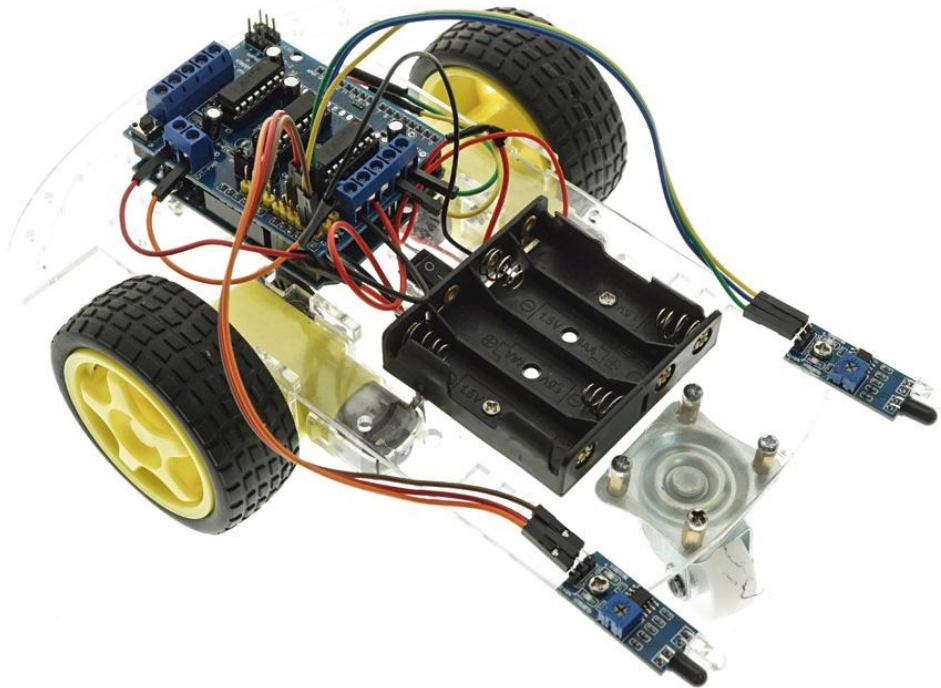


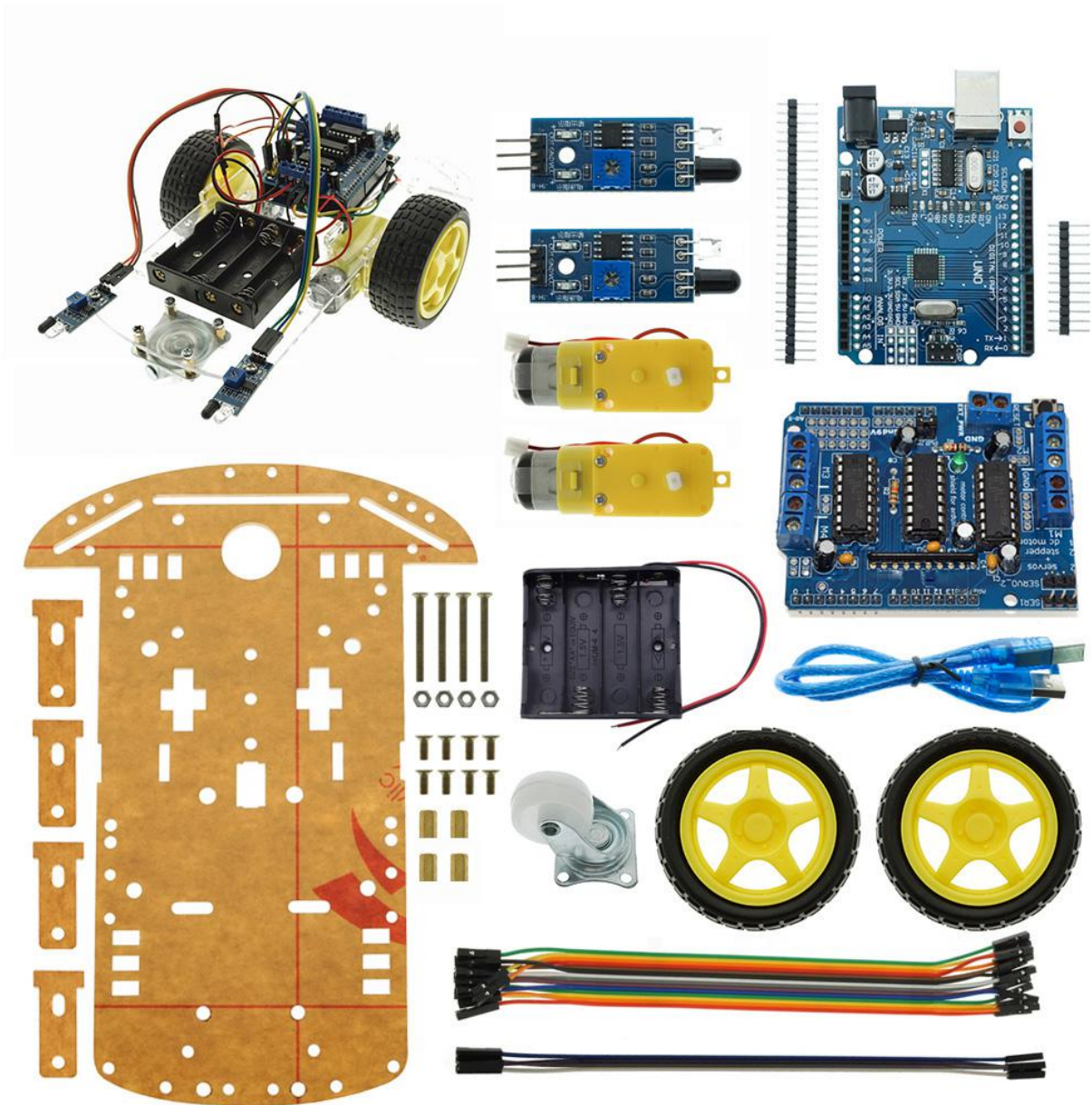
CCROBO⁴

Infrared obstacle avoidance follower



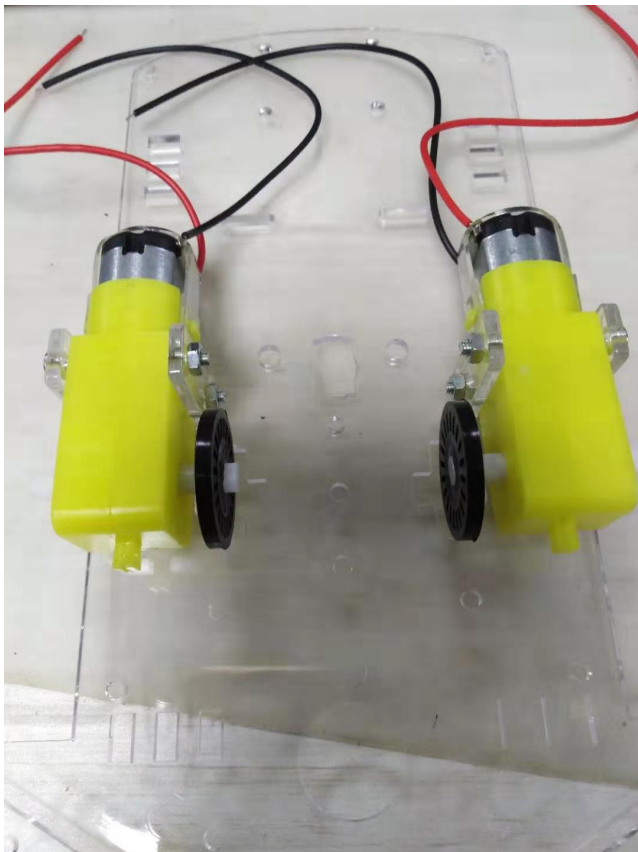
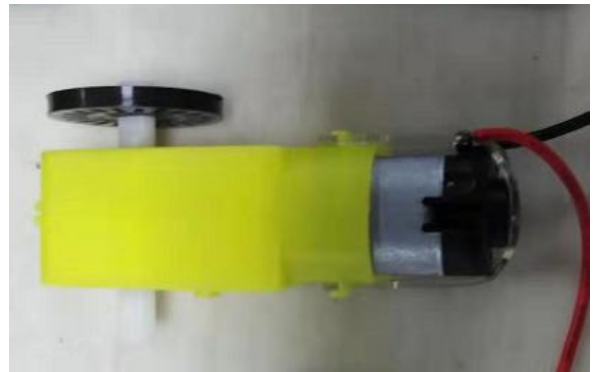
V1.0.19.10.24

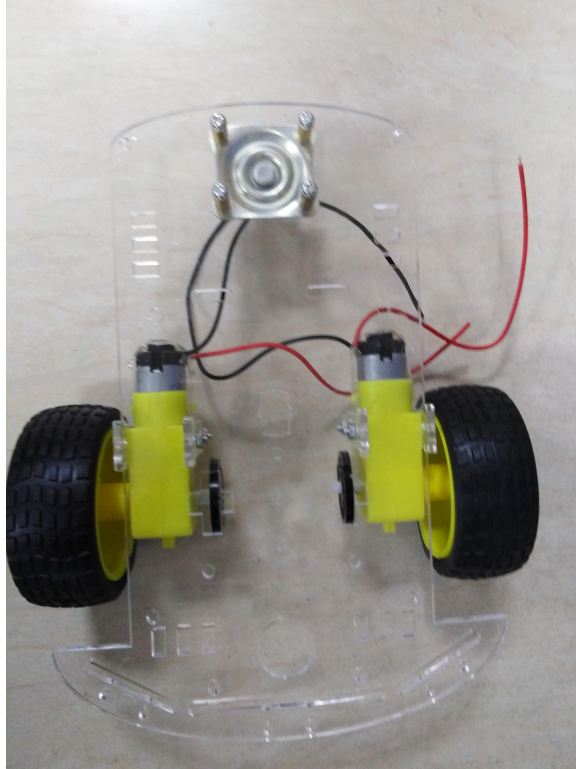
Kit list



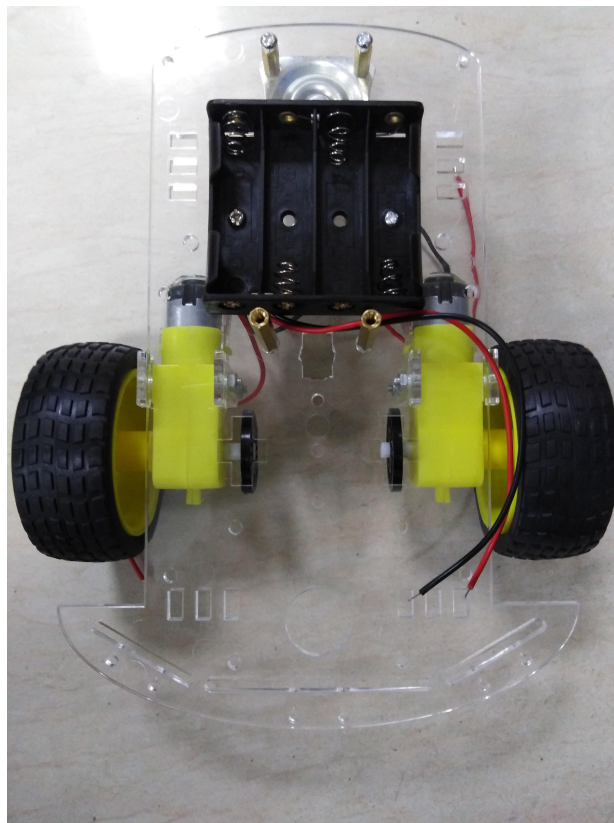
Assembly

The first step to install the trolley motor and wheels is as shown:

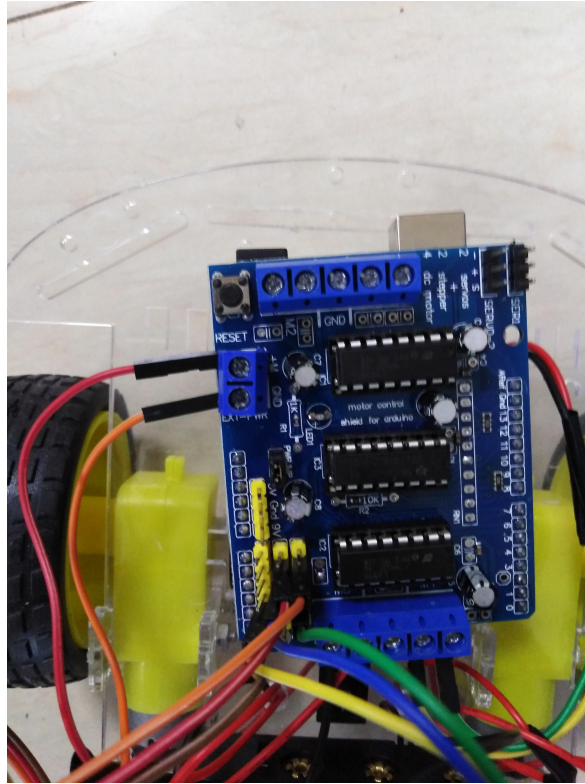




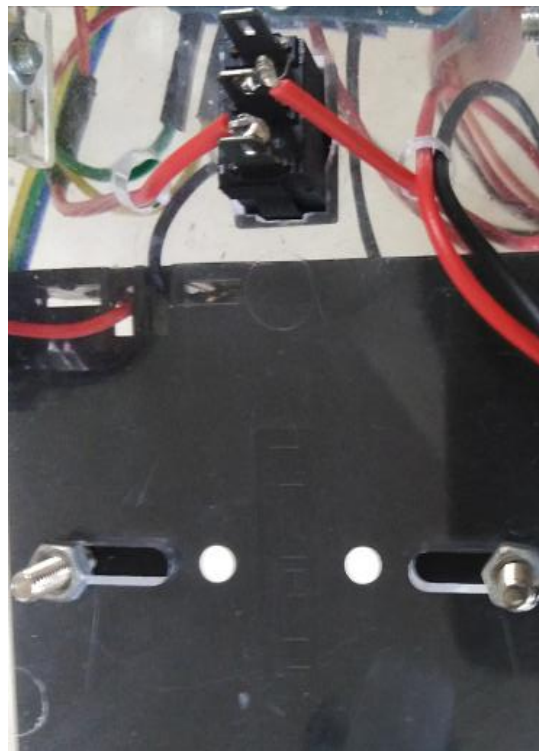
The 2 step is to install the battery box as shown:



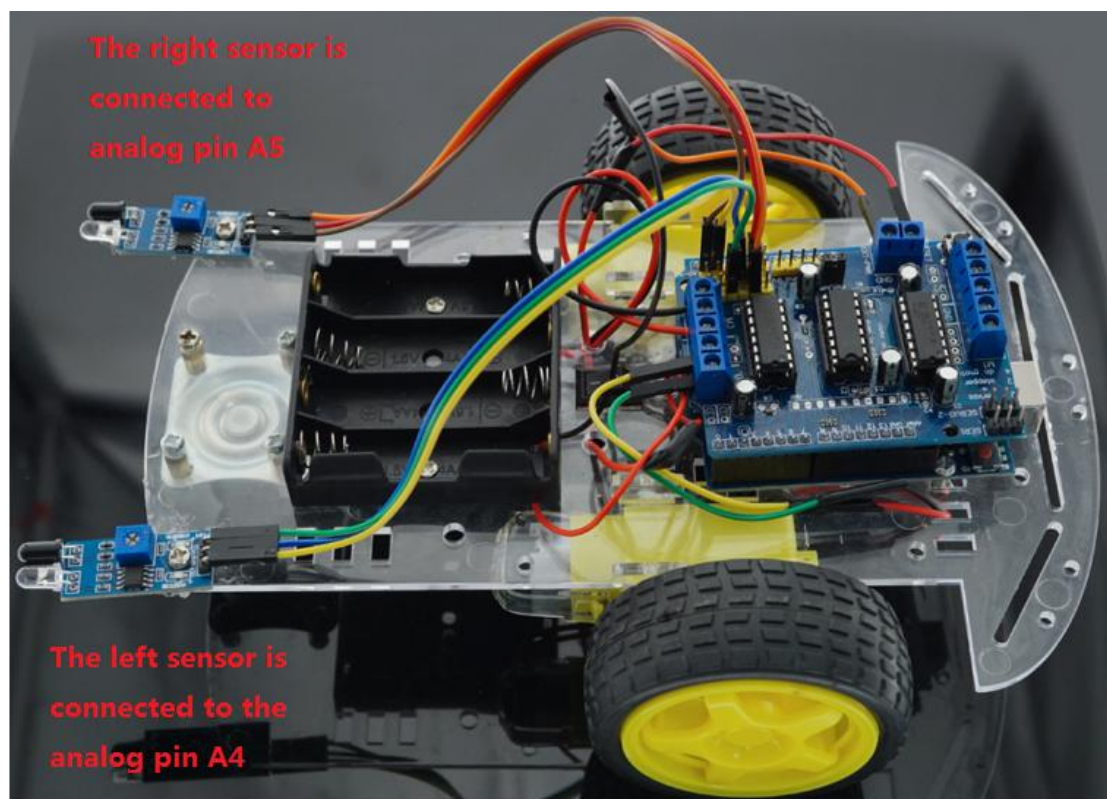
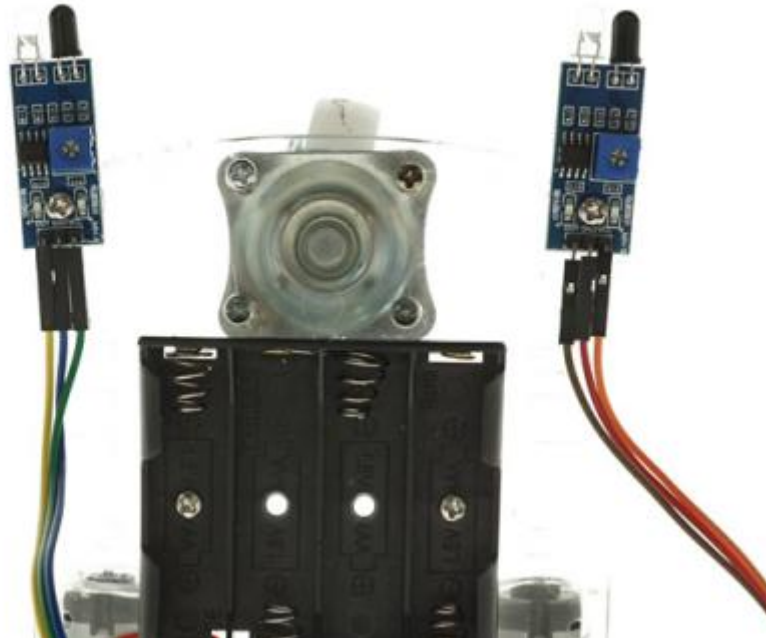
The third step is to install the main control board and the L293D motor expansion board as follows:

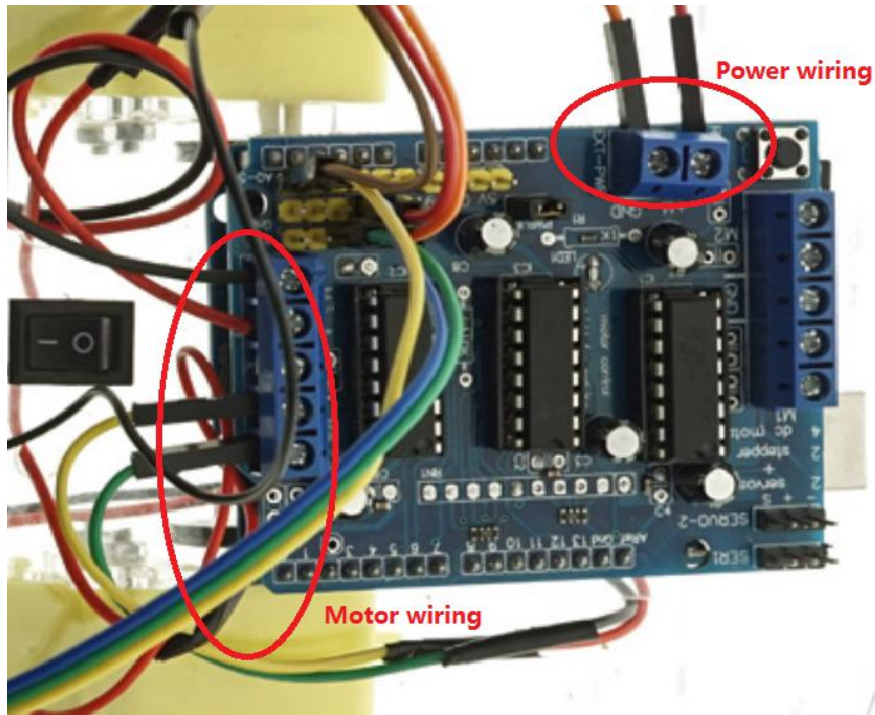


The fourth step is to solder the switch to fix the switch in the chassis of a car as follows:

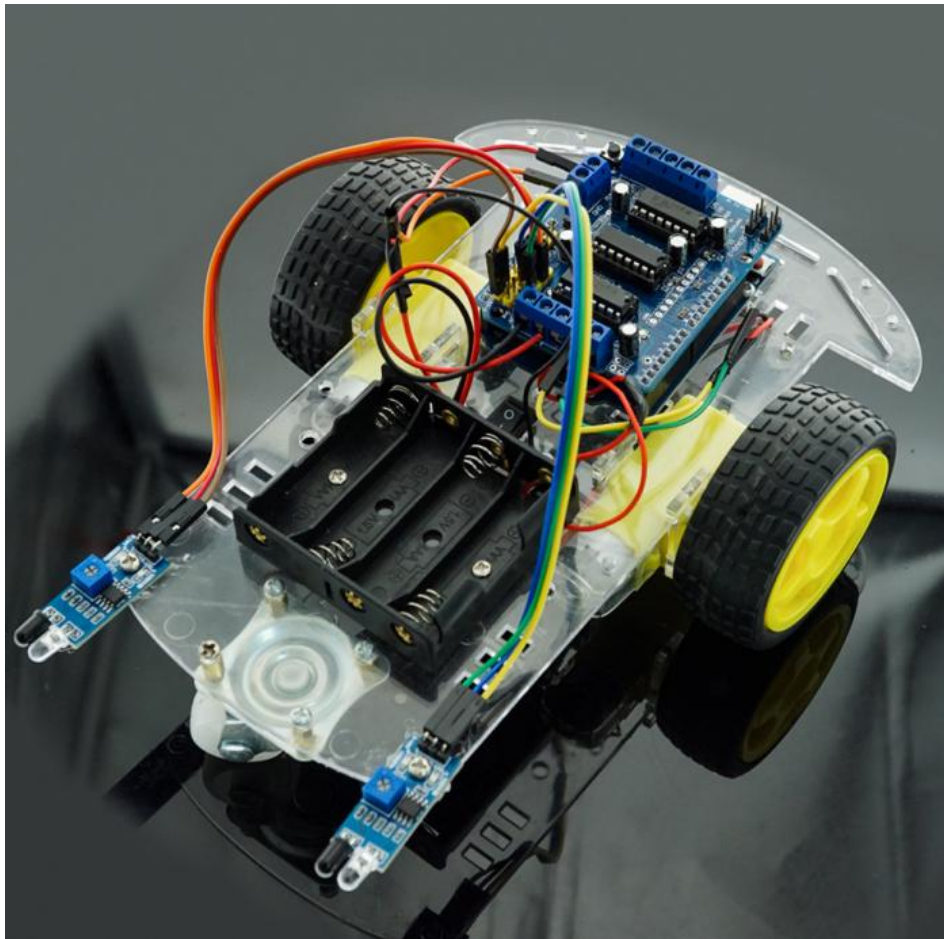


Step 5: Install the infrared obstacle avoidance module as shown:





Car assembly completed:



Car following code

```
//The values of analogRead could be changed for trouble shooting

//including the libraries
#include <AFMotor.h>

//defining pins and variables
#define lefts A4
#define rights A5

//defining motors
AF_DCMotor motor1(3, MOTOR12_8KHZ);
AF_DCMotor motor2(4, MOTOR12_8KHZ);
/*
AF_DCMotor motor1(3, MOTOR12_8KHZ);
AF_DCMotor motor2(4, MOTOR12_8KHZ);
*/

void setup() {
  //setting the speed of motors 设定电机速度
  motor1.setSpeed(100);
  motor2.setSpeed(100);
  //declaring pin types
  pinMode(lefts,INPUT);
  pinMode(rights,INPUT);
  //begin serial communication
  Serial.begin(9600);
}

void loop(){
  //printing values of the sensors to the serial monitor
  Serial.println(analogRead(lefts));
  Serial.println(analogRead(rights));
  //line detected by both
  if(analogRead(lefts)<=300 && analogRead(rights)<=300){
    //stop
    motor1.run(FORWARD);
    motor2.run(FORWARD);
  }
  //line detected by left sensor
```



```
else if(analogRead(lefts)<=300 && !analogRead(rights)<=300){
  //turn left
  motor1.run(FORWARD);
  motor2.run(BACKWARD);
  /*
  motor1.run(RELEASE);
  motor2.run(FORWARD);
  */
}
//line detected by right sensor
else if(!analogRead(lefts)<=300 && analogRead(rights)<=300){
  //turn right
  motor1.run(BACKWARD);
  motor2.run(FORWARD);
  /*
  motor1.run(FORWARD);
  motor2.run(RELEASE);
  */
}
//line detected by none
else if(!analogRead(lefts)<=300 && !analogRead(rights)<=300){
  //stop
  motor1.run(RELEASE);
  motor2.run(RELEASE);
  /*
  motor1.run(BACKWARD);
  motor2.run(BACKWARD);
  */
}
}
```

Car obstacle avoidance code

```
//I have added the possibilities of testing
//The values of analogRead could be changed for trouble shooting

//including the libraries
#include <AFMotor.h>

//defining pins and variables
#define lefts A4
#define rights A5

//defining motors 定义电机
AF_DCMotor motor1(3, MOTOR12_8KHZ);
AF_DCMotor motor2(4, MOTOR12_8KHZ);
/*
AF_DCMotor motor1(3, MOTOR12_8KHZ);
AF_DCMotor motor2(4, MOTOR12_8KHZ);
*/

void setup() {
  //setting the speed of motors 设定电机速度
  motor1.setSpeed(100);
  motor2.setSpeed(100);
  //declaring pin types
  pinMode(lefts,INPUT);
  pinMode(rights,INPUT);
  //begin serial communication
  Serial.begin(9600);
}

void loop(){
  //printing values of the sensors to the serial monitor
  Serial.println(analogRead(lefts));
  Serial.println(analogRead(rights));
  //line detected by both
  if(analogRead(lefts)<=300 && analogRead(rights)<=300){
    //stop
    motor1.run(BACKWARD);
    motor2.run(BACKWARD);
  }
  //line detected by left sensor
  else if(analogRead(lefts)<=300 && !analogRead(rights)<=300){
```

```
//turn left
motor1.run(BACKWARD);
motor2.run(FORWARD);
/*
motor1.run(RELEASE);
motor2.run(FORWARD);
*/
}
//line detected by right sensor
else if(!analogRead(lefts)<=300 && analogRead(rights)<=300){
//turn right
motor1.run(FORWARD);
motor2.run(BACKWARD);
/*
motor1.run(FORWARD);
motor2.run(RELEASE);
*/
}
//line detected by none
else if(!analogRead(lefts)<=300 && !analogRead(rights)<=300){
//stop
motor1.run(FORWARD);
motor2.run(FORWARD);
/*
motor1.run(BACKWARD);
motor2.run(BACKWARD);
*/
}
}
```