// PROGRAM LINE FOLLOWER

// OLEH : FAHMIZAL

// DIPLOMA TEKNIK ELEKTRO UGM 2007

#include<mega8535.h>

#include<delay.h>

unsigned char sensor;

void maju ();

void kanan\_dikit ();

void kanan\_banyak ();

void kiri\_dikit ();

void kiri\_banyak ();

void kanan\_banyaki ();

void kanan\_banyak2 ();

void kanan\_banting ();

void kiri\_banyak2 ();

void kiri\_banting ();

void ada\_garis ();

void cabang ();

void henti ();

void main(void)

{

DDRD=DDRB=0xFF;

DDRA=0x00;

//----inisialisasi pwm----//

TCCR1A=0xa3;

TCCR1B=0x0b;

TCNT1=0x0000;//000016 bit

OCR1A=0x03ff;

OCR1B=0x03FF;

TIFR=0;

//------------------------//

while (1)

{

// PORTA=0xff;// tambahan, jangan dipakai dlam sebenarnya

sensor=PINA;

sensor&=0b11111111;

switch(sensor)

{

case 0b11100111: maju (); // maju lurus

break;

case 0b11100011: kanan\_dikit (); // nyalakan kanan (dikit)

break;

case 0b11110001: kanan\_banyak (); // nyalakan kanan (banyak)

break;

case 0b11100001: kanan\_banyaki (); // nyalakan kanan (banyak)

break;

case 0b11111000: kanan\_banyak2 (); // nyalakan kanan (banyak)

break;

case 0b11110000: kanan\_banting (); // nyalakan kiri (banyak)

break;

case 0b11000111: kiri\_dikit (); // nyalakan kiri (dikit)

break;

case 0b10001111: kiri\_banyak (); // nyalakan kiri (banyak)

break;

case 0b00011111: kiri\_banyak2 (); // nyalakan kiri (banyak)

break;

case 0b00001111: kiri\_banting (); // nyalakan kiri (banyak)

break;

case 0b00000000: ada\_garis (); // nyalakan kiri (banyak)

break;

case 0b11000011: cabang (); // nyalakan kiri (banyak)

break;

case 0b11111111: henti();

break;// pilih orientasi kanan

}

};

}

//---maju---//

void maju ()

{

PORTB=0b00001010;

OCR1A=0x3ff; //KANAN OCR1A

OCR1B=0x3ff;

}

//---kanan dikit---//

void kanan\_dikit ()

{

PORTB=0b00001010;

OCR1A=0x200;

OCR1B=0x2ee;

}

//---kanan banyak---//

void kanan\_banyak ()

{

PORTB=0b00001010;

OCR1A=0x100;

OCR1B=0x3ff;

}

void kanan\_banyaki ()

{

PORTB=0b00001010;

OCR1A=0x100;

OCR1B=0x3ff;

}

//---kanan banyak2---//

void kanan\_banyak2 ()

{

PORTB=0b00001001;

OCR1A=0x3ff;

OCR1B=0x3ff;

}

//---kanan banyak2---//

void kanan\_banting ()

{

PORTB=0b00001001;

OCR1A=0x3ff;

OCR1B=0x3ff;

}

//---kiri dikit---//

void kiri\_dikit ()

{

PORTB=0b00001010;

OCR1A=0x2ee;

OCR1B=0x200;

}

//---kiri banyak---//

void kiri\_banyak ()

{

PORTB=0b00001010;

OCR1A=0x2ee;

OCR1B=0x100;

}

void kiri\_banyak2 ()

{

PORTB=0b00000110;

OCR1A=0x3ff;

OCR1B=0x3ff;

}

//---kanan banyak2---//

void kiri\_banting ()

{

PORTB=0b00000110;

OCR1A=0x3ff;

OCR1B=0x3ff;

}

//---ada garis---

void ada\_garis ()

{

PORTB=0b00001010;

OCR1A=0x03ff;

OCR1B=0x03ff;

}

//---cabang---//

void cabang ()

{

PORTB=0b00001010;

OCR1A=0x03ff;

OCR1B=0x0020;

}

//---henti

void henti ()

{

PORTB=0b00000101;

OCR1A=0x03ff; //KANAN OCR1A

OCR1B=0x03ff;

}