#include <SoftwareSerial.h> #include <ArduinoJson.h> #include

<LiquidCrystal\_I2C.h> #include <Wire.h>

LiquidCrystal\_I2C lcd(0x27, 16,

2);

SoftwareSerial nodemcu(6, 7);

const int trigPin= 2; const int echoPin= 3; int alert =

4;

int track1 = A0; int track2 = A1; int track3 = A2;

int track1val; int track2val; int

track3val;

float duration; float distance=200;

void buzz()

{

if(distance<20 ||

track1val==1 || track2val==1 || track3val==1)

{

digitalWrite(alert,HIGH);

}

else

{

digitalWrite(alert,LOW);

}

}

void setup() { lcd.init(); lcd.backlight();

Serial.begin(9600); nodemcu.begin(115200); pinMode(trigPin, OUTPUT); pinMode(echoPin,

INPUT);

pinMode(track1,INPUT); pinMode(track2,INPUT); pinMode(track3,INPUT);

pinMode(alert,OUTPUT);

}

void loop()

{

StaticJsonBuffer<500> jsonBuffer; JsonObject& root = jsonBuffer.createObject();

digitalWrite(trigPin, LOW);

delayMicroseconds(2); digitalWrite(trigPin, HIGH); delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH); distance=

(duration\*.0343)/2;

//Serial.print("Distance: ");

//Serial.println(distance);

delay(100);

track1val=digitalRead(track1); track2val=digitalRead(track2); track3val=digitalRea d(track3);

Serial.println("Track 1

:");

Serial.println(track1val); Serial.println("Track 2

:");

Serial.println(track2val); Serial.println("Track 3

:");

Serial.println(track3val);

if(distance<20)

{

lcd.print(" WARNING

!!!");

lcd.setCursor(0,1); lcd.print("Distance:"); lcd.print(distance);

lcd.print("cm");

}

else

{

lcd.print(" SAFE ZONE "); lcd.setCursor(0,1);

lcd.print(" MOVE FORWARD");

}

buzz(); delay(1000);

lcd.clear();

buzz(); lcd.print("TR:1 TR:2 TR:3");

lcd.setCursor(1,1); lcd.print(track1val); lcd.setCursor(6,1); lcd.print(track2val)

;

lcd.setCursor(11,1); lcd.print(track3val); delay(1000); lcd.clear();

root["a1"] = distance;

root["a2"] = track1val; root["a3"] = track2val;

root["a4"] = track3val; root.printTo(nodemcu); jsonBuffer.clear();

delay(100);

}