#include <Servo.h> //the library which helps us to control the servo motor

#include <SPI.h> //the communication interface with the modem

#include "RF24.h" //the library which helps us to control the radio modem (nRF24L)

//define our L298N control pins

//Motor A

const int RightMotorForward = 2; // IN1

const int RightMotorBackward = 3; // IN2

//Motor B

const int LeftMotorForward = 4; // IN3

const int LeftMotorBackward = 6; // IN4

//define the servo name

Servo myServo;

RF24 radio(5,10); /\*This object represents a modem connected to the Arduino.

Arguments 5 and 10 are a digital pin numbers to which signals

CE and CSN are connected.\*/

const uint64\_t pipe = 0xE8E8F0F0E1LL; //the address of the modem,that will receive data from the Arduino.

int data[1];

void setup(){

pinMode(RightMotorForward, OUTPUT);

pinMode(LeftMotorForward, OUTPUT);

pinMode(LeftMotorBackward, OUTPUT);

pinMode(RightMotorBackward, OUTPUT);

//define the servo input pins

myServo.attach(14); //A0

radio.begin(); //it activates the modem.

radio.openReadingPipe(1, pipe); //determines the address of our modem which receive data.

radio.startListening(); //enable receiving data via modem

}

void loop(){

if(radio.available()){

radio.read(data, 1);

if(data[0] < 11 && data[0] > 6){

// This is backward

// Set a Motor A backward

digitalWrite(RightMotorForward, LOW);

digitalWrite(RightMotorBackward, HIGH);

// Set a Motor B backward

digitalWrite(LeftMotorForward, LOW);

digitalWrite(LeftMotorBackward, HIGH);

}

if(data[0] > -1 && data[0] < 4){

// This is forward

// Set a Motor A forward

digitalWrite(RightMotorForward, HIGH);

digitalWrite(RightMotorBackward, LOW);

// Set a Motor B forward

digitalWrite(LeftMotorForward, HIGH);

digitalWrite(LeftMotorBackward, LOW);

}

if (data[0] == 5){

// Stop Motors

digitalWrite(RightMotorForward, LOW);

digitalWrite(RightMotorBackward, LOW);

digitalWrite(LeftMotorForward, LOW);

digitalWrite(LeftMotorBackward, LOW);

}

// This is Backward

// Set a Motor A Backward

if(data[0] < 21 && data[0] > 16){

digitalWrite(RightMotorForward, HIGH);

digitalWrite(RightMotorBackward, LOW);

// Set a Motor B Backward

digitalWrite(LeftMotorForward, LOW);

digitalWrite(LeftMotorBackward, HIGH);

}

// Turn Right

if(data[0] > 10 && data[0] < 14){

digitalWrite(RightMotorForward, LOW);

digitalWrite(RightMotorBackward, HIGH);

digitalWrite(LeftMotorForward, HIGH);

digitalWrite(LeftMotorBackward, LOW);

}

// Turn Left

if(data[0] == 15){

digitalWrite(RightMotorForward, LOW);

digitalWrite(RightMotorBackward, LOW);

digitalWrite(LeftMotorForward, LOW);

digitalWrite(LeftMotorBackward, LOW);

}

// for the servo motor

if(data[0] < 31 && data[0] > 21){

int potValue = data[0];

int potPos = map(potValue, 21, 30, 10, 170);

myServo.write(potPos);

}

}

}