import serial

import os

Import RP1.GPIO as gpio

import sys

Import time

Import Adafruit\_DHT

import httplib, urllib

sleep = 5

key ='Put your Thingspeak Channel Key here'

gpio.setwarnings (False) gpio.setmode (gpio.BCM)

ir\_ sensor= 21

gas \_sensor =20

mos \_sensor =16

ECHO =26

TRIG =19

buzzer= 25

motorl =23

motor2 =24

fan = 17

val=0

gpio.setup(ir\_sensor, gpio.IN) gpro.setup (gas\_sensor gpio.IN) gpro.setup (mos\_sensor, gpio.IN)

gpro.setup (TRIG, gpio.OUT) gpro.setup (ECHO, gpio. IN)

gpio.setup (buzzer, gpio.OUT) gpio setup (motorl gpio.OUT) gpio.setup(motor2, gpio.OUT) gpio setup (fan gpio.OUT)

def distance():

gpio.output (TRIG, False) time.sleep(1)

gpio.output (TRIG, True) timo.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 - puise\_start

distance= pulse\_duration \*17150 distance = round(distance, 2) Print distance

while True:

humidity, temperature - Adafruit \_DHT.read\_retry (Adafruit\_DHT.DHT11,4) print "Temperature: (0). format (temperature)

if (temperature >= 10):

gpio.output (fan, True) Print "Fan On" else:

gpio.output (fan, False) print "Fan OFF" print ""

Print "Humidi ity: (0)". Format (humidity) print""

time.sleep (1)

if (gpio.input (I r \_sensor) =True): print "Motion Detected" gIR=1

distanes ()

o.system (("fswebcam {0}.jpg - S 2").format(val))

time.sleep (1)

val= val +1 else:

print "Motion Not Detected"

gIR=0

time.sleep (1)

print" "

if(qpio.input (gas\_sensor)== True):

print "Gas Detected"

gGAS= 1

gpio.output (buzzer ,True)

print "Buzzer On"

time.sleep (4)

gpio.output (buzzer ,False)

Else:

Print "Gas Not Detected"

gGAS=0

gpio.output (buzzer ,False)

time.sleep (1)

Print" "

if(gpio.input (mos\_sensor) == True):

print "Mositure Not Detected"

GMOS=1

gpio.output motorl ,True)

gpio.output (motor2, False)

print "Motor ON"

time.sleep (2)

Else:

Print "Moisture Detected "

gMOS = 0

gpio.output motorl, False)

gpio.output (motor2, False)

time.sleep(1)

params = urllib.urlencode ({'field' temperature, 'field2': humidity, 'field3': gIR, 'field4': gGAS, 'field5': gMOS, 'key':'LOY974WOMCEHS69C'}) headers={"Content-typZZe": "application/x-www-form-urlencoded", "Accept": "text/ plain"}

conn= httplib.HTTPConnection("api.

thingspeak.com:80")

try:

conn.request ("POST", "/update", params, headers)

response= conn.getresponse()

data =response.read()

conn.close()

except:

print "connection failed"

Print" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"