**LINE FOLLOWER CODE:-**

int motor11=11;

int motor12=10;

int motor21=6;

int motor22=5;

int IR1=8;

int IR2=13;

int IR3=12;

int IR4=7;

int IR5=4;

void setup() {

Serial.begin(9600);

pinMode(IR1,INPUT);

pinMode(IR2,INPUT);

pinMode(IR3,INPUT);

pinMode(IR4,INPUT);

pinMode(IR5,INPUT);

pinMode(motor11,OUTPUT);

pinMode(motor12,OUTPUT);

pinMode(motor21,OUTPUT);

pinMode(motor22,OUTPUT);

}

void loop() {

int f1=digitalRead(IR1);

int f2=digitalRead(IR2);

int f3=digitalRead(IR3);

int f4=digitalRead(IR4);

int f5=digitalRead(IR5);

if(f1==0 && f2==0 && f3==0 && f4==1 && f5==1){

turnLeft();

}

else if(f1==1 && f2==0 && f3==0 && f4==1 && f5==1){

turnLeft\_smooth();

}

else if(f1==1 && f2==1 && f3==0 && f4==0 && f5==0){

turnRight();

}

else if(f1==1 && f2==1 && f3==0 && f4==0 && f5==1){

turnRight\_smooth();

}

else if(f1==1 && f2==1 && f3==0 && f4==1 && f5==1){

forward();

}

// else if(f1==0 && f2==0 && f3==0 && f4==0 && f5==0){ // Depends on the path ahead

// turnLeft();

// }

// else if(f1==0 && f2==0 && f3==1 && f4==0 && f5==0){ // Depends on the path ahead

// turnLeft();

// }

else if(f1==0 && f2==1 && f3==0 && f4==1 && f5==1){

turnLeft();

}

else if(f1==1 && f2==1 && f3==0 && f4==1 && f5==0){

turnRight();

}

// else if(f1==0 && f2==0 && f3==0 && f4==0 && f5==0){

// stop\_bot();

// delay(10000);

// }

// else if((f1==1 && f2==0 && f3==0 && f4==0 && f5==1) ||(f1==0 && f2==1 && f3==0 && f4==1 && f5==0)){

// turnLeft\_smooth();

// }

// else if(f1==0 && f2==1 && f3==0 && f4==1 && f5==1){

// turnLeft();

//

// }

// else if(f1==1 && f2==1 && f3==0 && f4==1 && f5==0){

// turnRight();

//

// }

// else if(f1==0 && f2==1 && f3==0 && f4==1 && f5==0){

// forward();

// }

// else if(f1==1 && f2==1 && f3==1 && f4==1 && f5==1){

// stop\_bot();

//// delay(10000);

// }

}

// left motor=1 right motor=2

void forward(){

analogWrite(motor11,0);

analogWrite(motor12,205);

analogWrite(motor21,205);

analogWrite(motor22,0);

}

void backward(){

analogWrite(motor11,205);

analogWrite(motor12,0);

analogWrite(motor21,0);

analogWrite(motor22,205);

}

void turnLeft(){

analogWrite(motor11,205);

analogWrite(motor12,0);

analogWrite(motor21,205);

analogWrite(motor22,0);

}

void turnLeft\_smooth(){

analogWrite(motor11,0);

analogWrite(motor12,0);

analogWrite(motor21,205);

analogWrite(motor22,0);

}

void turnRight(){

analogWrite(motor11,0);

analogWrite(motor12,205);

analogWrite(motor21,0);

analogWrite(motor22,205);

}

void turnRight\_smooth(){

analogWrite(motor11,0);

analogWrite(motor12,205);

analogWrite(motor21,0);

analogWrite(motor22,0);

}

void stop\_bot(){

analogWrite(motor11,0);

analogWrite(motor12,0);

analogWrite(motor21,0);

analogWrite(motor22,0);

}