// generated by mBlock5 for mBot Ranger

// codes make you happy

#include <Arduino.h>

#include <Wire.h>

#include <SoftwareSerial.h>

#include <MeAuriga.h>

MeLightSensor lightsensor\_12(12);

MeRGBLed rgbled\_0(0, 12);

MeBuzzer buzzer;

MeUltrasonicSensor ultrasonic\_10(10);

MeEncoderOnBoard Encoder\_1(SLOT1);

MeEncoderOnBoard Encoder\_2(SLOT2);

MeUltrasonicSensor ultrasonic\_8(8);

float Distance = 0;

float Rotation = 0;

float Seconds = 0;

float Degrees = 0;

void isr\_process\_encoder1(void)

{

if(digitalRead(Encoder\_1.getPortB()) == 0){

Encoder\_1.pulsePosMinus();

}else{

Encoder\_1.pulsePosPlus();

}

}

void isr\_process\_encoder2(void)

{

if(digitalRead(Encoder\_2.getPortB()) == 0){

Encoder\_2.pulsePosMinus();

}else{

Encoder\_2.pulsePosPlus();

}

}

void move(int direction, int speed)

{

int leftSpeed = 0;

int rightSpeed = 0;

if(direction == 1){

leftSpeed = -speed;

rightSpeed = speed;

}else if(direction == 2){

leftSpeed = speed;

rightSpeed = -speed;

}else if(direction == 3){

leftSpeed = -speed;

rightSpeed = -speed;

}else if(direction == 4){

leftSpeed = speed;

rightSpeed = speed;

}

Encoder\_1.setTarPWM(leftSpeed);

Encoder\_2.setTarPWM(rightSpeed);

}

void \_delay(float seconds) {

if(seconds < 0.0){

seconds = 0.0;

}

long endTime = millis() + seconds \* 1000;

while(millis() < endTime) \_loop();

}

void setup() {

randomSeed((unsigned long)(lightsensor\_12.read() \* 123456));

rgbled\_0.setpin(44);

rgbled\_0.fillPixelsBak(0, 2, 1);

buzzer.setpin(45);

TCCR1A = \_BV(WGM10);

TCCR1B = \_BV(CS11) | \_BV(WGM12);

TCCR2A = \_BV(WGM21) | \_BV(WGM20);

TCCR2B = \_BV(CS21);

attachInterrupt(Encoder\_1.getIntNum(), isr\_process\_encoder1, RISING);

attachInterrupt(Encoder\_2.getIntNum(), isr\_process\_encoder2, RISING);

rgbled\_0.setColor(0,51,0,37);

rgbled\_0.show();

\_delay(1);

rgbled\_0.setColor(0,0,0,0);

rgbled\_0.show();

buzzer.tone(392, 0.25 \* 1000);

\_delay(0.02);

rgbled\_0.setColor(0,39,14,0);

rgbled\_0.show();

\_delay(1);

rgbled\_0.setColor(0,0,0,0);

rgbled\_0.show();

buzzer.tone(784, 0.25 \* 1000);

\_delay(0.02);

rgbled\_0.setColor(0,0,13,51);

rgbled\_0.show();

\_delay(1);

rgbled\_0.setColor(0,0,0,0);

rgbled\_0.show();

buzzer.tone(1568, 0.25 \* 1000);

\_delay(0.02);

\_delay(0.5);

while(1) {

Distance = ultrasonic\_10.distanceCm();

if(Distance < 29){

if(Rotation == 0.200000){

move(4, 50 / 100.0 \* 255);

\_delay(0.3);

move(4, 0);

}else{

move(4, 50 / 100.0 \* 255);

\_delay(0.3);

move(4, 0);

}

}else{

move(2, 50 / 100.0 \* 255);

}

Distance = ultrasonic\_8.distanceCm();

if(Distance < 29){

if(Rotation == 0.200000){

move(3, 50 / 100.0 \* 255);

\_delay(0.3);

move(3, 0);

}else{

move(3, 50 / 100.0 \* 255);

\_delay(0.3);

move(3, 0);

}

}else{

move(2, 50 / 100.0 \* 255);

}

\_loop();

}

}

void \_loop() {

Encoder\_1.loop();

Encoder\_2.loop();

}

void loop() {

\_loop();

}