int IR1=8;

int IR2=9;

int enA = 5;

int MotorAip1=2;

int MotorAip2=3;

int enB = 6;

int MotorBip1=4;

int MotorBip2=7;

void setup()

{

pinMode(enA, OUTPUT);

pinMode(enB, OUTPUT);

pinMode(IR1,INPUT);

pinMode(IR2,INPUT);

pinMode(MotorAip1,OUTPUT);

pinMode(MotorAip2,OUTPUT);

pinMode(MotorBip1,OUTPUT);

pinMode(MotorBip2,OUTPUT);

}

void loop()

{

if(digitalRead(IR1)==HIGH && digitalRead(IR2)==HIGH) //IR will not glow on black line

{

//Stop both Motors

digitalWrite(MotorAip1,LOW);

digitalWrite(MotorAip2,LOW);

digitalWrite(MotorBip1,LOW);

digitalWrite(MotorBip2,LOW);

analogWrite (enA, 0);

analogWrite (enB, 0);

}

else if(digitalRead(IR1)==LOW && digitalRead(IR2)==LOW) //IR not on black line

{

//Move both the Motors

digitalWrite(MotorAip1,HIGH);

digitalWrite(MotorAip2,LOW);

digitalWrite(MotorBip1,HIGH);

digitalWrite(MotorBip2,LOW);

analogWrite (enA, 200);

analogWrite (enB, 200);

}

else if(digitalRead(IR1)==LOW && digitalRead(IR2)==HIGH)

{

//Tilt robot towards left by stopping the left wheel and moving the right one

digitalWrite(MotorAip1,HIGH);

digitalWrite(MotorAip2,LOW);

digitalWrite(MotorBip1,LOW);

digitalWrite(MotorBip2,HIGH);

analogWrite (enA, 200);

analogWrite (enB, 150);

delay(100);

}

else if(digitalRead(IR1)==HIGH && digitalRead(IR2)==LOW)

{

//Tilt robot towards right by stopping the right wheel and moving the left one

digitalWrite(MotorAip1,LOW);

// If I want to turn right then the speed of the right wheel should be less than that of the left wheel, here, let a be the right wheel

digitalWrite(MotorAip2,HIGH);

digitalWrite(MotorBip1,HIGH);

digitalWrite(MotorBip2,LOW);

analogWrite (enA, 150);

analogWrite (enB, 200);

delay(100);

}

else

{

//Stop both the motors

digitalWrite(MotorAip1,LOW);

digitalWrite(MotorAip2,LOW);

digitalWrite(MotorBip1,LOW);

digitalWrite(MotorBip2,LOW);

analogWrite (enA, 0);

analogWrite (enB, 0);

}

}