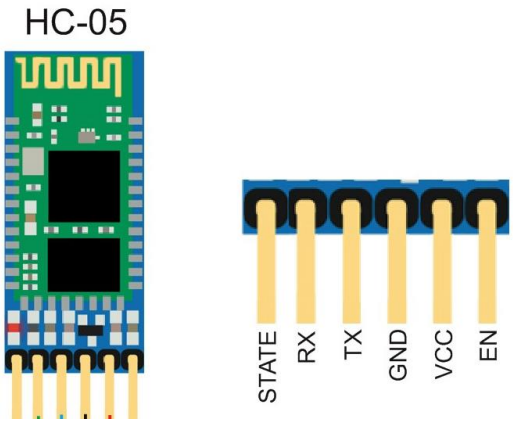
Arduino Based Pager with Bluetooth and LCD

Bluetooth Module for Arduino UNO

We will be using the most common Bluetooth module for Arduino which is the HC-05 Bluetooth Module.



Connect the PINs as:

Arduino Pins	HC-05 Pins
5 V	5V
GND	GND
RX (0)	TX
TX (1)	RX

The RX pin is the receiving pin and the TX pin is the transmitting pin. This is why RX of Arduino is connected to TX of HC-05. Whatever the HC-05 sends will be received by the Arduino and

whatever Arduino sends will be received by the HC-05. When an Android phone is connected to the module and sends data, Arduino will read that data in Serial.

Connection Settings for new modules

Name = HC-05

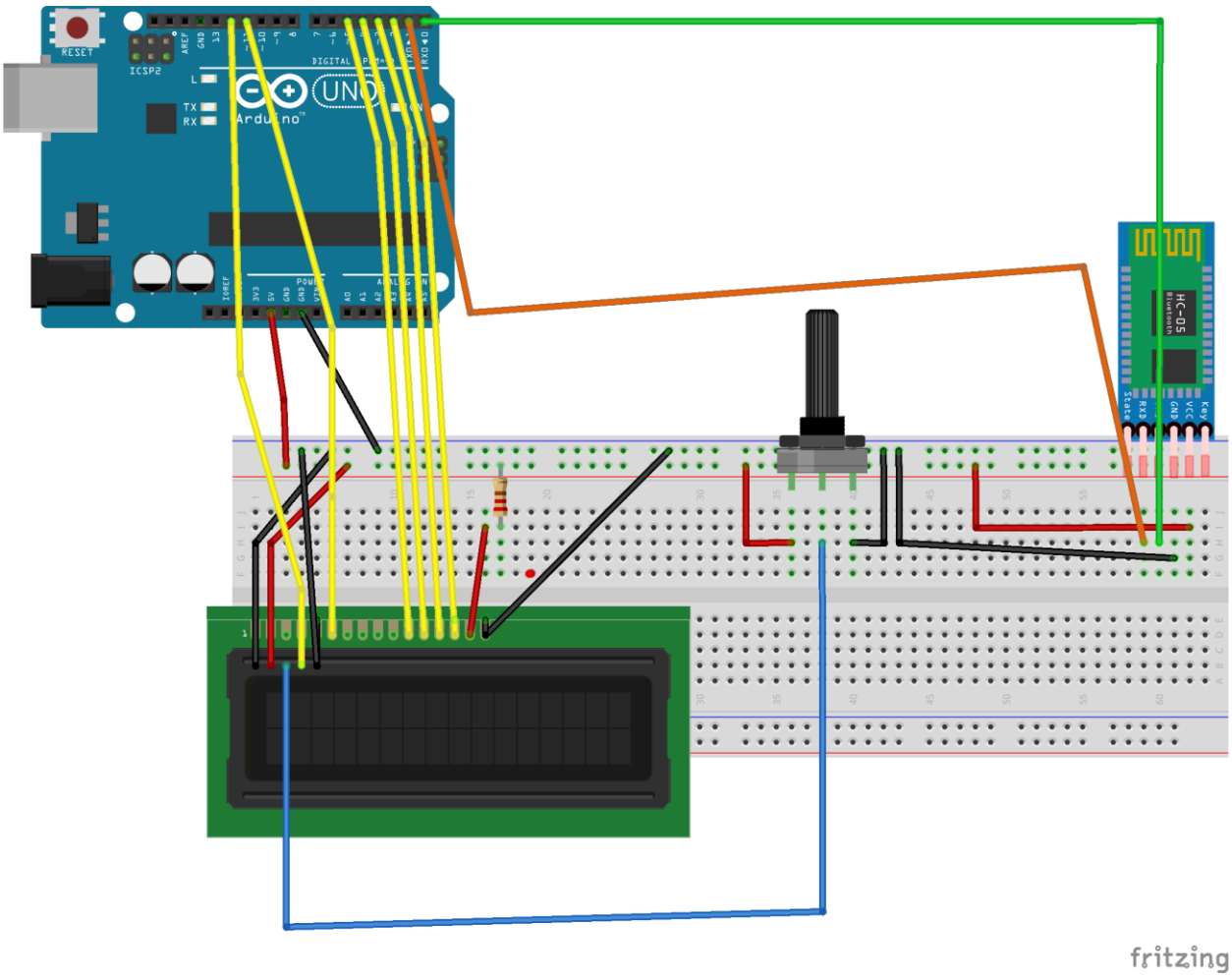
Password = 1234

Baud rate = 9600

16x2 LCD:

We will be using the 16x2 LCD with Arduino as Arduino has a built in library for the LCD. The schematic of the LCD and

Bluetooth module is shown below:



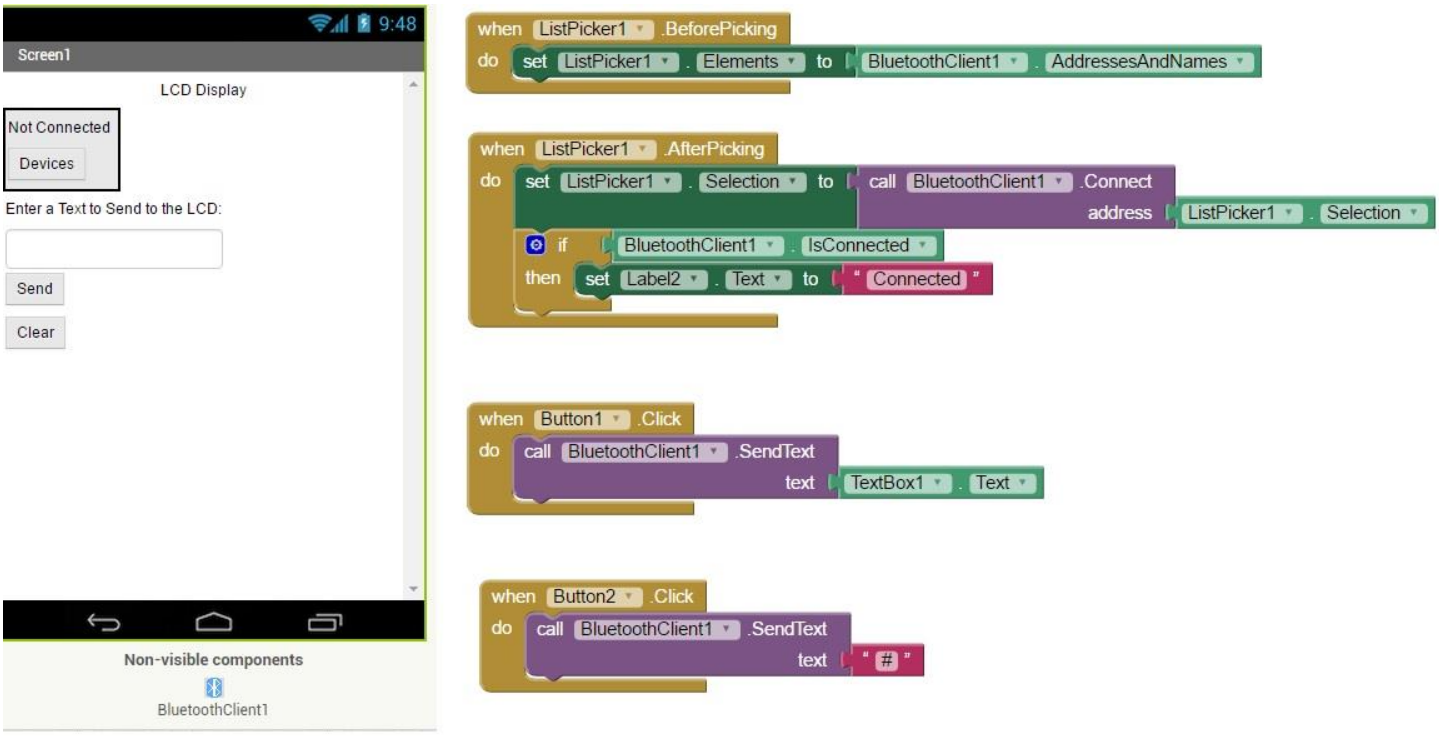
The potentiometer in the 3rd pin from the left is for controlling the contrast.

MIT APP Inventor:

Now we will make the app that will be used in controlling the LCD. MIT App Inventor is a free tool which allows for Android

applications to be made. The programming is in blocks and is similar to that of Scratch.

The design of the app and programming is shown below:



The basic idea in the app is that first it will connect to the device and then whatever text you have typed; it will send that to the device. Also when the clear button is clicked to clear the LCD it will send the # character to the device. To get this app on your Android phone copy the APK file onto your phone and install it.

In the Arduino program, first the Arduino will read whatever is coming through the Bluetooth device in serial and it will print that onto the LCD. The Arduino will only print characters and digits. If the # character is received by pressing

the clear button, it will clear the LCD. To download the Arduino program, open the file and upload it onto your Arduino.

NOTE: When uploading the program, remember to take out the RX and TX pins from your Arduino and put them back in after the program has uploaded. If this is not done, then the program will not be properly uploaded.