**CODE:**

import RPi.GPIO as gpio  
import serial  
import time  
import random  
from flask import Flask, render\_template, request, jsonify

import smtplib

RS =18  
EN =23  
D4 =24  
D5 =25  
D6 =8  
D7 =7

DT =27  
SCK=17  
led=22  
buz=5

m1=19  
m2=26

HIGH=1  
LOW=0

sample=0  
val=0

flag=0

gpio.setwarnings(False)  
gpio.setmode(gpio.BCM)  
gpio.setup(RS, gpio.OUT)  
gpio.setup(EN, gpio.OUT)  
gpio.setup(D4, gpio.OUT)  
gpio.setup(D5, gpio.OUT)  
gpio.setup(D6, gpio.OUT)  
gpio.setup(D7, gpio.OUT)  
gpio.setup(led, gpio.OUT)  
gpio.setup(buz, gpio.OUT)  
gpio.setup(m1, gpio.OUT)  
gpio.setup(m2, gpio.OUT)  
gpio.setup(SCK, gpio.OUT)  
gpio.output(led , 0)  
gpio.output(buz , 0)  
gpio.output(m1 , 0)  
gpio.output(m2 , 0)

app = Flask(\_\_name\_\_)  
a=1  
@app.route("/")  
def index():  
 return render\_template('web.html')  
    
@app.route('/show\_weight')  
def show\_weight():  
    count= readCount()  
    w=0  
    w=(count-sample)/106  
    print w,"g"  
    setCursor(0,0)  
    data=str(w);  
    lcdprint(data)  
    lcdprint("g   ")  
    global flag  
    if w>300:  
      if flag == 0:  
        lcdclear()  
        lcdprint("Container Is Full")  
        setCursor(0,1);  
        lcdprint("Sending Email")  
        server = smtplib.SMTP('smtp.gmail.com', 587)  
        server.starttls()  
        server.login("[saddam4201@gmail.com](mailto:saddam4201@gmail.com)", "password")  
        msg = "Smart Container Alert.... Container Full"  
        server.sendmail("[saddam4201@gmail.com](mailto:saddam4201@gmail.com)", "[sk9610126059@gmail.com](mailto:sk9610126059@gmail.com)", msg)  
        server.quit()  
        lcdclear()  
        lcdprint("Email Sent")  
        flag=1;  
        lcdclear()  
    elif w<300:  
      if flag==1:  
        lcdclear()  
        lcdprint("Container Empty")  
        setCursor(0,1);  
        lcdprint("Sending Email")  
        server = smtplib.SMTP('smtp.gmail.com', 587)  
        server.starttls()  
        server.login("[saddam4201@gmail.com](mailto:saddam4201@gmail.com)", "Password")  
        msg = "Smart Container Alert.... Container is Empty"  
        server.sendmail("[saddam4201@gmail.com](mailto:saddam4201@gmail.com)", "[sk9610126059@gmail.com](mailto:sk9610126059@gmail.com)", msg)  
        server.quit()  
        lcdclear()  
        lcdprint("Email Sent")  
        flag=0;  
        lcdclear()

    return jsonify(result=w)

def begin():  
  lcdcmd(0x33)   
  lcdcmd(0x32)   
  lcdcmd(0x06)  
  lcdcmd(0x0C)   
  lcdcmd(0x28)   
  lcdcmd(0x01)   
  time.sleep(0.0005)  
   
def lcdcmd(ch):   
  gpio.output(RS, 0)  
  gpio.output(D4, 0)  
  gpio.output(D5, 0)  
  gpio.output(D6, 0)  
  gpio.output(D7, 0)  
  if ch&0x10==0x10:  
    gpio.output(D4, 1)  
  if ch&0x20==0x20:  
    gpio.output(D5, 1)  
  if ch&0x40==0x40:  
    gpio.output(D6, 1)  
  if ch&0x80==0x80:  
    gpio.output(D7, 1)  
  gpio.output(EN, 1)  
  time.sleep(0.005)  
  gpio.output(EN, 0)

  # Low bits  
  gpio.output(D4, 0)  
  gpio.output(D5, 0)  
  gpio.output(D6, 0)  
  gpio.output(D7, 0)  
  if ch&0x01==0x01:  
    gpio.output(D4, 1)  
  if ch&0x02==0x02:  
    gpio.output(D5, 1)  
  if ch&0x04==0x04:  
    gpio.output(D6, 1)  
  if ch&0x08==0x08:  
    gpio.output(D7, 1)  
  gpio.output(EN, 1)  
  time.sleep(0.005)  
  gpio.output(EN, 0)  
    
def lcdwrite(ch):   
  gpio.output(RS, 1)  
  gpio.output(D4, 0)  
  gpio.output(D5, 0)  
  gpio.output(D6, 0)  
  gpio.output(D7, 0)  
  if ch&0x10==0x10:  
    gpio.output(D4, 1)  
  if ch&0x20==0x20:  
    gpio.output(D5, 1)  
  if ch&0x40==0x40:  
    gpio.output(D6, 1)  
  if ch&0x80==0x80:  
    gpio.output(D7, 1)  
  gpio.output(EN, 1)  
  time.sleep(0.005)  
  gpio.output(EN, 0)

  # Low bits  
  gpio.output(D4, 0)  
  gpio.output(D5, 0)  
  gpio.output(D6, 0)  
  gpio.output(D7, 0)  
  if ch&0x01==0x01:  
    gpio.output(D4, 1)  
  if ch&0x02==0x02:  
    gpio.output(D5, 1)  
  if ch&0x04==0x04:  
    gpio.output(D6, 1)  
  if ch&0x08==0x08:  
    gpio.output(D7, 1)  
  gpio.output(EN, 1)  
  time.sleep(0.005)  
  gpio.output(EN, 0)

def lcdclear():  
  lcdcmd(0x01)  
   
def lcdprint(Str):  
  l=0;  
  l=len(Str)  
  for i in range(l):  
    lcdwrite(ord(Str[i]))  
      
def setCursor(x,y):  
    if y == 0:  
        n=128+x  
    elif y == 1:  
        n=192+x  
    lcdcmd(n)

def readCount():  
  i=0  
  Count=0  
 # print Count  
 # time.sleep(0.001)  
  gpio.setup(DT, gpio.OUT)  
  gpio.output(DT,1)  
  gpio.output(SCK,0)  
  gpio.setup(DT, gpio.IN)

  while gpio.input(DT) == 1:  
      i=0  
  for i in range(24):  
        gpio.output(SCK,1)  
        Count=Count<<1

        gpio.output(SCK,0)  
        #time.sleep(0.001)  
        if gpio.input(DT) == 0:   
            Count=Count+1  
            #print Count  
          
  gpio.output(SCK,1)  
  Count=Count^0x800000  
  #time.sleep(0.001)  
  gpio.output(SCK,0)  
  return Count

print "Hello"  
begin()  
lcdcmd(0x01)  
lcdprint("Smart Container   ")  
lcdcmd(0xc0)  
lcdprint("    Using RPI     ")  
time.sleep(3)  
lcdcmd(0x01)  
lcdprint("Welcome")  
lcdcmd(0xc0)  
lcdprint("Smart Container using Raspberry Pi")  
time.sleep(3)  
sample= readCount()  
lcdclear()  
while 1:  
  print "Start"    
  if \_\_name\_\_ == "\_\_main\_\_":  
   app.run(host='0.0.0.0',port=5010)