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#include <MeMegaPi.h>
#include <Wire.h>
#include <SoftwareSerial.h>

MeLineFollower lineFinder(PORT_6);
MeUltrasonicSensor ultraSensor(PORT_8);

//motor_setup
const byte interruptPin =18;
const byte NE1=31;
long count=0;
unsigned long time;
unsigned long last_time;
MeMegaPiDCMotor motor1(PORT1B);
MeMegaPiDCMotor motor2(PORT2B);
MeMegaPiDCMotor motor3(PORT3B);
MeMegaPiDCMotor motor4(PORT4B);
uint8_t motorSpeed = 100;
uint8_t motorSpeed2 = 70;
uint8_t motorHiSpeed = 130;
uint8_t motorHiSpeed2 = 130;
uint8_t motorSpeed3 = 70;
uint8_t motorStop = 0;
int WallCount = 0;
//motor_setup_end

void setup(){
  pinMode(interruptPin, INPUT_PULLUP);
  pinMode(NE1, INPUT);
  attachInterrupt(digitalPinToInterrupt(interruptPin), blink,RISING);
  Serial.begin(9600);
  motor3.run(-motorSpeed3);
  motor4.run(-motorSpeed3);
  delay(4000);
  motor3.run(motorStop);
  motor4.run(motorStop);
}

void loop(){

  //UltraSoundSensor
  Serial.print("Distance : ");
  Serial.print(ultraSensor.distanceCm() );
  Serial.println(" cm");
  delay(100);

  if (ultraSensor.distanceCm() < 8){
    motor1.run(motorStop);
    motor2.run(motorStop);
    motor3.run(motorSpeed3);
    delay(2100);
    motor3.run(motorStop);
    if (WallCount == 0){
      motor4.run(motorSpeed3);
      delay(4000);
      WallCount++;
    }
    else{
      motor4.run(-motorSpeed3);
      delay(4000);
      WallCount = 0;
    }
    motor4.run(motorStop);
    motor3.run(-motorSpeed3);
```

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    delay(4000);
    motor3.run(motorStop);
    motor1.run(-motorSpeed);
    motor2.run(-motorSpeed2);
    delay(1500);
    motor1.run(motorHiSpeed);
    motor2.run(-motorHiSpeed2);
    delay(4000);
  }
  else{
    //LineTrace
    int sensorState = lineFinder.readSensors();
    switch(sensorState){
      case S1_IN_S2_IN:
        Serial.println("Sensor 1 and 2 are inside of black line");
        motor1.run(motorSpeed);
        motor2.run(motorSpeed2);
        break;
      case S1_IN_S2_OUT:
        Serial.println("Sensor 2 is outside of black line");
        motor1.run(motorSpeed);
        motor2.run(-motorSpeed2);
        break;
      case S1_OUT_S2_IN:
        Serial.println("Sensor 1 is outside of black line");
        motor2.run(motorSpeed2);
        motor1.run(-motorSpeed);
        break;
      case S1_OUT_S2_OUT:
        Serial.println("Sensor 1 and 2 are outside of black line");
        motor1.run(-motorSpeed3);
        motor2.run(-motorSpeed3);
        break;
    }
  delay(200);
  }
}

void blink()
{
    if (digitalRead(NE1)>0)
    count++;
    else
    count = count -1;
}
```