package packfrauasmove;

import lejos.hardware.Button;

import lejos.hardware.motor.Motor;

import lejos.hardware.port.SensorPort;

import lejos.hardware.sensor.EV3UltrasonicSensor;

import lejos.robotics.SampleProvider;

public class AutonomousCarTest {

public static double constant\_distance=0.15; // 15 cm

public static double transition\_distance=0.20; // 20 cm

public static double critical\_value=0.10;// 10 cm

public static double \_plus\_infinity= 2.00;

public static double \_minus\_infinity=-0.00009;

//public static EV3UltrasonicSensor uss = new EV3UltrasonicSensor(SensorPort.S1);

//public static SampleProvider sp = uss.getDistanceMode();

//public static float[] sample = new float[sp.sampleSize()];

//EV3UltrasonicSensor uss = new EV3UltrasonicSensor(SensorPort.S1);

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public static void main(String[] args) {

EV3UltrasonicSensor uss = new EV3UltrasonicSensor(SensorPort.S1);

uss.enable();

SampleProvider sp = uss.getDistanceMode();

float[] sample = new float[sp.sampleSize()];

double dist;

int speed=0;

boolean flag=true;

while(flag!=false) {

sp.fetchSample(sample, 0);

dist=(double)sample[0];

// if(dist>\_plus\_infinity|| dist<\_minus\_infinity) {Motor.D.stop(); uss.disable();break;}

System.out.println(dist);

if(dist>constant\_distance + transition\_distance) {

while(dist>constant\_distance + transition\_distance) {

Motor.D.forward();

if(speed != 300) {

speed=300;

}

Motor.D.setSpeed(speed);

sp.fetchSample(sample, 0);

dist=(double)sample[0];

//System.out.println(dist);

}

}

else if (constant\_distance + transition\_distance > dist && dist>constant\_distance) {

while(constant\_distance + transition\_distance > dist && dist>constant\_distance) {

Motor.D.forward();

if(speed != 200) {

speed=200;

}

Motor.D.setSpeed(speed);

sp.fetchSample(sample, 0);

dist=(double)sample[0];

//System.out.println(dist);

}

}

else if (dist== constant\_distance) {

while(dist==constant\_distance) {

Motor.D.forward();

if(speed != 100) {

speed=100;

}

Motor.D.setSpeed(speed);

sp.fetchSample(sample, 0);

dist=(double)sample[0];

//System.out.println(dist);

}

}

else if(constant\_distance>dist && dist>critical\_value) {

while(constant\_distance>dist && dist>critical\_value) {

Motor.D.forward();

if(speed != 50) {

speed=50;

}

Motor.D.setSpeed(speed);

sp.fetchSample(sample, 0);

dist=(double)sample[0];

//System.out.println(dist);

if(Button.ESCAPE.isDown()) flag=false; // Every time stuck here!!

}

}

else if(dist<critical\_value) {

while(dist<critical\_value) {

Motor.D.stop();

speed=0;

sp.fetchSample(sample, 0);

dist=(double)sample[0];

//System.out.println(dist);

}

/\*Motor.D.forward();

speed=50;

Motor.D.setSpeed(speed);\*/

}

if(dist<.05) {flag=false;break;}

//if(Button.ESCAPE.isDown()) flag=false;

}

uss.disable();

uss.close();

Motor.D.stop();

}

}