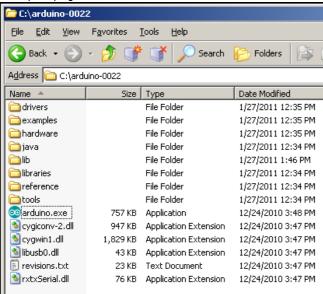
==== 1. Setup Environment ======

- -download the arduino software form official webiste (http://arduino.cc/en/Main/Software)
- -unzip arduino-0022.zip file and copy to local drive C:\arduino-0022
- -download the labviewduino file from google project code website (http://code.google.com/p/labviewduino/downloads/list)
- -unzip labviewduino-v1.0.0.127.zip and copy to local drive C:\labviewduino-v1.0.0.127
- -connect the usb cable from board to desktop PC.
- -install FTDI driver to desktop PC (please ignore if you are using Arduino UNO board). installer file available at C:\arduino-0022\drivers\FTDI USB Drivers -check the serial port status of Device Manager>>Ports(COM & LPT) >>USB Serial Port (COM2)
- -default baud rate setting is 57600 N-8-1.



==== 2. Load sketch to Arduino board =====

-startup the program from C:\arduino-0022\arduino.exe



-see welcome logo at screen, it shows the latest version 0022



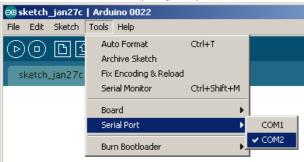
-select the board type.

>> Tools>>Board>>Arduino Duemilanove (for my case)



-select the COM port.

>>Tools>>Serial Port>>COM2 (for my case)



-load the firmata sketch file

>>File >>Open...>>C:\labviewduino-v1.0.0.127\sketch_firmata_analog_input\sketch_firmata_analog_input.pde

```
sketch_firmata_analog_input | Arduino 0022
                                                                Sketch
              Tools
                   Help
₽
  sketch_firmata_analog_input
#include <Firmata.h>
byte analogPin;
void analogWriteCallback(byte pin, int value)
    pinMode(pin,OUTPUT);
    analogWrite(pin, value);
void setup()
    Firmata.setFirmwareVersion(0, 1);
    Firmata.attach(ANALOG_MESSAGE, analogWriteCallback);
    Firmata.begin(57600);
void loop()
-{
    while(Firmata.available()) {
        Firmata.processInput();
    for(analogPin = 0; analogPin < TOTAL_ANALOG_PINS; analogPin++) {</pre>
        Firmata.sendAnalog(analogPin, analogRead(analogPin));
        delay(200);
    }
```

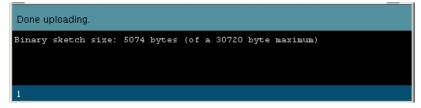
verify the sketch. see the "Done compiling" message as below.

>>Sketch>>Verify / Compile

```
Done compilina
Binary sketch size: 5074 bytes (of a 30720 byte maximum)
```

-upload the sketch to arduino.see the "Done uploading" message as below.

>>File>>Upload to I/O Board

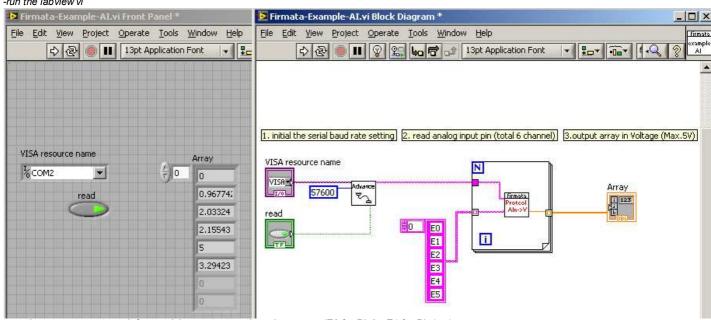


=== 3. Run LabVIEW Program ====

-open C:\lab viewduino-v1.0.0.127\Firmata-example-AI.vi

-check the VISA resource setting for your own setting (ie:COM2)

-run the labview vi



-see the measurement result from arduino , output as the voltage array (E0 for Pin0 , E1 for Pin1....)