#define in1 5 //L298n Motor Driver pins.

#define in2 6

#define in3 10

#define in4 11

#define LED 13

int command; //Int to store app command state.

int Speed;

int Speedsec;

int Turnradius = 200; // This controls the radius of a turn, the higher the smaller the turn. This should not exceed

// 255

void setup() {

pinMode(in1, OUTPUT);

pinMode(in2, OUTPUT);

pinMode(in3, OUTPUT);

pinMode(in4, OUTPUT);

pinMode(LED, OUTPUT); //Set the LED pin.

Serial.begin(9600); //Set the baud rate to your Bluetooth module.

}

void loop() {

if (Serial.available() > 0) {

command = Serial.read();

Stop(); //Initialize with motors stoped.

switch (command) {

case 'F':

forward();

break;

case 'B':

back();

break;

case 'L':

left();

break;

case 'R':

right();

break;

case 'G':

forwardleft();

break;

case 'I':

forwardright();

break;

case 'H':

backleft();

break;

case 'J':

backright();

break;

case '0':

Speed = 128;

break;

case '1':

Speed = 140;

break;

case '2':

Speed = 153;

break;

case '3':

Speed = 165;

break;

case '4':

Speed = 178;

break;

case '5':

Speed = 191;

break;

case '6':

Speed = 204;

break;

case '7':

Speed = 216;

break;

case '8':

Speed = 229;

break;

case '9':

Speed = 242;

break;

case 'q':

Speed = 255;

break;

case 'W': //LED pin on or off.

digitalWrite(LED, HIGH);

break;

case 'w':

digitalWrite(LED, LOW);

break;

case 'X':

Auto();

break;

case 'x':

Manual();

break;

}

Speedsec = Speed - Turnradius;

}

}

void forward() {

analogWrite(in1, Speed);

analogWrite(in3, Speed);

}

void back() {

analogWrite(in2, Speed);

analogWrite(in4, Speed);

}

void left() {

analogWrite(in3, Speed);

analogWrite(in2, Speed);

}

void right() {

analogWrite(in4, Speed);

analogWrite(in1, Speed);

}

void forwardleft() {

analogWrite(in1, Speedsec);

analogWrite(in3, Speed);

}

void forwardright() {

analogWrite(in1, Speed);

analogWrite(in3, Speedsec);

}

void backright() {

analogWrite(in2, Speed);

analogWrite(in4, Speedsec);

}

void backleft() {

analogWrite(in2, Speed);

analogWrite(in4, Speedsec);

}

void Stop() {

analogWrite(in1, 0);

analogWrite(in2, 0);

analogWrite(in3, 0);

analogWrite(in4, 0);

}

void Auto() {

//Reserved for future use

}

void Manual() {

//Reserved for future use

}

