#include <SoftwareSerial.h>

SoftwareSerial bluetooth(7, 6); // RX, TX

char t;

#define MLa 8 // left motor 1st pin

#define MLb 9 // left motor 2nd pin

#define MRa 10 // right motor 1st pin

#define MRb 11 // right motor 2nd pin

void setup() {

Serial.begin(9600);

bluetooth.begin(9600);

pinMode(MLa, OUTPUT); // left motors forward

pinMode(MLb, OUTPUT); // left motors reverse

pinMode(MRa, OUTPUT); // right motors forward

pinMode(MRb, OUTPUT); // right motors reverse

}

void loop() {

if (bluetooth.available() > 0) {

t = bluetooth.read();

Serial.println(t); // For debugging, print the received character

}

switch (t) {

case 'F': { // Move forward (all motors rotate in the forward direction)

digitalWrite(MLa, LOW);

digitalWrite(MLb, HIGH);

digitalWrite(MRa, LOW);

digitalWrite(MRb, HIGH);

break;

}

case 'B': { // Move backward (all motors rotate in the reverse direction)

digitalWrite(MLa, HIGH);

digitalWrite(MLb, LOW);

digitalWrite(MRa, HIGH);

digitalWrite(MRb, LOW);

break;

}

case 'L': { // Turn left (left side motors rotate in the forward direction, right side motors don't rotate)

digitalWrite(MLa, LOW);

digitalWrite(MLb, HIGH);

digitalWrite(MRa, LOW);

digitalWrite(MRb, LOW);

break;

}

case 'R': { // Turn right (right side motors rotate in the forward direction, left side motors don't rotate)

digitalWrite(MLa, LOW);

digitalWrite(MLb, LOW);

digitalWrite(MRa, LOW);

digitalWrite(MRb, HIGH);

break;

}

case 'S': { // Stop (all motors stop)

digitalWrite(MLa, LOW);

digitalWrite(MLb, LOW);

digitalWrite(MRa, LOW);

digitalWrite(MRb, LOW);

break;

}

}

}