-------------------------- CODE --------------------------------

/\*------ Arduino Line Follower Code----- \*/

/\*-------defining Inputs------\*/

#define LS 2 // left sensor

#define RS 3 // right sensor

/\*-------defining Outputs------\*/

#define LM1 4 // left motor

#define LM2 5 // left motor

#define RM1 6 // right motor

#define RM2 7 // right motor

void setup()

{

pinMode(LS, INPUT);

pinMode(RS, INPUT);

pinMode(LM1, OUTPUT);

pinMode(LM2, OUTPUT);

pinMode(RM1, OUTPUT);

pinMode(RM2, OUTPUT);

}

void loop()

{

if(digitalRead(LS) && digitalRead(RS)) // Move Forward

{

digitalWrite(LM1, HIGH);

digitalWrite(LM2, LOW);

digitalWrite(RM1, HIGH);

digitalWrite(RM2, LOW);

}

if(!(digitalRead(LS)) && digitalRead(RS)) // Turn right

{

digitalWrite(LM1, LOW);

digitalWrite(LM2, LOW);

digitalWrite(RM1, HIGH);

digitalWrite(RM2, LOW);

}

if(digitalRead(LS) && !(digitalRead(RS))) // turn left

{

digitalWrite(LM1, HIGH);

digitalWrite(LM2, LOW);

digitalWrite(RM1, LOW);

digitalWrite(RM2, LOW);

}

if(!(digitalRead(LS)) && !(digitalRead(RS))) // stop

{

digitalWrite(LM1, LOW);

digitalWrite(LM2, LOW);

digitalWrite(RM1, LOW);

digitalWrite(RM2, LOW);

}

}

int vSpeed = 110; // MAX 255

int turn\_speed = 230; // MAX 255

int turn\_delay = 10;

//L293 Connection

const int motorA1 = 8;

const int motorA2 = 10;

const int motorAspeed = 9;

const int motorB1 = 12;

const int motorB2 = 13;

const int motorBspeed = 11;

//Sensor Connection

const int left\_sensor\_pin =A0;

const int right\_sensor\_pin =A1;

int left\_sensor\_state;

int right\_sensor\_state;

void setup() {

pinMode(motorA1, OUTPUT);

pinMode(motorA2, OUTPUT);

pinMode(motorB1, OUTPUT);

pinMode(motorB2, OUTPUT);

Serial.begin(9600);

delay(3000);

}

void loop() {

left\_sensor\_state = analogRead(left\_sensor\_pin);

right\_sensor\_state = analogRead(right\_sensor\_pin);

if(right\_sensor\_state > 500 && left\_sensor\_state < 500)

{

Serial.println("turning right");

digitalWrite (motorA1,LOW);

digitalWrite(motorA2,HIGH);

digitalWrite (motorB1,LOW);

digitalWrite(motorB2,HIGH);

analogWrite (motorAspeed, vSpeed);

analogWrite (motorBspeed, turn\_speed);

}

if(right\_sensor\_state < 500 && left\_sensor\_state > 500)

{

Serial.println("turning left");

digitalWrite (motorA1,HIGH);

digitalWrite(motorA2,LOW);

digitalWrite (motorB1,HIGH);

digitalWrite(motorB2,LOW);

analogWrite (motorAspeed, turn\_speed);

analogWrite (motorBspeed, vSpeed);

delay(turn\_delay);

}

if(right\_sensor\_state > 500 && left\_sensor\_state > 500)

{

Serial.println("going forward");

digitalWrite (motorA2,LOW);

digitalWrite(motorA1,HIGH);

digitalWrite (motorB2,HIGH);

digitalWrite(motorB1,LOW);

analogWrite (motorAspeed, vSpeed);

analogWrite (motorBspeed, vSpeed);

delay(turn\_delay);

}

if(right\_sensor\_state < 500 && left\_sensor\_state < 500)

{

Serial.println("stop");

analogWrite (motorAspeed, 0);

analogWrite (motorBspeed, 0);

}

}