Guide to setup Raspberry Pi Plant Automation

· Connect arduino with your PC and Flash arduino code provide to you
  https://www.youtube.com/watch?v=5OtMqr5hGjE
· Wire as per:

Overview of python code:

```python
from serial import Serial
import sys
import urllib2
from time import sleep


# Enter Your API key here
myAPI = '1YJZRBLZ5BV9A4CM'
# URL where we will send the data, Don't change it
baseURL = 'https://api.thingspeak.com/update?api_key=%s' % myAPI
#serial object to read from arduino serial port. Run this command to check your serial port "dmesg |
grep tty"
ser = Serial(port='/dev/ttyACM1',baudrate = 9600)

while 1:
    try:
        if ser.is_open:
            if ser.in_waiting>0:
                x=ser.readline()
                y=x.split(",")
                temp=y[1]
                humidity=y[0]
                soil_moisture=y[2]
                water_level=y[3]
                print humidity,temp,soil_moisture,water_level
                # Sending the data to thingspeak
                conn = urllib2.urlopen(baseURL + '&field1=%s&field2=%s&field3=%s&field4=%s' %
(water_level, soil_moisture,temp,humidity))
                print conn.read()
                # Closing the connection
                conn.close()
                sleep(10)
    except:
        print("Error")
```

```
pi@raspberrypi:~/Desktop/peterkold446 $ dmesg | grep tty
[    0.000000] Kernel command line: 8250.nr_uarts=0 bcm2708_fb.fbwidth=1360 bcm2
708_fb.fbheight=768 bcm2708_fb.fbswap=1 vc_mem.mem_base=0x3ec00000 vc_mem.mem_si
ze=0x40000000  dwc_otg.lpm_enable=0 console=ttyS0,115200 console=tty1 root=PARTU
UID=cf66985e-02 rootfstype=ext4 elevator=deadline fsck.repair=yes rootwait quiet
 splash plymouth.ignore-serial-consoles
[    0.000306] console [tty1] enabled
[    0.779061] 3f201000.serial: ttyAMA0 at MMIO 0x3f201000 (irq = 87, base_baud
= 0) is a PL011 rev2
[    3.375817] cdc_acm 1-1.3:1.0: ttyACM0: USB ACM device
```

This is the api key you need to replace in the code.
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Private View   Public View   Channel Settings   Sharing   API Keys

Write API Key

Key   2DHA8I3M9NZ1293C

Generate New Write API Key