Digital Smart Bus

import time

import serial

import string

import pynmea2

import RPi GPIO as gpio

import Adafruit\_CharLCD as LCD

gpio.setmode(gpio.BCM)

GPIO.setup(11, GPIO.IN)

GPIO.setup(3, GPIO.OUT)

ser = serial.Serial(port, baudrate = 9600, timeout = 0.5)

alertdriver():

while 1:

try:

data = ser.readline()

except:

print("loading")

if data[0:6] == '$GPGGA':

msg = pynmea2.parse(data)

latval = msg.lat

concatlat = "lat:" + str(latval)

print concatlat #printing the latitude

lcd.set\_cursor(0,0)

lcd.message(concatlat)

longval = msg.lon

concatlong = "long:"+ str(longval)

print concatlong // printing the longtitude

i=GPIO.input(11)

if i==1:

print "seat filled by the passenger",i //printing the seat occupaied or not

time.sleep(0.5)

def alertdriver():

TRIG =3

ECHO =5

While(1):

print "Distance measurement in progress“

GPIO.setmode(GPIO.BOARD)

GPIO.setup(TRIG, GPIO.OUT)

GPIO.setup(ECHO, GPIO.IN)

GPIO.output(TRIG,False)

print "Waiting for sensor to settle down"

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)

print "Distance : " ,distance ,"Cm“

if Distance<10

GPIO.output(7,True) //alert the driver

time.sleep(5)

GPIO.output(7,false) //reset the alert signal

GPIO.cleanup()