#define DELAY 0

#define SWEEP\_DELAY 20

#define CALIB\_IR 100

#define RIGHT\_IR A2

#define LEFT\_IR A0

int counter=0;

void LeftRotate(){

digitalWrite(5,LOW);

digitalWrite(6,HIGH);

digitalWrite(8,HIGH);

digitalWrite(7,LOW);

}

void RightRotate(){

digitalWrite(5,HIGH);

digitalWrite(6,LOW);

digitalWrite(8,LOW);

digitalWrite(7,HIGH);

}

void Forward(){

digitalWrite(5,HIGH);

digitalWrite(6,LOW);

digitalWrite(8,HIGH);

digitalWrite(7,LOW);

}

void Backward(){

digitalWrite(5,LOW);

digitalWrite(6, HIGH);

digitalWrite(8,LOW);

digitalWrite(7, HIGH);

}

void StandStill(){

digitalWrite(5,LOW);

digitalWrite(6, LOW);

digitalWrite(8, LOW);

digitalWrite(7,LOW);

}

void Sweep()

{

Forward();

delay(SWEEP\_DELAY);

}

void setup() {

pinMode(RIGHT\_IR,INPUT); //right ir sensor

pinMode( LEFT\_IR,INPUT); //left ir sensor

pinMode(5,OUTPUT);

pinMode(6,OUTPUT);

pinMode(7,OUTPUT);

pinMode(8,OUTPUT);

Serial.begin(9600);

}

void loop() {

int ir1,ir2;

ir1 =analogRead(RIGHT\_IR); // right ir sensor

ir2=analogRead( LEFT\_IR); // left ir sensor

Serial.println(ir2);

if(ir1>CALIB\_IR&&ir2>CALIB\_IR)

{

Forward();

delay(DELAY);

Sweep();

}

else if(ir1<CALIB\_IR&&ir2>CALIB\_IR)

{

while(ir1<CALIB\_IR)

{

ir1 =analogRead(RIGHT\_IR); //left Turn

LeftRotate();

delay(DELAY);

Sweep();

}

}

else if(ir1>CALIB\_IR&&ir2<CALIB\_IR)

{

while(ir2<CALIB\_IR)

{

ir2=analogRead( LEFT\_IR); //right Turn

RightRotate();

delay(DELAY);

Sweep();

}

}

else if(ir1<CALIB\_IR&&ir2<CALIB\_IR)

{

counter++;

if(counter==6){

while(analogRead( LEFT\_IR)<CALIB\_IR&&analogRead(RIGHT\_IR)>CALIB\_IR)

{

LeftRotate();

}

}

else if (counter==7){

StandStill();

}

else{

while(analogRead(LEFT\_IR)>CALIB\_IR&&analogRead(RIGHT\_IR)<CALIB\_IR)

{

RightRotate();

delay(DELAY);

Sweep();

}

}

}

} //End LOOP