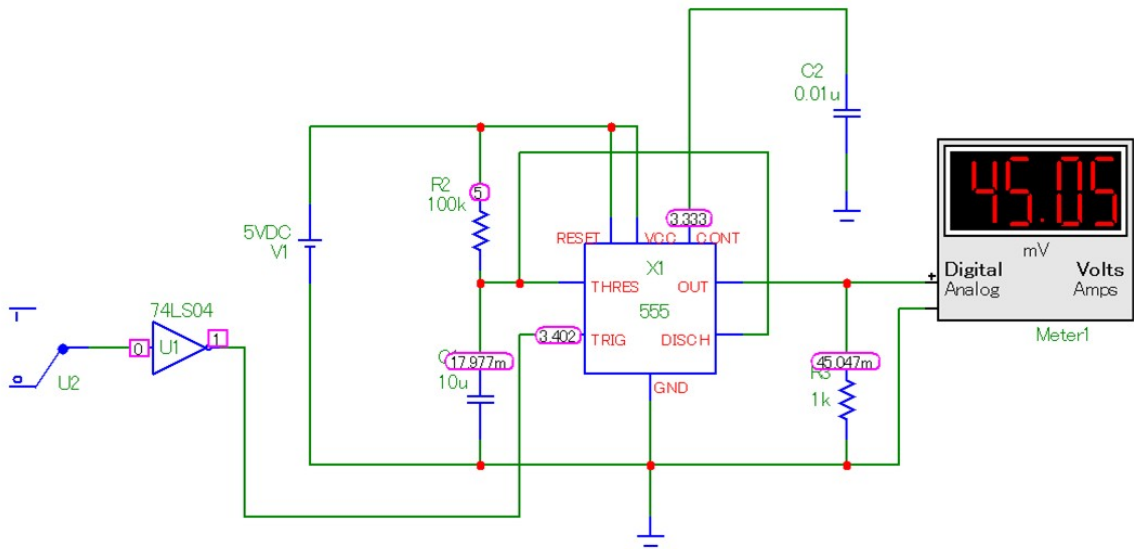
Chapter 8: Capacitive Touch Sensing

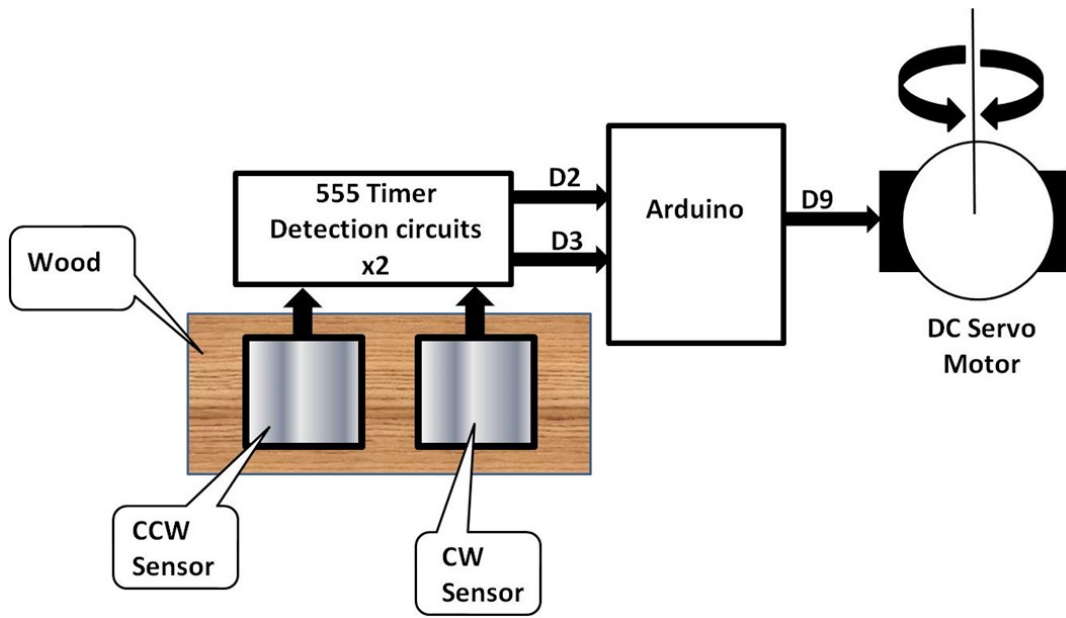




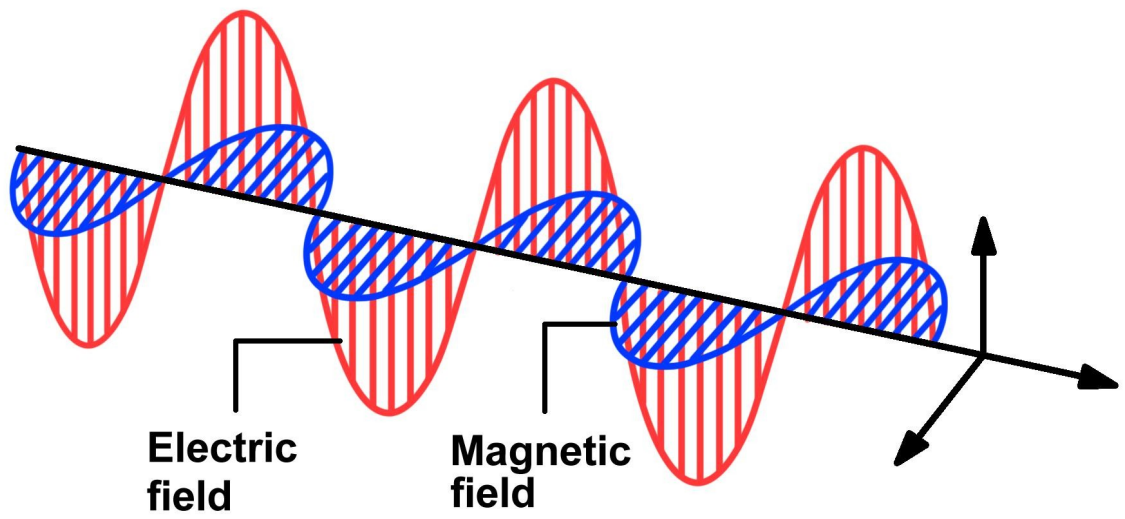


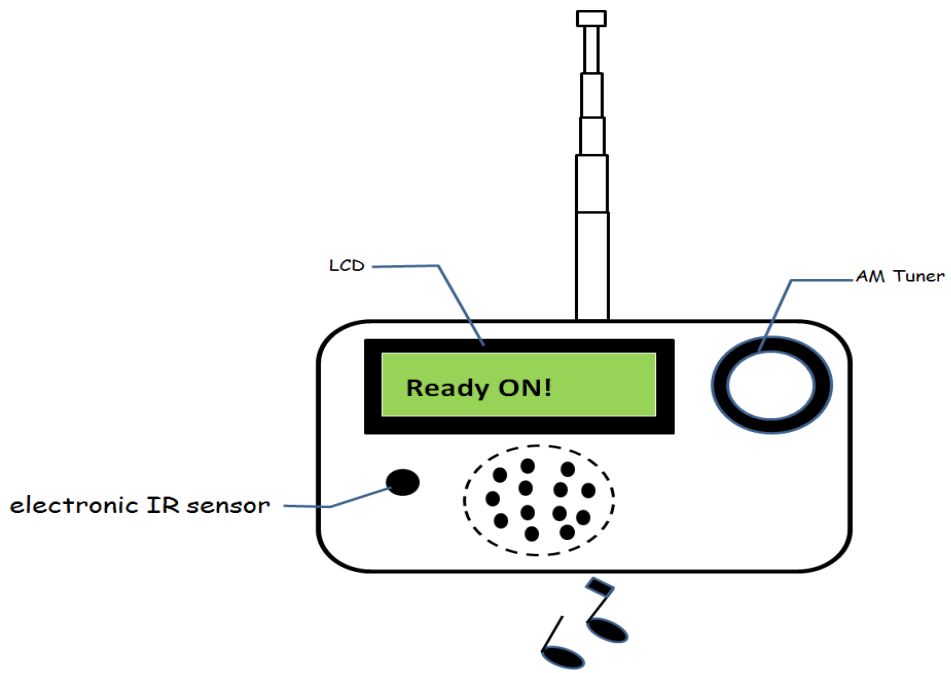
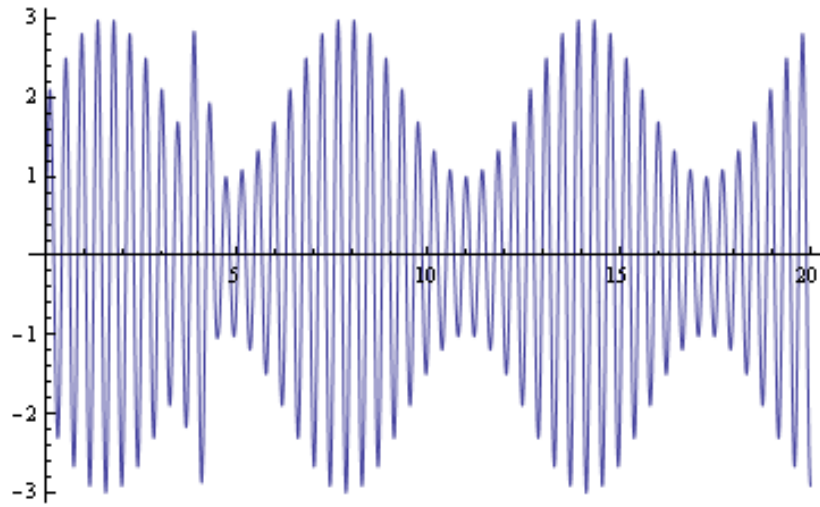


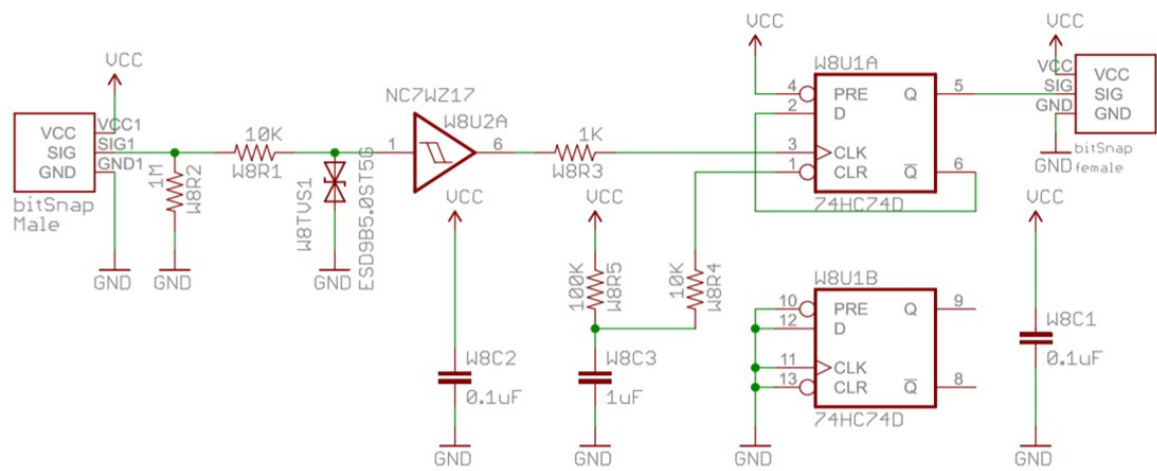
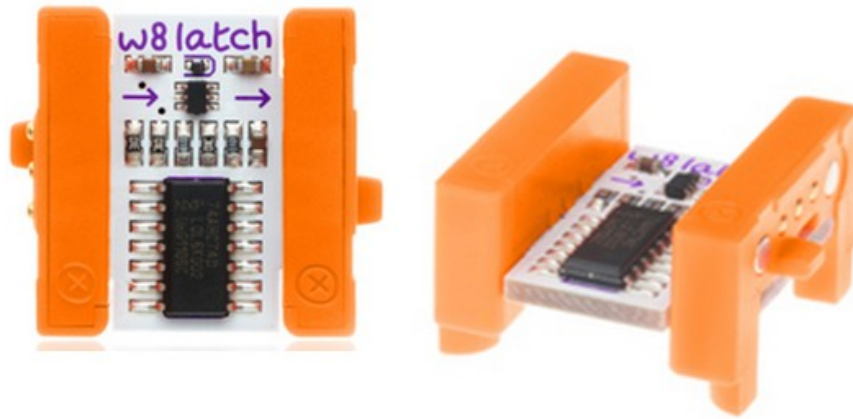
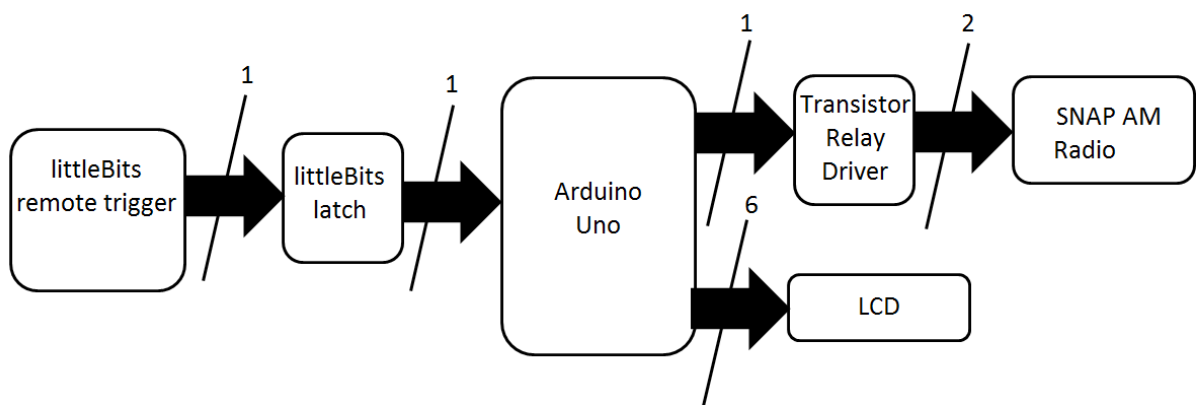


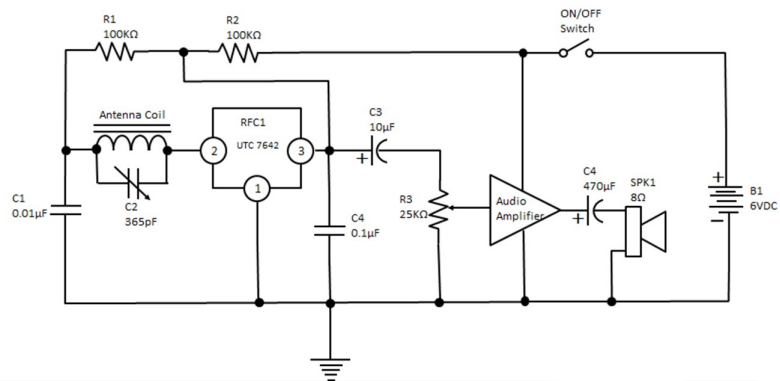
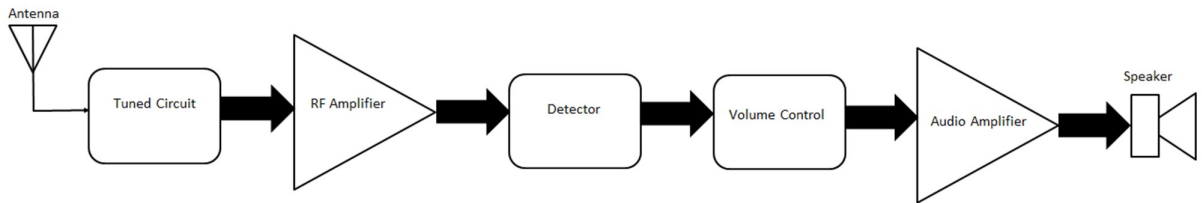
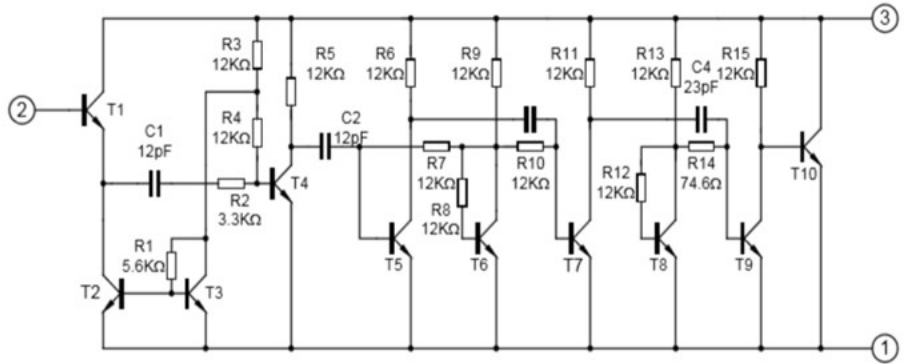


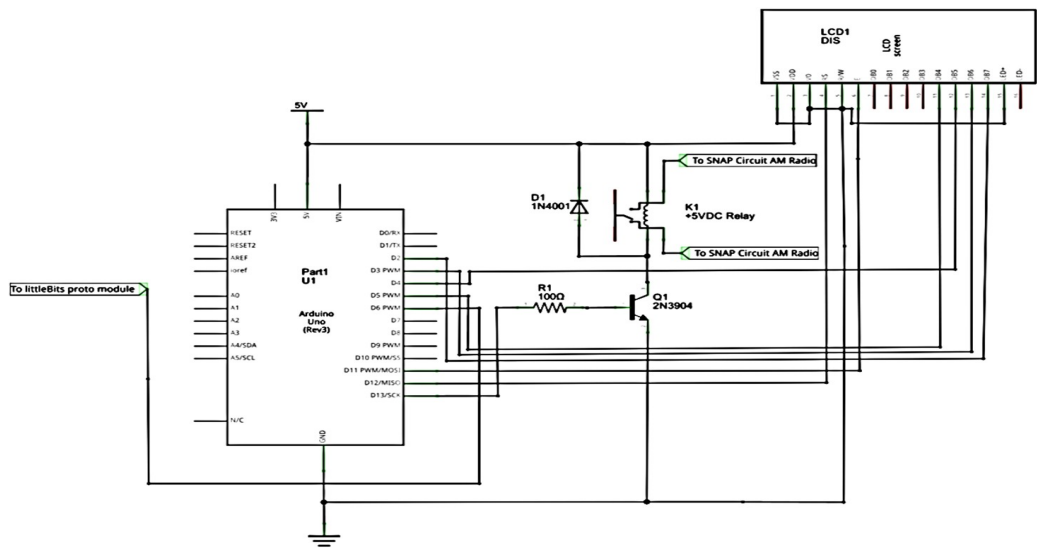
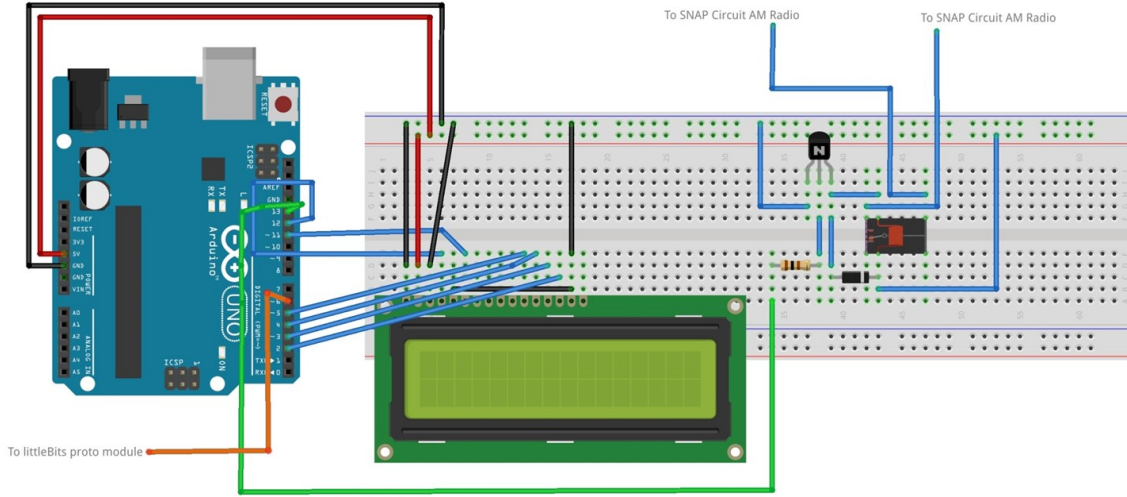
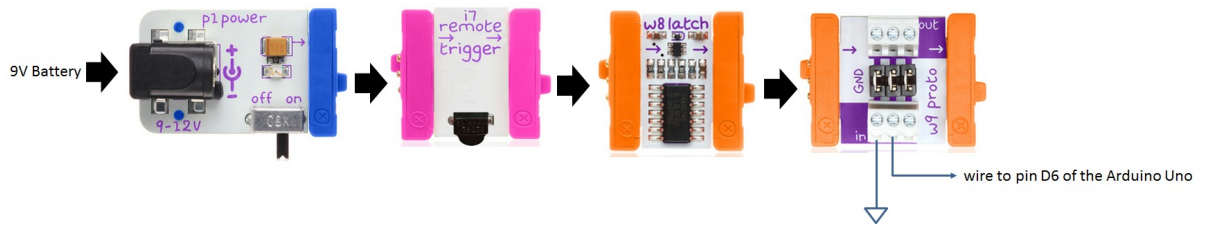
Chapter 9: Arduino-SNAP Circuit AM Radio

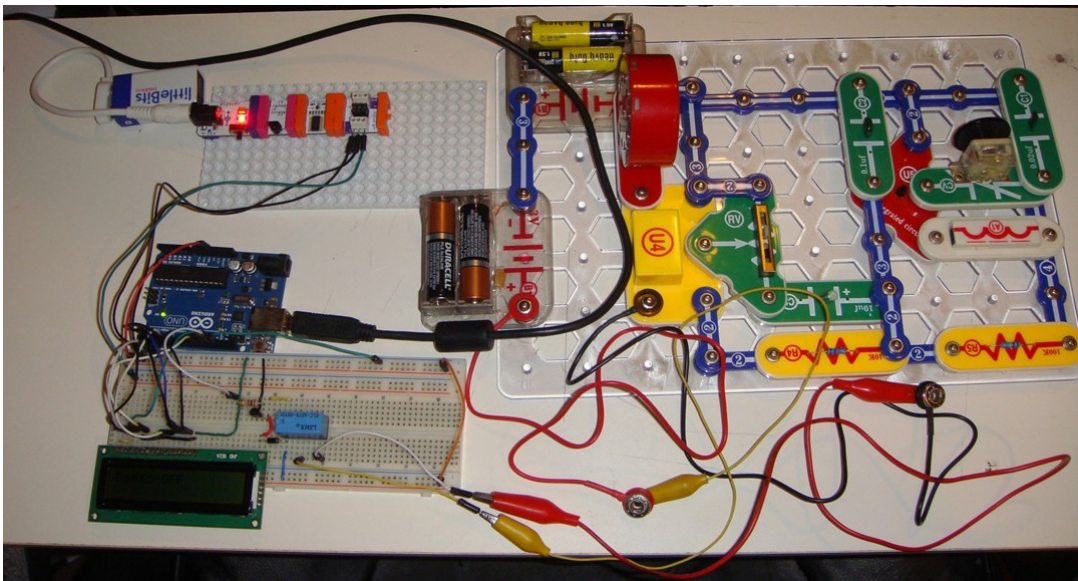
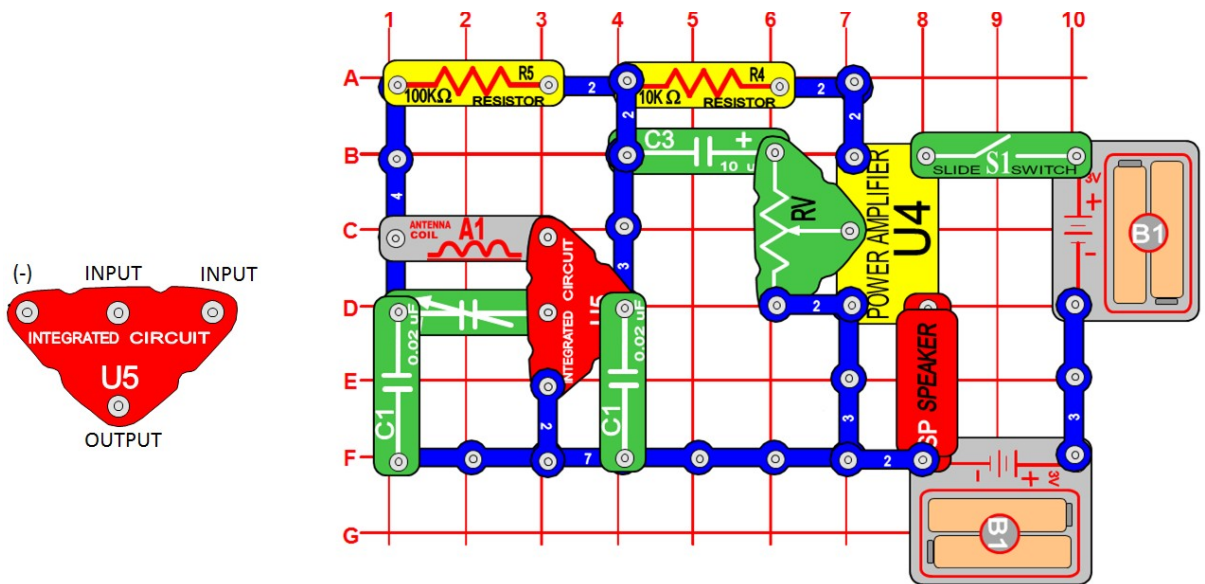


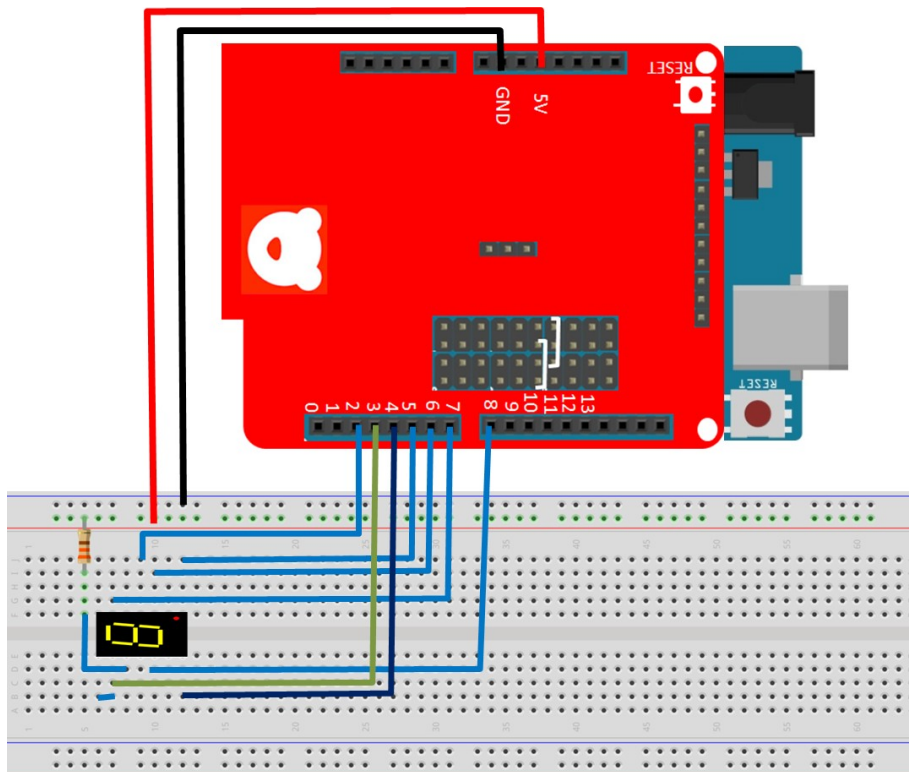
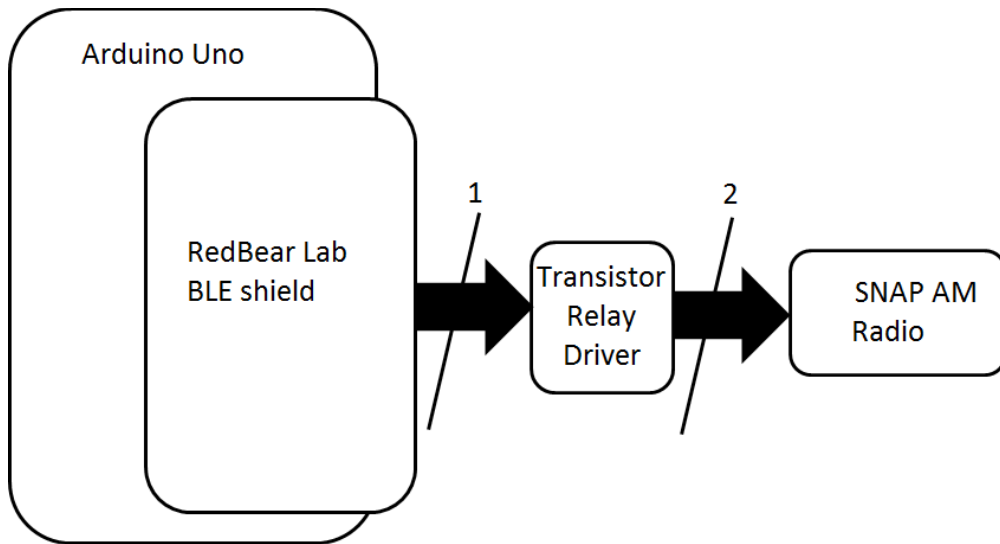












Chapter 10: Arduino Scrolling Marquee



