**LINE FALLOWING:**

#include <Arduino.h>

#include<AFMotor.h>

AF\_DCMotor motor1(1, MOTOR12\_64KHZ); // create motor #1, 64KHz pwm

AF\_DCMotor motor2(2, MOTOR12\_64KHZ); // create motor #2, 64KHz pwm

AF\_DCMotor motor3(3, MOTOR34\_64KHZ); // create motor #3, 64KHz pwm

AF\_DCMotor motor4(4, MOTOR34\_64KHZ); // create motor #4, 64KHz pwm

#define left\_IRSERSOR A0

#define right\_IRSERSOR A1

int i=0;

void setup() {

Serial.begin(9600);

pinMode(left\_IRSERSOR,INPUT);

pinMode(right\_IRSERSOR,INPUT);

}

void slow\_speed(){

    motor1.setSpeed(70);     // set the speed to 200/255

    motor2.setSpeed(70);     // set the speed to 200/255

    motor3.setSpeed(70);     // set the speed to 200/255

    motor4.setSpeed(70);     // set the speed to 200/255

}

void fast\_speed\_l(){

    motor1.setSpeed(100);     // set the speed to 200/255

    motor2.setSpeed(100);     // set the speed to 200/255

    motor3.setSpeed(40);     // set the speed to 200/255

    motor4.setSpeed(40);     // set the speed to 200/255

}

void fast\_speed\_r()

{

    motor1.setSpeed(40);     // set the speed to 200/255

    motor2.setSpeed(40);     // set the speed to 200/255

    motor3.setSpeed(100);     // set the speed to 200/255

    motor4.setSpeed(100);     // set the speed to 200/255

}

void turn\_left()

{

    fast\_speed\_l();

   motor1.run(FORWARD);

    motor2.run(FORWARD);

    motor3.run(BACKWARD);

    motor4.run(BACKWARD);

}

void turn\_right()

{

    fast\_speed\_r();

    motor1.run(BACKWARD);

    motor2.run(BACKWARD);

    motor3.run(FORWARD);

    motor4.run(FORWARD);

}

void loop()

{

if(digitalRead(left\_IRSERSOR)==0 && digitalRead(right\_IRSERSOR)==0)

{

     slow\_speed();

      motor1.run(FORWARD);

        motor2.run(FORWARD);

        motor3.run(FORWARD);

        motor4.run(FORWARD);

}

else if(digitalRead(left\_IRSERSOR)==0 && digitalRead(right\_IRSERSOR)==1)

{

      while (true)

        {

            turn\_right();

                delay(100);

        if (digitalRead(left\_IRSERSOR)==0 && digitalRead(right\_IRSERSOR)==0)

        {

            break;

        }

        else

        {

                delay(1000);

        }

        }

}

    else if(digitalRead(left\_IRSERSOR)==1 && digitalRead(right\_IRSERSOR)==0)

    {

        while (true)

        {

            turn\_left();

                delay(100);

        if (digitalRead(left\_IRSERSOR)==0 && digitalRead(right\_IRSERSOR)==0)

        {

            break;

        }

        else

        {

                delay(1000);

        }

        }

    }

    else if(digitalRead(left\_IRSERSOR)==1 && digitalRead(right\_IRSERSOR)==1)

    {

      motor1.run(RELEASE);

    motor2.run(RELEASE);

    motor3.run(RELEASE);

    motor4.run(RELEASE);

    }

else

{

    Serial.println("error");

}

    }

    // void setup() {

    // }

    // void loop() {

    // }

**---PING LIBRARY---**

**#include <Arduino.h>**

**#include <NewPing.h>**

**#include <Servo.h>**

**#include <AFMotor.h>**

**//hc-sr04 sensor**

**#define TRIGGER\_PIN A2**

**#define ECHO\_PIN A3**

**#define max\_distance 50**

**//ir sensor**

**#define irLeft A0**

**#define irRight A1**

**//motor**

**#define MAX\_SPEED 200**

**#define MAX\_SPEED\_OFFSET 20**

**Servo servo;**

**NewPing sonar(TRIGGER\_PIN, ECHO\_PIN, max\_distance);**

**AF\_DCMotor motor1(1, MOTOR12\_1KHZ);**

**AF\_DCMotor motor2(2, MOTOR12\_1KHZ);**

**AF\_DCMotor motor3(3, MOTOR34\_1KHZ);**

**AF\_DCMotor motor4(4, MOTOR34\_1KHZ);**

**int distance = 0;**

**int leftDistance;**

**int rightDistance;**

**boolean object;**

**void setup() {**

**Serial.begin(9600);**

**servo.attach(10);**

**servo.write(90);**

**}**

**void loop() {**

**servo.write(180);**

**Serial.print(sonar.ping\_cm());**

**Serial.println("cm");**

**delay(1000);**

**servo.write(90);**

**Serial.print(sonar.ping\_cm());**

**Serial.println("cm");**

**delay(1000);**

**servo.write(0);**

**Serial.print(sonar.ping\_cm());**

**Serial.println("cm");**

**delay(1000);**

**servo.write(90);**

**Serial.print(sonar.ping\_cm());**

**Serial.println("cm");**

**delay(1000);**

**servo.write(180);**

**Serial.print(sonar.ping\_cm());**

**Serial.println("cm");**

**delay(1000);**

**}**