Sebuah gambar berisi teks, Rekayasa elektronik, elektronik, sirkuit

Deskripsi dibuat secara otomatis

ULTRA SONIC

#include <LiquidCrystal\_I2C.h>

LiquidCrystal\_I2C lcd(0x20, 16, 2);

LiquidCrystal\_I2C lcd2(0x25, 16, 2);

int PushButtonPin1 = 7;

int PushButtonPin2 = 6;

int BuzzerPin1 = 3;

int counterLife = 3;

char inChar;

int score = 4;

int trigPin = 9;

int echoPin = 10;

int cm = 0;

String State = "inisialisasi";

String isiBarisAtas = "O X O X X ";

String isiBarisBawah = " O O X O ";

int durasi;

int posisiAwalPlayerTerhadapIndexString = 15;

bool posisiPanahDiatas = true;

void setup()

{

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(PushButtonPin1, INPUT);

pinMode(PushButtonPin2, INPUT);

pinMode(BuzzerPin1, OUTPUT);

Serial.begin(9600);

//LCD KANAN

lcd.init();

lcd.backlight();

lcd.home();

lcd.setCursor(0, 0);

lcd.print("Ridho R Saputra");

lcd.setCursor(0, 1);

lcd.print("6702220073");

//LCD KIRI

lcd2.init();

lcd2.backlight();

lcd2.home();

lcd2.setCursor(0, 0);

lcd2.print("Nyawa");

lcd2.setCursor(0, 1);

lcd2.print(counterLife);

}

void loop()

{

bacaSerial();

if (inChar == 'y')

{

lcd.clear();

lcd2.clear();

counterLife--;

lcd2.setCursor(0, 0);

lcd2.print("Nyawa");

lcd2.setCursor(0, 1);

lcd2.print(counterLife);

lcd2.setCursor(6, 0);

lcd2.print("START");

lcd2.setCursor(6, 1);

lcd2.print("Score: ");

lcd2.setCursor(14, 1);

lcd2.print(score);

State = "MODE Permainan";

inChar = ' ';

}

if (State == "MODE Permainan")

{

for (int i = 0; i <= 15; i++)

{

durasi = bacaUltrasonik();

digitalWrite(BuzzerPin1, LOW);

char karakterDiAtas = isiBarisAtas[posisiAwalPlayerTerhadapIndexString];

char karakterDiBawah = isiBarisBawah[posisiAwalPlayerTerhadapIndexString];

lcd.clear();

lcd.setCursor(i, 0);

lcd.print(isiBarisAtas);

lcd.setCursor(i, 1);

lcd.print(isiBarisBawah);

Serial.print("Isi Baris Atas: ");

Serial.println(karakterDiAtas);

Serial.print("Isi Baris Bawah: ");

Serial.println(karakterDiBawah);

Serial.println(cm);

if (digitalRead(PushButtonPin1) == LOW)

{

posisiPanahDiatas = true;

}

if (digitalRead(PushButtonPin2) == LOW)

{

posisiPanahDiatas = false;

}

if (posisiPanahDiatas == true)

{

lcd.setCursor(15, 0);

lcd.print('<');

if (karakterDiAtas == 'O')

{

score++;

tone(BuzzerPin1, 220, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

}

else if (karakterDiAtas == 'X')

{

score--;

tone(BuzzerPin1, 400, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

}

}

if (posisiPanahDiatas == false)

{

lcd.setCursor(15, 1);

lcd.print('<');

if (karakterDiBawah == 'O')

{

score++;

tone(BuzzerPin1, 220, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

}

else if (karakterDiBawah == 'X')

{

score--;

tone(BuzzerPin1, 400, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

}

}

if (posisiAwalPlayerTerhadapIndexString == 0){

i = 15;

State = "SELESAI";

posisiAwalPlayerTerhadapIndexString = 15;

}

if (score <= 0)

{

i = 15;

State = "GAMEOVER";

posisiAwalPlayerTerhadapIndexString = 15;

}

posisiAwalPlayerTerhadapIndexString--;

delay(durasi);

}

}

if (State == "SELESAI")

{

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Score: ");

lcd.print(score);

lcd2.setCursor(6, 0);

lcd2.print("SELESAI");

}

if (State == "GAMEOVER")

{

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("GAME OVER!!!");

lcd.setCursor(0, 1);

lcd.print("Score: ");

lcd.print(score);

lcd2.setCursor(6, 0);

lcd2.print("GAMEOVER");

}

}

long bacaUltrasonik()

{

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

long duration = pulseIn(echoPin, HIGH);

cm = duration / 58;

// Mengatur kecepatan scroll berdasarkan nilai sensor

int speed = map(cm, 0, 200, 50, 200); // Nilai 0 hingga 200 cm akan di-mapped menjadi 50 hingga 200 delay

return speed;

}

void bacaSerial()

{

while (Serial.available() > 0)

{

inChar = (char)Serial.read();

Serial.print("Terima data: ");

Serial.println(inChar);

}

}

Sebuah gambar berisi teks, diagram, Rekayasa elektronik, garis

Deskripsi dibuat secara otomatis

PHOTODIODE

#include <LiquidCrystal\_I2C.h>

LiquidCrystal\_I2C lcd(0x20, 16, 2);

LiquidCrystal\_I2C lcd2(0x25, 16, 2);

int pushButtonPin1 = 2;

int pushButtonPin2 = 4;

int BuzzerPin = 9;

int photodiodaPin = A0;

int counterLife = 73;

char inChar;

String State = "Inisialisasi";

int durasi;

String isiBarisAtas = "X X O X O ";

String isiBarisBawah = " O X O X ";

int posisiAwalPlayerTerhadapIndexString = 15;

bool posisiPanahDiAtas = true;

int score = 3;

void setup() {

Serial.begin(9600);

pinMode(pushButtonPin1, INPUT);

pinMode(pushButtonPin2, INPUT);

pinMode(BuzzerPin, OUTPUT);

pinMode(photodiodaPin, INPUT);

lcd.init();

lcd.backlight();

lcd.home();

lcd.setCursor(0, 0);

lcd.print("Ridho R Saputra");

lcd.setCursor(0, 1);

lcd.print("6702220073");

lcd2.init();

lcd2.backlight();

lcd2.home();

lcd2.setCursor(0, 0);

lcd2.print("Life");

lcd2.setCursor(0, 1);

lcd2.print(counterLife);

delay(1000);

}

void loop() {

bacaSerial();

if (inChar == 'c') {

lcd.clear();

lcd2.setCursor(6, 0);

lcd2.print("START");

lcd2.setCursor(6, 1);

lcd2.print("Score:");

lcd2.setCursor(14, 1);

lcd2.print(score);

State = "MODE Permainan";

}

if (inChar == 'z') {

lcd.clear();

State = "GAMEOVER";

}

if (State == "MODE Permainan") {

int sensorValue = analogRead(photodiodaPin);

int stringValue = map(sensorValue, 0, 1023, 100, 500);

for (int i = 0; i <= 15; i++) {

digitalWrite(BuzzerPin, LOW);

char karakterDiAtas = isiBarisAtas[posisiAwalPlayerTerhadapIndexString];

char karakterDiBawah = isiBarisBawah[posisiAwalPlayerTerhadapIndexString];

lcd.clear();

lcd.setCursor(i, 0);

lcd.print(isiBarisAtas);

lcd.setCursor(i, 1);

lcd.print(isiBarisBawah);

Serial.print("Isi Baris Atas: ");

Serial.println(karakterDiAtas);

Serial.print("Isi Baris Bawah: ");

Serial.println(karakterDiBawah);

Serial.println(durasi);

if (digitalRead(pushButtonPin1) == LOW) {

posisiPanahDiAtas = true;

}

if (digitalRead(pushButtonPin2) == LOW) {

posisiPanahDiAtas = false;

}

if (posisiPanahDiAtas) {

lcd.setCursor(15, 0);

lcd.print("<");

if (karakterDiAtas == 'O') {

score++;

tone(BuzzerPin, 220, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

} else if (karakterDiAtas == 'X') {

score--;

tone(BuzzerPin, 400, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

}

}

if (!posisiPanahDiAtas) {

lcd.setCursor(15, 1);

lcd.print("<");

Serial.println(karakterDiBawah);

Serial.println(posisiAwalPlayerTerhadapIndexString);

if (karakterDiBawah == 'O') {

score++;

tone(BuzzerPin, 220, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

} else if (karakterDiBawah == 'X') {

score--;

tone(BuzzerPin, 400, 100);

lcd2.setCursor(14, 1);

lcd2.print(score);

}

}

if (i == 15 || score == 0) {

lcd.clear();

lcd.print("GAME OVER!!!");

i = 15;

State = "GAMEOVER";

inChar = ' ';

}

posisiAwalPlayerTerhadapIndexString--;

delay(stringValue);

}

}

if (State == "GAMEOVER") {

lcd2.setCursor(6, 0);

lcd2.print("GAMEOVER");

}

}

void bacaSerial() {

while (Serial.available() > 0) {

inChar = (char)Serial.read();

Serial.print("Terima data: ");

Serial.println(inChar);

}

}