```
import RPi.GPIO as GPIO
import time
import urllib.request as urllib2

myAPI = 'EFOLGCAORYK0WIH3'
baseURL = 'https://api.thingspeak.com/update?api_key=%s' % myAPI

GPIO.setmode(GPIO.BCM)
TRIG = 19
ECHO = 26

print ("Distance measurement in progress")

GPIO.setup(TRIG,GPIO.OUT)
GPIO.setup(ECHO,GPIO.IN)

while True:

  GPIO.output(TRIG, False)
  print ("Waitng For Sensor To Settle")
  time.sleep(2)

  GPIO.output(TRIG, True)
  time.sleep(0.00001)
  GPIO.output(TRIG, False)

  while GPIO.input(ECHO)==0:
    pulse_start = time.time()

  while GPIO.input(ECHO)==1:
    pulse_end = time.time()

  pulse_duration = pulse_end - pulse_start

  distance = pulse_duration * 17150
  distance = round(distance, 2)

  if distance > 2 and distance < 400:
    print ("Distance:",distance - 0.5,"cm")
  else:
    print( "Out Of Range")
  conn = urllib2.urlopen(baseURL +'&field1=%s' % (distance))
```

```
import time
import Adafruit_DHT
import urllib.request as urllib2


myAPI = 'EFOLGCAORYK0WIH3'
baseURL = 'https://api.thingspeak.com/update?api_key=%s' % myAPI

sensor = Adafruit_DHT.DHT11
pin = 4

while(1):
    try:
        humidity, temperature = Adafruit_DHT.read_retry(sensor, pin)
        print ("Humidity ="+str(humidity))
        print ("Temperature ="+str(temperature))
        conn = urllib2.urlopen(baseURL + '&field1=%s&field6=%s' % (temp, humidity))
    except ValueError:
        print ("Unable to read data")
```

```
import urllib.request as urllib2
import Adafruit_GPIO.SPI as SPI
import Adafruit_MCP3008

myAPI = 'EFOLGCAORYK0WIH3'
# URL where we will send the data, Don't change it
baseURL = 'https://api.thingspeak.com/update?api_key=%s' % myAPI

SPI_PORT   = 0
SPI_DEVICE = 0
mcp = Adafruit_MCP3008.MCP3008(spi=SPI.SpiDev(SPI_PORT, SPI_DEVICE))

gas_value = 0.0
moisture_value = 0.0

while(1):
        try:
          gas_value = mcp.read_adc(0)
                moisture_value = mcp.read_adc(1)
                print("Gas Value : ")
                print("------------------")
                print(gas_value)
```

```
                print("------------------")
                print("soil Moisture Value : ")
                print("------------------")
                print(moisture_value)
                print("------------------")
                conn = urllib2.urlopen(baseURL + '&field1=%s&field2=%s' %
(gas_value,moisture_value))
        except ValueError:
        print ("Unable to read data")
```

```
import urllib.request as urllib2
import RPi.GPIO as GPIO
import time

myAPI = 'EFOLGCAORYK0WIH3'
# URL where we will send the data, Don't change it
baseURL = 'https://api.thingspeak.com/update?api_key=%s' % myAPI

GPIO.setmode(GPIO.BCM)
GPIO.setup(13,GPIO.IN)
GPIO.setup(19,GPIO.OUT)
GPIO.setup(26,GPIO.IN)

light_sensor_pin = 13
light_value = 0

while(1):
        try:
          light_value = GPIO.input(light_sensor_pin)
         if light_value==0 or light_value==1:
            if light_value==0:
                print("------------------")
                print ('Light Detected')
                print("------------------")
            else:
                print("------------------")
                print ('Light Not Detected')
                print("------------------")
                conn = urllib2.urlopen(baseURL + '&field1=%s' % (light_value))
        except ValueError:
        print ("Unable to read data")
```