Arduino Radar Project

Dejan Nedelkovski July 28, 2015 Projects 233

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In this Arduino Tutorial I will show you how you can make this cool looking radar using the Arduino Board and the Processing Development Environment. You can watch the following video or read the written tutorial below for more details.

Overview

All you need for this Arduino Project is an

► Arduino Library
► Processing Arduino

Ultrasonic Sensor for detecting the objects, a small hobbyist Servo Motor for rotating the sensor and an Arduino Board for controlling them. You can watch the following video or read the written tutorial below.

Components needed for this Arduino Project

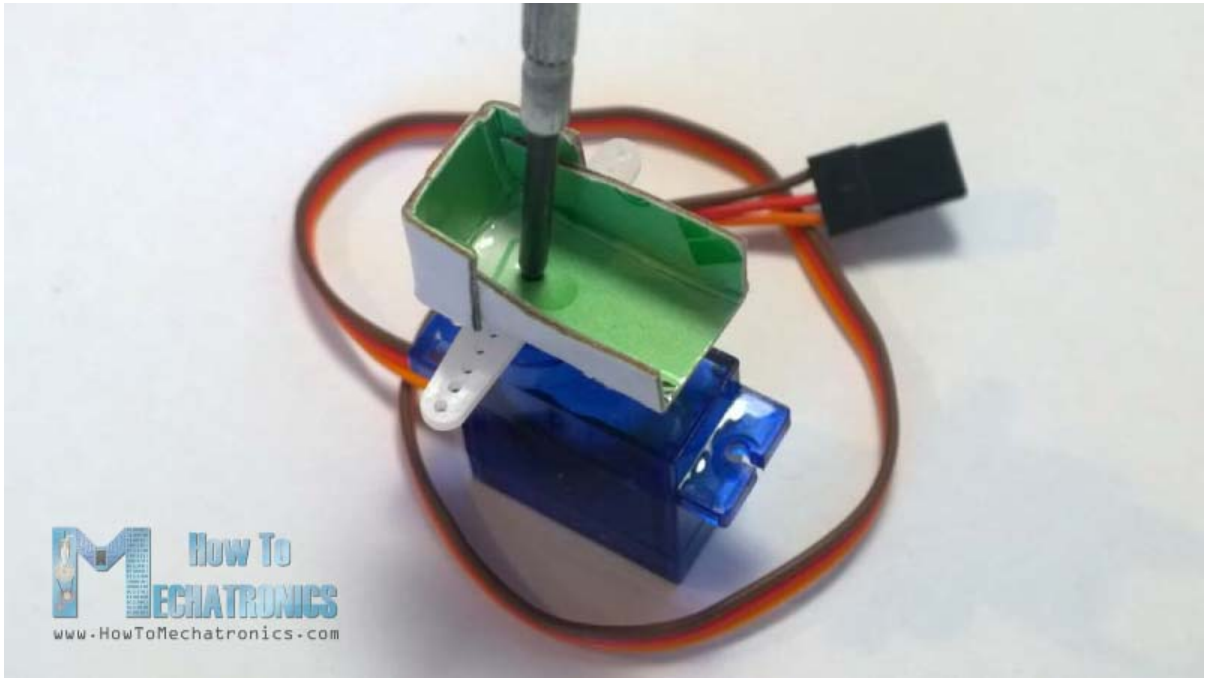
You can get these components from any of the sites below:

- Ultrasonic sensor HC- SR04..... Amazon / Banggood / GearBest / DealExtreme / ICStation
- Servo Motor..... Amazon / Banggood / GearBest / DealExtreme / ICStation
- Arduino Board..... Amazon / Banggood / GearBest / DealExtreme ICStation
- Breadboard and Jump Wires..... Amazon / Banggood / GearBest / DealExtreme / ICStation

**Please note: These are affiliate links. I may make a commission if you buy the components through these links.*
I would appreciate your support in this way!

Building the device

- First I made a cardboard stand for connecting the Ultrasonic sensor to the Servo motor. I folded it like it's shown on the picture below, glued it and secured to the servo motor using a screw like this.



- Also I attached a pin header on which I soldered 4 jumper wires for connecting the sensor.

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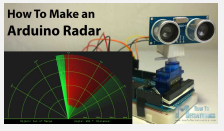

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Dejan Nedelkovski

July 28, 2015

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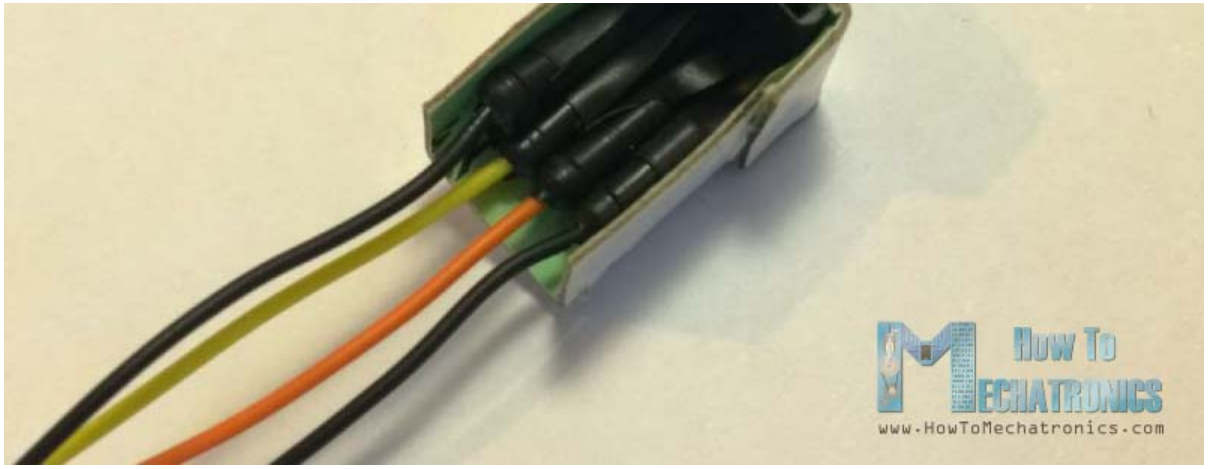
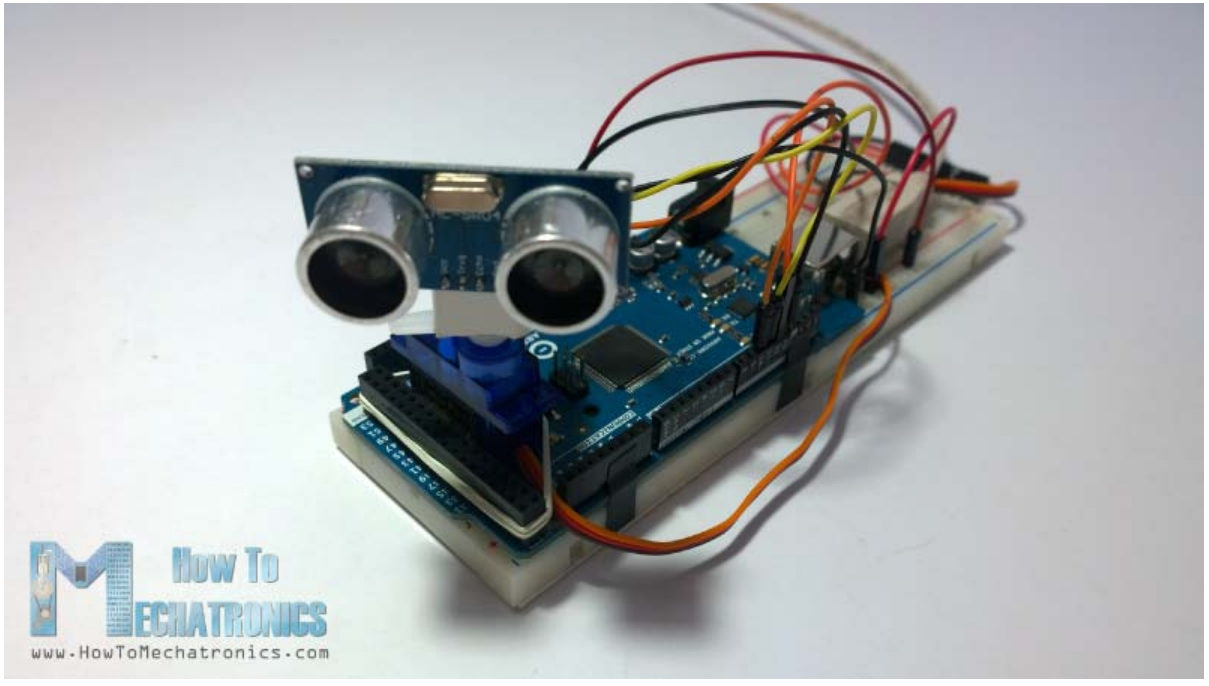
Ultrasonic Sensor HC-SR04 and Arduino



- Finally I secured the servo motor to the Arduino Board using an elastic band.



There are also some special mount bracket for the ultrasonic sensor from Banggod. You can get them from the following links:

Tutorial

Dejan Nedelkovski

July 26, 2015

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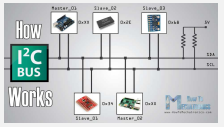


How I2C Communication Works and How To Use It with Arduino

Dejan Nedelkovski

October 5, 2015

My Amazon Picks

Elegoo UNO R3 Project Complete Starter Kit with Tutorial for Arduino…

$52.99 Prime

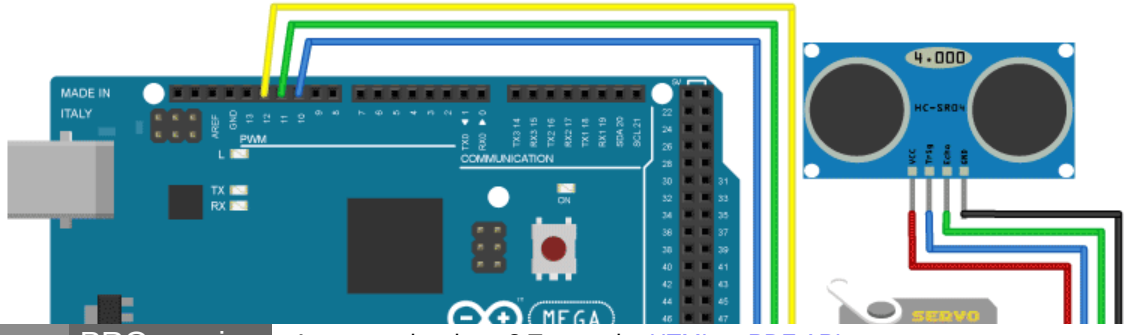
★★★★☆ (51)

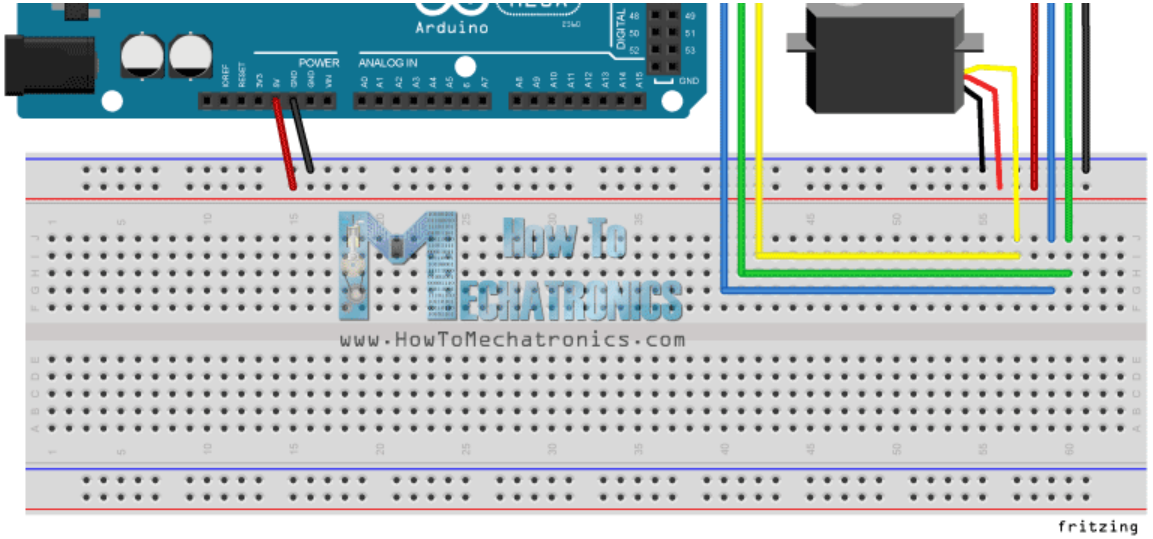
- Cartoon Ultrasonic Sensor Mounting Bracket For HC-SR04
- Acrylic Ultrasonic Sensor Mounting Bracket For HC-SR04 Module
- HC-SR04 Ultrasonic Module Distance Measuring Mount Bracket



Circuit Schematics

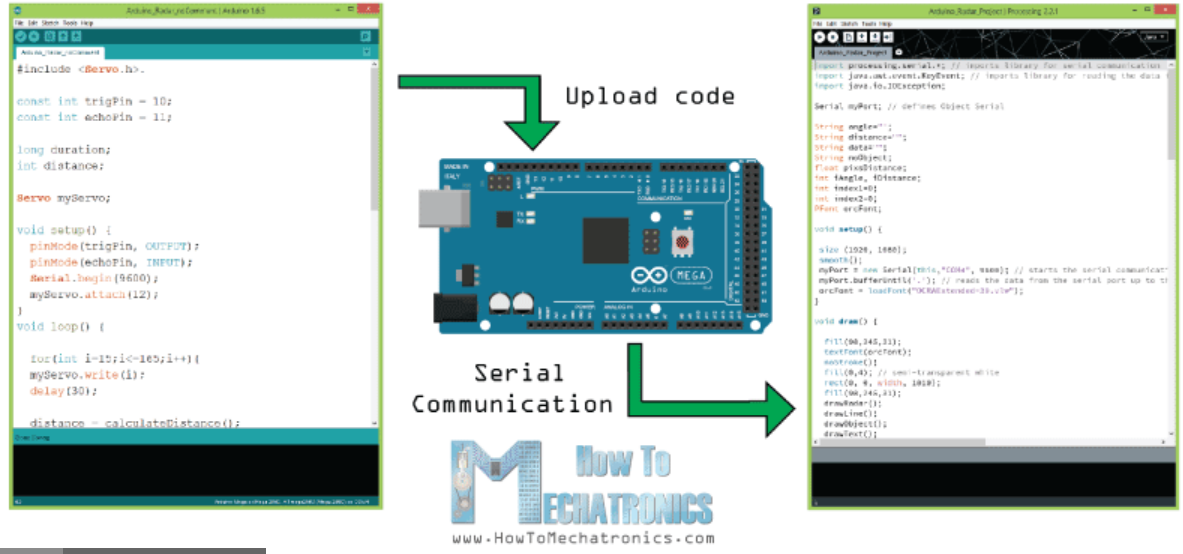
I connected the Ultrasonic Sensor HC-SR04 to the pins number 10 and 11 and the servo motor to the pin number 12 on the Arduino Board.





Source codes

Now we need to make a code and upload it to the Arduino Board that will enable the interaction between the Arduino and the Processing IDE. For understanding how the connection works click here to visit my Arduino and Processing Tutorial.



Here's the Arduino Source Code with description of each line of the code:

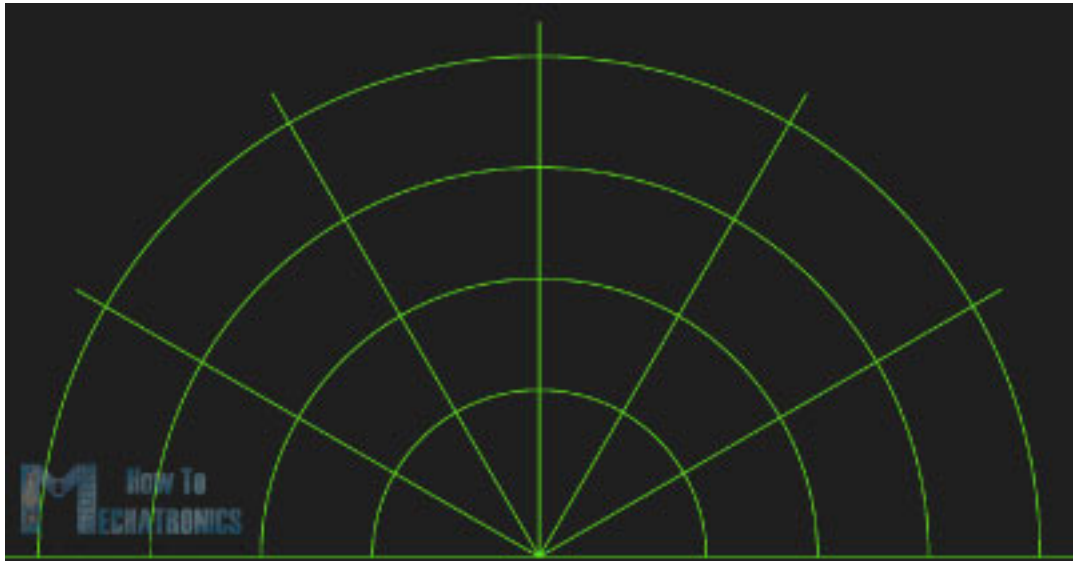
```
1.  // Includes the Servo library
2.  #include <Servo.h>.
3.
4.  // Defines Tirg and Echo pins of the Ultrasonic Sensor
5.  const int trigPin = 10;
6.  const int echoPin = 11;
7.  // Variables for the duration and the distance
8.  long duration;
```

```
int distance;

Servo myServo; // Creates a servo object for controlling the servo motor

void setup() {
  pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
  pinMode(echoPin, INPUT); // Sets the echoPin as an Input
  Serial.begin(9600);
  myServo.attach(12); // Defines on which pin is the servo motor attached
}
void loop() {
  // rotates the servo motor from 15 to 165 degrees
  for(int i=15;i<=165;i++){
  myServo.write(i);
  delay(30);
  distance = calculateDistance();// Calls a function for calculating the distance measured by the Ultrasonic sensor for each degree

  Serial.print(i); // Sends the current degree into the Serial Port
  Serial.print(","); // Sends addition character right next to the previous value needed later in the Processing IDE for indexing
  Serial.print(distance); // Sends the distance value into the Serial Port
  Serial.print("."); // Sends addition character right next to the previous value needed later in the Processing IDE for indexing
```

```
  }
  // Repeats the previous lines from 165 to 15 degrees
  for(int i=165;i>15;i--){
  myServo.write(i);
  delay(30);
  distance = calculateDistance();
  Serial.print(i);
  Serial.print(",");
  Serial.print(distance);
  Serial.print(".");
  }
}
// Function for calculating the distance measured by the Ultrasonic sensor
int calculateDistance(){

  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  // Sets the trigPin on HIGH state for 10 micro seconds
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH); // Reads the echoPin, returns the sound wave travel time in microseconds
  distance= duration*0.034/2;
  return distance;
}
```

Now we will receive the values for the angle and the distance

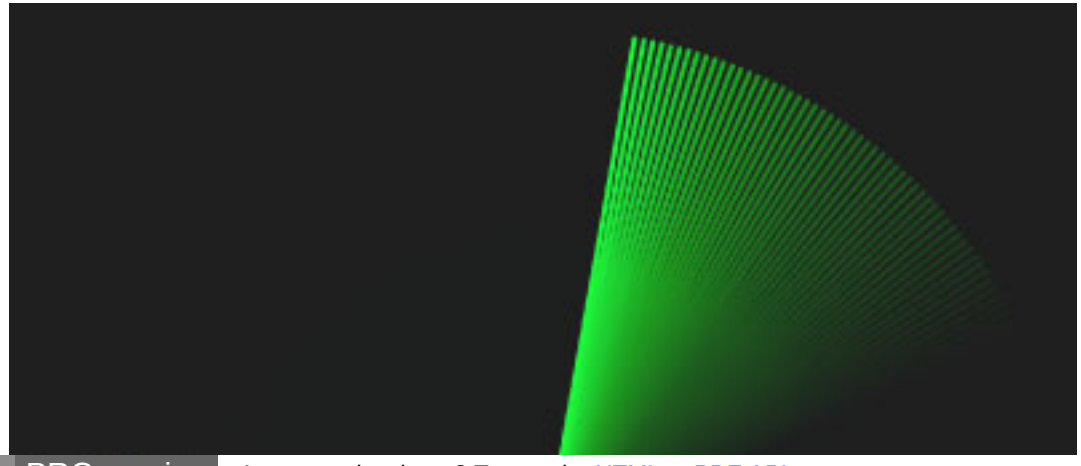
measured by the sensor from the Arduino Board into the Processing IDE using the *SerialEvent()* function which reads the data from the Serial Port and we will put the values of the angle and the distance into the variables iAngle and iDistance. These variable will be used for drawing the radar, the lines, the detected objects and some of the text.

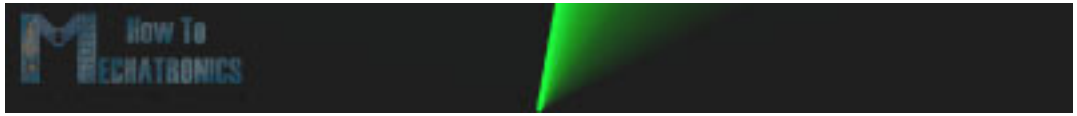


For drawing the radar I made this function *drawRadar()* which consist of *arc()* and *line()* functions.

```
1.  void drawRadar() {
2.    pushMatrix();
3.    translate(960,1000); // moves the starting coordinats
    to new location
4.    noFill();
5.    strokeWeight(2);
6.    stroke(98,245,31);
```

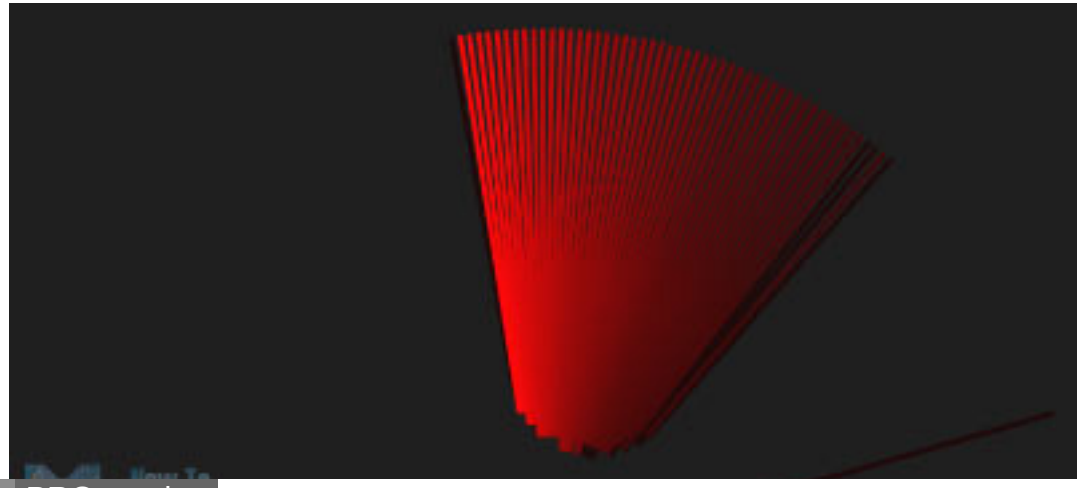
```
  // draws the arc lines
  arc(0,0,1800,1800,PI,TWO_PI);
  arc(0,0,1400,1400,PI,TWO_PI);
  arc(0,0,1000,1000,PI,TWO_PI);
  arc(0,0,600,600,PI,TWO_PI);
  // draws the angle lines
  line(-960,0,960,0);

line(0,0,-960*cos(radians(30)),-960*sin(radians(30)));

line(0,0,-960*cos(radians(60)),-960*sin(radians(60)));

line(0,0,-960*cos(radians(90)),-960*sin(radians(90)));

line(0,0,-960*cos(radians(120)),-960*sin(radians(120)))
;

line(0,0,-960*cos(radians(150)),-960*sin(radians(150)))
;
  line(-960*cos(radians(30)),0,960,0);
  popMatrix();
}
```





For drawing the line that is moving along the radar I made this function *drawLine()*. Its center of rotation is set with the translate() function and using the line() function in which the iAngle variable is used the line is redrawn for each degree.

```
1.  void drawLine() {
2.    pushMatrix();
3.    strokeWeight(9);
4.    stroke(30,250,60);
5.    translate(960,1000); // moves the starting coordinats
    to new location
6.
    line(0,0,950*cos(radians(iAngle)),-950*sin(radians(iAng
    le))); // draws the line according to the angle
7.    popMatrix();
8.  }
```



For drawing the detected objects I made this *drawObject()* function. It gets the distance from ultrasonic sensor, transforms it into pixels and in combination with the angle of the sensor draws the object on the radar.

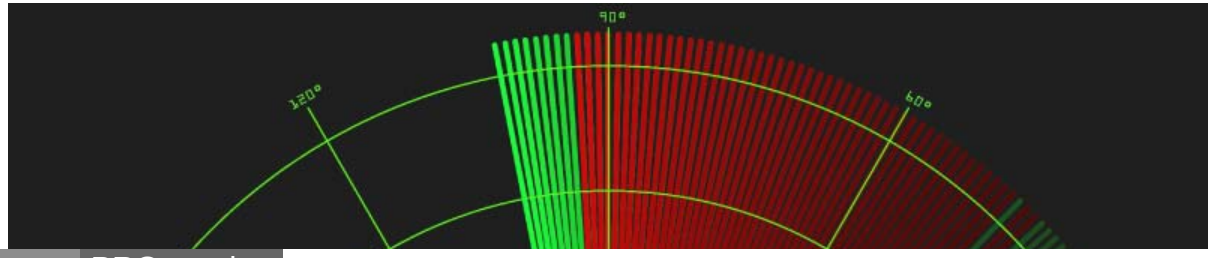
```
1.  void drawObject() {
2.    pushMatrix();
3.    translate(960,1000); // moves the starting coordinats
to new location
4.    strokeWeight(9);
5.    stroke(255,10,10); // red color
6.    pixsDistance = iDistance*22.5; // covers the distance
from the sensor from cm to pixels
7.    // limiting the range to 40 cms
8.    if(iDistance<40){
9.      // draws the object according to the angle and the
distance
10.   line(pixsDistance*cos(radians(iAngle)),-
pixsDistance*sin(radians(iAngle)),950*cos(radians(iAngl
e)),-950*sin(radians(iAngle)));
11.   }
12.   popMatrix();
13.  }
```

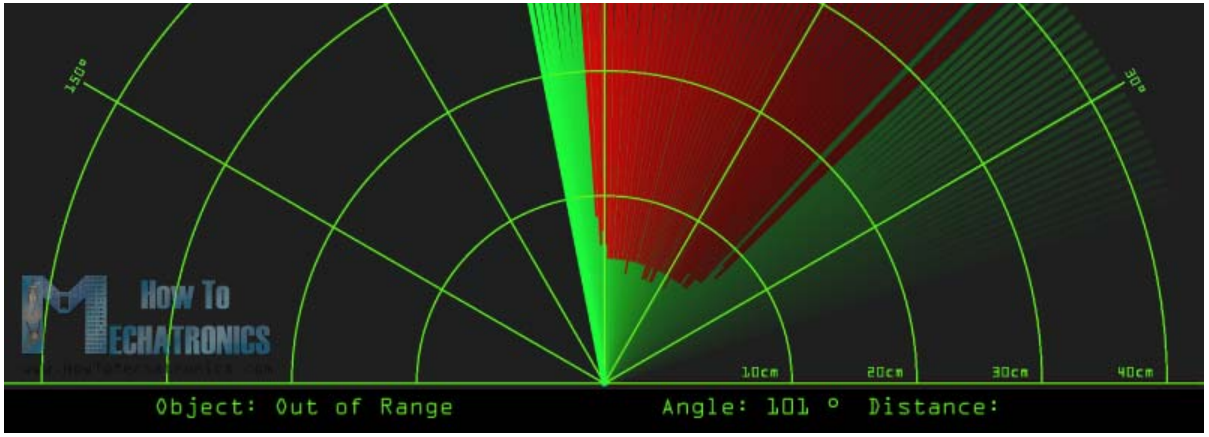
For the text on the screen I made the *drawText()* function which draws texts on particular locations.

All of these functions are called in the main *draw()* function which repeats all the time and draws the screen. Also here I am using this *fill()* function with 2 parameters for simulating motion blur and slow fade of the moving line.

```
1.  void draw() {
2.
3.    fill(98,245,31);
4.    textFont(orcFont);
5.    // simulating motion blur and slow fade of the moving
    line
6.    noStroke();
7.    fill(0,4);
8.    rect(0, 0, width, 1010);
9.
10.   fill(98,245,31); // green color
11.   // calls the functions for drawing the radar
12.   drawRadar();
13.   drawLine();
14.   drawObject();
15.   drawText();
16. }
```

Here's the final appearance of the radar:





Here's the complete Processing Source Code of the Arduino Radar:

```
import processing.serial.*; // imports library for serial communication
import java.awt.event.KeyEvent; // imports library for reading the data from the serial port
import java.io.IOException;

Serial myPort; // defines Object Serial
// defubes variables
String angle="";
String distance="";
String data="";
String noObject;
float pixsDistance;
int iAngle, iDistance;
int index1=0;
int index2=0;
PFont orcFont;

```

```
void setup() {

 size (1920, 1080);
 smooth();
 myPort = new Serial(this,"COM4", 9600); // starts the serial communication
 myPort.bufferUntil('.'); // reads the data from the serial port up to the character '.'. So actually it reads this: angle,distance.
 orcFont = loadFont("OCRAExtended-30.vlw");
}

void draw() {

  fill(98,245,31);
  textFont(orcFont);
  // simulating motion blur and slow fade of the moving line
  noStroke();
  fill(0,4);
  rect(0, 0, width, 1010);

  fill(98,245,31); // green color
  // calls the functions for drawing the radar
  drawRadar();
  drawLine();
  drawObject();
  drawText();
}

void serialEvent (Serial myPort) { // starts reading data from the Serial Port
```

```
  // reads the data from the Serial Port up to the character '.' and puts it into the String variable "data".
  data = myPort.readStringUntil('.');
  data = data.substring(0,data.length()-1);

  index1 = data.indexOf(","); // find the character ',' and puts it into the variable "index1"
  angle= data.substring(0, index1); // read the data from position "0" to position of the variable index1 or thats the value of the angle the Arduino Board sent into the Serial Port
  distance= data.substring(index1+1, data.length()); // read the data from position "index1" to the end of the data pr thats the value of the distance

  // converts the String variables into Integer
  iAngle = int(angle);
  iDistance = int(distance);
}

void drawRadar() {
  pushMatrix();
  translate(960,1000); // moves the starting coordinats to new location
  noFill();
  strokeWeight(2);
  stroke(98,245,31);
  // draws the arc lines
  arc(0,0,1800,1800,PI,TWO_PI);
  arc(0,0,1400,1400,PI,TWO_PI);
  arc(0,0,1000,1000,PI,TWO_PI);
```

```
  arc(0,0,600,600,PI,TWO_PI);
  // draws the angle lines
  line(-960,0,960,0);

line(0,0,-960*cos(radians(30)),-960*sin(radians(30)));

line(0,0,-960*cos(radians(60)),-960*sin(radians(60)));

line(0,0,-960*cos(radians(90)),-960*sin(radians(90)));

line(0,0,-960*cos(radians(120)),-960*sin(radians(120)))
;

line(0,0,-960*cos(radians(150)),-960*sin(radians(150)))
;
  line(-960*cos(radians(30)),0,960,0);
  popMatrix();
}

void drawObject() {
  pushMatrix();
  translate(960,1000); // moves the starting coordinats
to new location
  strokeWeight(9);
  stroke(255,10,10); // red color
  pixsDistance = iDistance*22.5; // covers the distance
from the sensor from cm to pixels
  // limiting the range to 40 cms
  if(iDistance<40){
    // draws the object according to the angle and the
distance
  line(pixsDistance*cos(radians(iAngle)),-
pixsDistance*sin(radians(iAngle)),950*cos(radians(iAngl
```

```
e)),-950*sin(radians(iAngle)));
  }
  popMatrix();
}

void drawLine() {
  pushMatrix();
  strokeWeight(9);
  stroke(30,250,60);
  translate(960,1000); // moves the starting coordinats
to new location

line(0,0,950*cos(radians(iAngle)),-950*sin(radians(iAng
le))); // draws the line according to the angle
  popMatrix();
}

void drawText() { // draws the texts on the screen

  pushMatrix();
  if(iDistance>40) {
  noObject = "Out of Range";
  }
  else {
  noObject = "In Range";
  }
  fill(0,0,0);
  noStroke();
  rect(0, 1010, width, 1080);
  fill(98,245,31);
  textSize(25);
  text("10cm",1180,990);
```

```
117.    text("20cm",1380,990);
118.    text("30cm",1580,990);
119.    text("40cm",1780,990);
120.    textSize(40);
121.    text("Object: " + noObject, 240, 1050);
122.    text("Angle: " + iAngle +" °", 1050, 1050);
123.    text("Distance: ", 1380, 1050);
124.    if(iDistance<40) {
125.    text("        " + iDistance +" cm", 1400, 1050);
126.    }
127.    textSize(25);
128.    fill(98,245,60);
129.
        translate(961+960*cos(radians(30)),982-960*sin(radians(
        30)));
130.    rotate(-radians(-60));
131.    text("30°",0,0);
132.    resetMatrix();
133.
        translate(954+960*cos(radians(60)),984-960*sin(radians(
        60)));
134.    rotate(-radians(-30));
135.    text("60°",0,0);
136.    resetMatrix();
137.
        translate(945+960*cos(radians(90)),990-960*sin(radians(
        90)));
138.    rotate(radians(0));
139.    text("90°",0,0);
140.    resetMatrix();
141.
        translate(935+960*cos(radians(120)),1003-960*sin(radian
```

```
s(120)));
  rotate(radians(-30));
  text("120°",0,0);
  resetMatrix();

translate(940+960*cos(radians(150)),1018-960*sin(radian
s(150)));
  rotate(radians(-60));
  text("150°",0,0);
  popMatrix();
}
```

New Updated version of the code to fit any screen resolution:

Just change the values in size() function, with your screen resolution.


```
/*   Arduino Radar Project
 *
 *   Updated version. Fits any screen resolution!
 *   Just change the values in the size() function,
 *   with your screen resolution.
 *
 *  by Dejan Nedelkovski,
 *  www.HowToMechatronics.com
 *
 */
```

```
11.
12.  import processing.serial.*; // imports library for
     serial communication
13.  import java.awt.event.KeyEvent; // imports library for
     reading the data from the serial port
14.  import java.io.IOException;
15.
16.  Serial myPort; // defines Object Serial
17.  // defubes variables
18.  String angle="";
19.  String distance="";
20.  String data="";
21.  String noObject;
22.  float pixsDistance;
23.  int iAngle, iDistance;
24.  int index1=0;
25.  int index2=0;
26.  PFont orcFont;
27.
28.  void setup() {
29.
30.   size (1920, 1080); // ***CHANGE THIS TO YOUR SCREEN
     RESOLUTION***
31.   smooth();
32.   myPort = new Serial(this,"COM4", 9600); // starts the
     serial communication
33.   myPort.bufferUntil('.'); // reads the data from the
     serial port up to the character '.'. So actually it
     reads this: angle,distance.
34.   orcFont = loadFont("OCRAExtended-30.vlw");
35.  }
36.
```

```
void draw() {

  fill(98,245,31);
  textFont(orcFont);
  // simulating motion blur and slow fade of the moving line
  noStroke();
  fill(0,4);
  rect(0, 0, width, height-height*0.065);

  fill(98,245,31); // green color
  // calls the functions for drawing the radar
  drawRadar();
  drawLine();
  drawObject();
  drawText();
}

void serialEvent (Serial myPort) { // starts reading data from the Serial Port
  // reads the data from the Serial Port up to the character '.' and puts it into the String variable "data".
  data = myPort.readStringUntil('.');
  data = data.substring(0,data.length()-1);

  index1 = data.indexOf(","); // find the character ',' and puts it into the variable "index1"
  angle= data.substring(0, index1); // read the data from position "0" to position of the variable index1 or thats the value of the angle the Arduino Board sent into the Serial Port
```

```
61.   distance= data.substring(index1+1, data.length()); // read the data from position "index1" to the end of the data pr thats the value of the distance
62.
63.   // converts the String variables into Integer
64.   iAngle = int(angle);
65.   iDistance = int(distance);
66. }
67.
68. void drawRadar() {
69.   pushMatrix();
70.   translate(width/2,height-height*0.074); // moves the starting coordinats to new location
71.   noFill();
72.   strokeWeight(2);
73.   stroke(98,245,31);
74.   // draws the arc lines
75.   arc(0,0,(width-width*0.0625),(width-width*0.0625),PI,TWO_PI);
76.   arc(0,0,(width-width*0.27),(width-width*0.27),PI,TWO_PI);
77.   arc(0,0,(width-width*0.479),(width-width*0.479),PI,TWO_PI);
78.   arc(0,0,(width-width*0.687),(width-width*0.687),PI,TWO_PI);
79.   // draws the angle lines
80.   line(-width/2,0,width/2,0);
81.   line(0,0,(-width/2)*cos(radians(30)),(-width/2)*sin(radians(30)));
82.   line(0,0,(-width/2)*cos(radians(60)),(-width/2)*sin(radians(60)));
83.   line(0,0,(-width/2)*cos(radians(90)),(-width/2)*sin(radians(90)));
```

```
  line(0,0,(-width/2)*cos(radians(120)),(-width/2)*sin(radians(120)));
  line(0,0,(-width/2)*cos(radians(150)),(-width/2)*sin(radians(150)));
  line((-width/2)*cos(radians(30)),0,width/2,0);
  popMatrix();
}

void drawObject() {
  pushMatrix();
  translate(width/2,height-height*0.074); // moves the starting coordinats to new location
  strokeWeight(9);
  stroke(255,10,10); // red color
  pixsDistance = iDistance*((height-height*0.1666)*0.025); // covers the distance from the sensor from cm to pixels
  // limiting the range to 40 cms
  if(iDistance<40){
    // draws the object according to the angle and the distance
  line(pixsDistance*cos(radians(iAngle)),-pixsDistance*sin(radians(iAngle)),(width-width*0.505)*cos(radians(iAngle)),-(width-width*0.505)*sin(radians(iAngle)));
  }
  popMatrix();
}

void drawLine() {
  pushMatrix();
  strokeWeight(9);
```

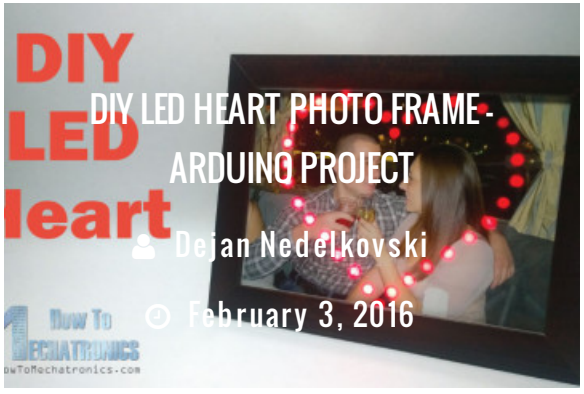
```
  stroke(30,250,60);
  translate(width/2,height-height*0.074); // moves the
starting coordinats to new location
  line(0,0,(height-
height*0.12)*cos(radians(iAngle)),-(height-
height*0.12)*sin(radians(iAngle))); // draws the line
according to the angle
  popMatrix();
}

void drawText() { // draws the texts on the screen

  pushMatrix();
  if(iDistance>40) {
  noObject = "Out of Range";
  }
  else {
  noObject = "In Range";
  }
  fill(0,0,0);
  noStroke();
  rect(0, height-height*0.0648, width, height);
  fill(98,245,31);
  textSize(25);

  text("10cm",width-width*0.3854,height-height*0.0833);
  text("20cm",width-width*0.281,height-height*0.0833);
  text("30cm",width-width*0.177,height-height*0.0833);
  text("40cm",width-width*0.0729,height-height*0.0833);
  textSize(40);
  text("Object: " + noObject, width-width*0.875,
height-height*0.0277);
```

```
134.   text("Angle: " + iAngle +" °", width-width*0.48,
       height-height*0.0277);
135.   text("Distance: ", width-width*0.26, height-
       height*0.0277);
136.   if(iDistance<40) {
137.   text("        " + iDistance +" cm", width-
       width*0.225, height-height*0.0277);
138.   }
139.   textSize(25);
140.   fill(98,245,60);
141.   translate((width-
       width*0.4994)+width/2*cos(radians(30)),(height-
       height*0.0907)-width/2*sin(radians(30)));
142.   rotate(-radians(-60));
143.   text("30°",0,0);
144.   resetMatrix();
145.   translate((width-
       width*0.503)+width/2*cos(radians(60)),(height-
       height*0.0888)-width/2*sin(radians(60)));
146.   rotate(-radians(-30));
147.   text("60°",0,0);
148.   resetMatrix();
149.   translate((width-
       width*0.507)+width/2*cos(radians(90)),(height-
       height*0.0833)-width/2*sin(radians(90)));
150.   rotate(radians(0));
151.   text("90°",0,0);
152.   resetMatrix();
153.   translate(width-
       width*0.513+width/2*cos(radians(120)),(height-
       height*0.07129)-width/2*sin(radians(120)));
154.   rotate(radians(-30));
155.   text("120°",0,0);
```

```
156.    resetMatrix();
157.    translate((width-
        width*0.5104)+width/2*cos(radians(150)),(height-
        height*0.0574)-width/2*sin(radians(150)));
158.    rotate(radians(-60));
159.    text("150°",0,0);
160.    popMatrix();
161.  }
```


Arduino | Arduino Project | Demo | Example | radar

RELATED POSTS



233 RESPONSES

Jaime

December 16, 2015

Where is the code?

REPLY

Dejan Nedelkovski

December 17, 2015

There was a problem. Now the code is here.

REPLY

AD23

December 29, 2015

Dear sir

The code that you have written is not getting compiled in my arduino IDE. Its showing “Missing author” can you help me out.. I d k where i am going wrong..

Dejan Nedelkovski

December 29, 2015

Did you try to compile the right code, because there are to codes, one for Arduino IDE and one for Processing IDE and did you copy it the whole code properly. I have never seen such an error. Try it again please.

mayur

February 7, 2016

hello sir, my radar line is not moving from initial point its gets stuck after 60 degree every time.can u please help me out that whats exactly the error and how can i solve it

Dejan Nedelkovski

February 7, 2016

Try different speed for the servo, change the delay time in the for loop for the servo.

Waqar Ali

April 2, 2016

sir your code is not working can would you please give me your email adress i will send you the error message for solution

Dejan Nedelkovski

April 3, 2016

It is working, you are probably doing something wrong. Go through the previous comments you might find the answer of your problem.

sai kumar

April 12, 2016

Hello sir,
Iam facing a problem in processing ,

When i run the program in processing, it highlighted the line in program=
(orcFont = loadFont(“OCRAExtended-30.vlw”);
). The reason for that is (could not load font OCRAExtended-30.vlw. Make sure that the font has been copied to the data folder of your sketch) shown by processing.
Help me out Sir.

Dejan Nedelkovski

April 12, 2016

Well this question has already been answered in the comments below.
You should always check the comments before asking something, because usually there is an answer to most of the problems people might face.

Ray

June 28, 2016

Thank you for the great project. Everything

worked perfectly. The only thing I would add to your page is a section where you talk about the creation of the “OCRAExtended-30.vlw” font so that the processing code works without issue. It would be better than having people dig through the comments section for answers.

Thanks again for an awesome project.

Vic

March 10, 2016

I keep getting errors about fonts.
Is processing an actual working format?
Do I have to start creating fonts and stuff?
I thought that this was for experimenting with programming code.
Arduino ide never bothered with fonts. What gives?
This seems like a half baked system.
And the last time I was asked to download java, it ruined computer and installed a virus on my other pc. Now I have an infected pc that cost me a few grand.
Why can’t I just copy and paste, hit run and have it

work?

REPLY

Henry

April 19, 2016

Is the radar made from java?

REPLY

Dejan Nedelkovski

April 19, 2016

No, it’s made using Processing IDE.

MOHAMMAD

May 26, 2016

Q1.
what is the time taken to send signal and receive

signal if we do not have any object facing the ultrasonic ?

Q2.
why you put delay(30) in your code and not more or less ?

REPLY

Dejan Nedelkovski

May 27, 2016

A1: You might be able to find this answer in the datasheet of the ultrasonic sensor.
A2: This delay is used to regulate the motor speed of rotation.

Arman

December 16, 2015

Hi sir.

Actually we're doing this project in our high school, so we

need the link of the original project. We haven't got much time for do it, so please, try to repair it as soon as you can.

Thanks for your attention.

REPLY

Dejan Nedelkovski

December 17, 2015

It is working now.

REPLY

ale

December 17, 2015

I tried to copy the code, but I get errors from all sides, you may
put a link where anyone can copy all the code

REPLY

Dejan Nedelkovski

December 18, 2015

What kind of errors. The complete source codes for both Arduino IDE and Processing IDE can be found on this post.

REPLY

Rakib Anam

December 18, 2015

Dear sir,
please help me understand what is the problem with my project.
I followed the steps that u showed in ur video. it was a wonderful project.
I copied the code for the arduino from this website and it works perfect. the ultra sonic sensor nicely represents the distance and angle in the arduino serial monitor. the

problem is with the processing code. when I run the code from my processor IDE it says that there is some error. my processing IDE is version is 1.5.1 I hope for ur help and co operation
thank u very much

Dejan Nedelkovski

December 19, 2015

Try install the newest version of Processing IDE.

Marc G.

December 18, 2015

Hi. I'm building this Radar for an experiment for school. Is the code compatible with Arduino UNO too? And then , the last code , must be put into Processing IDE , and not other languages , right?
Thank you

REPLY

Dejan Nedelkovski

December 19, 2015

Yes, you can use the UNO and the last code is for Processing IDE.

REPLY

Marc G.

December 20, 2015

Thank you so much. Can I upload directly the Arduino code in my Arduino UNO? Or there's something I must adapt to make it compatible?

Eugene

December 21, 2015

Somebody uses yours code

http://www.instructables.com/id/Arduino-Sodar-Cool-Radar-/

no links to your original project. Is not honest i think – just delete any information about you as an author.

REPLY

Dejan Nedelkovski

December 21, 2015

Thanks for the comment! Well yes you are right. My tutorials and projects are free so everyone can use them, but if someone use them on other website, just like you said, hi should provide links to the original article. What's more, he is even using my photos with blurring my logo.

REPLY

AMRANi

December 22, 2015

Hello, Where we can find the OCRAExtended-30.vlw” file ?

REPLY

Dejan Nedelkovski

December 22, 2015

You don’t have to use that font. If this problem occurs when running the Processing sketch this could help you:
The problem could be that you should first generate the font in the Processing IDE. Tools > Create Font… and here select that font and size. This will generate appropriate font file in the working directory so that you are able to use that font.
OR you can just remove these lines in the code and the processing will use its default font.

REPLY

Hamza

December 23, 2015

kindly tell me how to change screen resolution in program?

REPLY

Dejan Nedelkovski

December 23, 2015

Well if you use the updated processing code, which can be found at the bottom of the post, it can fit any screen resolution. You just have to change the parameters for the screen resolution to your screen resolution.

REPLY

Wally

December 25, 2015

Thank-you for sharing this awesome tutorial

REPLY

Abu Taj

December 26, 2015

Hey.. I done what you have shown. But I'm not getting the output. In processing windows the scale o radar sticks in ZERO. It doesn't move any where. Can you help me to fix this.

REPLY

deon

January 8, 2016

I'm getting the same problem

REPLY

Jim M.

December 26, 2015

I didn’t realize the Processing code needed to be executed in a download from processing.org. Other than that, my son and I very much enjoyed this build. Thank you.

REPLY

Dejan Nedelkovski

December 27, 2015

I’m glad to hear that!

REPLY

Dustonred

March 9, 2016

Same here ! took me a while to figure out what was processing IDE , but i have finished it and it was a real pleasure to build it !

REPLY

AcerbusNyx

December 27, 2015

Can you use a Ultrasonic range sensor from radio shack? it has 3 pins un like the one you are using

REPLY

Dejan Nedelkovski

December 27, 2015

You will have to modify the Arduino code in that case.

REPLY

Cole

May 4, 2016

Dejan,
Thank you for sharing these tutorials. This radar project was very helpful for learning Arduino & Processing IDE. Now that my radar is up and running, its time to tackle the TFT touch shield!
Thanks again buddy.

REPLY

Dejan Nedelkovski

May 4, 2016

Yep, thanks! I'm glad to hear this!

Hans

December 27, 2015

Hello sir. Great project. I've a question. There's a way to make the lines in the function drawObject () , likes points? I mean , is possible to cut the red line to the initial distance , and not to proceed behind?

Something like this:
http://i.ytimg.com/vi/wNN1CtOuEIM/maxresdefault.jpg
Thanks

REPLY

Dejan Nedelkovski

December 27, 2015

Well yes, it is possible. You will have to modify that part of the code and instead of using line(), use ellipse(a, b, c, d). a,b – x,y coordinates of the ellipse, c,d – width and height of the ellipse.

REPLY

Alex

December 27, 2015

Great project. Used it with Arduino Uno. Very cool!

REPLY

Dejan Nedelkovski

December 29, 2015

Thanks!

REPLY

Hemant

December 29, 2015

Hey.. I followed your steps and have completed the project . After uploading the sketch on arduino i’m getting output on the serial monitor but i am not able to get any output on processing ide. The radar sticks to a fixed point (at zero) , it doesn’t move in sync with the motor. Any solutions for this?

REPLY

Dejan Nedelkovski

December 29, 2015

Do you get any error message?

REPLY

Hemant

December 31, 2015

No error message at all. The radar screen shows up but everything is still, no movement is shown in the radar even though the setup is working fine.

Hemant

December 31, 2015

I have one more question. I am using an arduino uno r3 board so is there any possibility that this might be the reason why it is not working. I have cross checked every connection and now the servo is also not

moving .

Hemant

December 31, 2015

servo started moving .Actually it was the wight of the support i made for the sensor because of which it was not moving. Also i am not using a breadboard for connections.The servo is connected to the 5v pin of arduino and the sensor is connected to 9v battery.

Alex

December 30, 2015

i don’t understand what i have to put in arduino IDE and what i have to put in processing

REPLY

Dejan Nedelkovski

December 30, 2015

Well I think that is nicely stated:
The first code is for Arduino IDE and it is stated!
The last code is work Processing IDE and it is stated!

REPLY

Michael Juan

January 4, 2016

Hi man i need your help you here. What if i want to add some active buzzer and LED to your code, i tried once and the servo turn really slow. Can you teach me the code so i can add the buzzer and LED?

REPLY

Michael Juan

January 4, 2016

Looks like a managed to fix the problem in arduino

and now i can works normally. The problem now is with the processing. if i use you code, it's fine processing draw the sonar, but when i add the buzzer and LED the processing wont draw the sonar

REPLY

Vinay

January 8, 2016

sir
the code is not working on my macbook pro
due to some port not available error
please provide me a solution for that

REPLY

Dejan Nedelkovski

January 8, 2016

Try do define the port something like this:

/dev/tty.usbmodem or /dev/tty.usbserial

REPLY

vinay

January 8, 2016

thank you sir

instead of just changing the port name that u has said but it didn't work
then i made a list by using

println(Serial.list());
serialPort = new Serial(this, Serial.list()[4], 9600);

it works now

Dejan Nedelkovski

January 8, 2016

Great!

Michael

January 8, 2016

Dejan,
A very good project.
I have been having a great time setting it all up and learning some of the finer details of “Processing”.
Well done!

I did notice that the serial communication would fail sometimes when stopping and starting “Processing”. It is likely to be a problem with the string handling if a part message is received and the resulting string length is 0.

I modified the code so that it looks for a string of at least 4 characters before the “.” (ie 15,0.)

…
data = myPort.readStringUntil(‘.’);
if (data.length()>4) { //check to see if there are enough characters(ie min “15,0.”)
…
existing code
…

```
}
}
```

This seemed to make the serial link much more reliable.

There are many other ways of handling the exception but this was simple to do 🙂

Cheers
MOC

REPLY

Dejan Nedelkovski

January 8, 2016

That's a great remark! People experiencing this kind of problem would find this comment useful.
Thanks!

REPLY

salowa

January 8, 2016

i’m getting the following message after running the arduino code:

C:\Users\User\Documents\Arduino\libraries\sketch_jan09a\ske
warning: extra tokens at end of #include directive
[enabled by default]

#include .

^

Sketch uses 6,138 bytes (2%) of program storage space.
Maximum is 253,952 bytes.
Global variables use 348 bytes (4%) of dynamic memory,
leaving 7,844 bytes for local variables. Maximum is 8,192
bytes.
Invalid library found in
C:\Users\User\Documents\Arduino\libraries\sketch_jan09a:
C:\Users\User\Documents\Arduino\libraries\sketch_jan09a
Invalid library found in
C:\Users\User\Documents\Arduino\libraries\sketch_jan09a:
C:\Users\User\Documents\Arduino\libraries\sketch_jan09a

REPLY

Dejan Nedelkovski

January 8, 2016

You should be getting that kind of error. Try it again, did you copy the right codes to the right places properly?

REPLY

Henrik

January 9, 2016

Hi, is it possible to use a USB as a serial port, and rewrite the code? I'm pretty amateur when it comes to coding.

REPLY

Dejan Nedelkovski

January 9, 2016

What do you mean by USB? What kind of change do you want?

REPLY

bagus

January 10, 2016

sir ..i have a problem and it is “java.awt.event.keyEvent; its does not exist.you might be missing a library..

REPLY

Dejan Nedelkovski

January 10, 2016

That library is default for Processing IDE so you can’t be missing it. Try again with the latest version of Processing IDE.

REPLY

boris

January 10, 2016

good day. here some errors what to do ?
sketch_jan10b:12: error: 'import' does not name a type

import java.awt.event.KeyEvent; // imports library for reading the data from the serial port

^

sketch_jan10b:13: error: 'import' does not name a type

import java.io.IOException;

^

sketch_jan10b:14: error: 'Serial' does not name a type

Serial myPort; // defines Object Serial

^

sketch_jan10b:24: error: 'PFont' does not name a type

PFont orcFont;

REPLY

Dejan Nedelkovski

January 10, 2016

I don’t know why these errors occurs to you. You are probably doing something wrong, retry again the exact same procedure as described, with the latest version of the two software.

REPLY

Akshay Agarwal

January 13, 2016

Sir,i am new in the ground of arduino and after surveying many videos and website i decided to choose yours project though i was feeling satisfied and was very exited of making myself one and i did it bt the issue i am facing is everything works great only the radar which is appearing in the screen is not moving and functioning

please sir help me

REPLY

Dejan Nedelkovski

January 13, 2016

Give me some more details about your problem. It can be anything. Did you upload the Arduino sketch to Arduino properly, check if it's working properly with the Serial Monitor. Also, did you use the updated version of the Processing IDE code which is at the bottom of the post.

REPLY

Akshay Agarwal

January 14, 2016

thank u sir for your concern it really helped me as u said to check i just again started from the very begnning and used the new

processing sketch and now it is working thank you sir

vinay

January 13, 2016

Dear sir,

My sensor is showing “0” distance in any way.
And the radar is showing red due to the zero reading
can you please find the problem

REPLY

Dejan Nedelkovski

January 14, 2016

Maybe your sensor isn’t working. Check my particular tutorial for the ultrasonic sensor, and see if the sensor is working with that code.

REPLY

Lapenta

January 13, 2016

Thank you very much for sharing your project! very neat!

REPLY

Ernesto

January 13, 2016

sorry can you tell me how can I do a code to turn on a led with this same example but turn on the led to any distance you want to???
CAN YOU HELP ME PLEASE????

REPLY

Dejan Nedelkovski

January 14, 2016

You can do that. Check my Arduino and Processing IDE tutorial for that.

REPLY

Ernesto

January 14, 2016

ok but if I dont wanna use processing just the servo and the sensor to turn on the LED can you help me to doing a code Please???

L Greene

January 13, 2016

Hello, I would like to try this for a school project, but I was wondering if this works on Arduino Yun as well?

REPLY

Dejan Nedelkovski

January 14, 2016

Yes, if the microcontroller is ATmega32U4, and the pins of the Arduino Yun are 5V. Because if the are at 3.3V you might have problem with the Ultrasonic sensor, as it works at 5V.

REPLY

L Greene

January 14, 2016

I tried some things, but I when I tried to upload the first code, I got the following error:

Arduino: 1.6.6 (Mac OS X), Board: “Arduino/Genuino Uno”

/Users/Username/Schoolwerk/HKU/If This then That/Prototype 1/code1/code1.ino:2:19: warning: extra tokens at end of #include directive [enabled by default]
#include .
^

Sketch uses 5,136 bytes (15%) of program storage space. Maximum is 32,256 bytes.
Global variables use 237 bytes (11%) of dynamic memory, leaving 1,811 bytes for local variables. Maximum is 2,048 bytes.
avrdude: ser_open(): can't open device "COM1": No such file or directory
ioctl("TIOCMGET"): Inappropriate ioctl for device

L Greene

January 14, 2016

Never mind the other comment, I figured it out and everything works fine now! Thank you for putting up this wonderful tutorial!

REPLY

Ernesto

January 14, 2016

Please can u help me I got this problem “Error opening serial portCOM4:port not found” when I try to copilet, do u know the problem???

REPLY

Tom

January 16, 2016

Ernesto, We have the same problem. We are working with a MAC. Now we will try on a Windows machine. I’ll let you know if it works.

REPLY

Tom

January 17, 2016

On our system it turned out to be COM3. Then it worked.

REPLY

Nilava

January 15, 2016

Sir i want a led to light up or a buzzer to beep when an object comes in range, could u please tell me how to do it?

REPLY

Dejan Nedelkovski

January 15, 2016

It can be done, but sorry I cannot do custom codes. This tutorial and all my other tutorials are here to help you learn about Arduino and some coding, so you are able to achieve the level needed to make your own code for your own project.

REPLY

Obrelix

January 19, 2016

Hi mate !
You have to add a piezo to your circuit
select a pin of your choise to connecti it
then add these lines to your code

```
const int piezoPin = 8;

int notes[] = {262, 462, 862, 1662, 3262}; // Enter
here the notes you like

and call this function whenever you want to make
noise your piezo

void beep(){
if(distance > 40){
noTone(piezoPin);
delay(10);
noTone(piezoPin);
delay(30);
}
else if (distance 30){
tone(piezoPin, notes[1]);
delay(10);
noTone(piezoPin);
```

```
delay(30);
}
else if (distance 20){
tone(piezoPin,notes[2]);
delay(10);
noTone(piezoPin);
delay(30);
}
else if (distance 10){
tone(piezoPin,notes[3]);
delay(10);
noTone(piezoPin);
delay(30);
}
else {
tone(piezoPin,notes[4]);
delay(10);
noTone(piezoPin);
delay(30);
}
}
```

i hope this will help you

REPLY

Obrelix

January 19, 2016

i just saw that the code change when i posted due to specific symbols
you can find the code here
https://drive.google.com/open?id=0B7thj0Y_jJNRMXhfN1k0eTF5STA

SAI KRISHNA

March 16, 2016

Sir i want to add hall sensor for detecting magnetic fields if the object is magnetic material and when an object comes in range, could u please tell me how to do it?

---

charan

January 18, 2016

i want a ultrasonic sensor covering a range of 10mts or above 10meters so please give the details of the sensor what i have to use in order to cover 10mts range and as

well as the layout of the connections we we have to build on arduino board awating for your reply and thankful for seeing

REPLY

MJ

January 21, 2016

Hi, I'am MJ.
Yesterday while I was building the radar, ofcurse I was a bit confused in the coding part. I think that u meant to copy the arduino code and put on the arduino coding place and upload it on the board, and then copy and paste the processing code and do the same. But I have a small issue. When I want to upload the code of the processing I get this error about the "myPort = new Serial(this,"COM4", 9600);" on this place i get problems. It says: Error Opening serial port COM4: Port not found? Dejan please help me out I really need to finish this project in a matter of a week!! THANK YOU FOR YOUR ATTENTION SIR

REPLY

Dejan Nedelkovski

January 21, 2016

You should change the name of the COM port according to the one your Arduino is connected to you pc.

REPLY

MJ

January 21, 2016

Sir Dejan , I did realize that the COM was on 5. But I did change the com now to 4. But same thing occurred as if I did nothing... what is the issue here Sir Dejan?

Adam

January 22, 2016

Hi Dejan. While Uploading the Processor to the board I got this error “Could not load font OCRAExtended-30.vlw. Make sure that the font has been copied to the data folder of your sketch ” What does it mean sir thank you.

REPLY

Dejan Nedelkovski

January 23, 2016

There is already an answer to this question in the comments.

REPLY

splendor

January 26, 2016

hello Sir…
can you share how to change the radar distance, i want to change 1 meter…
in your project use 40cm.

thank you sir..

REPLY

vahid.IRI

January 26, 2016

hello
i used srf05
how i Increase distance of detection up to 3meter???
thanksele

REPLY

Yash Thakkar

January 26, 2016

Is their any changes required in Ardunio Uno ? or the same procedure we need to follow, any pin changes or program changes ?

Thank you in advance ..

REPLY

Dejan Nedelkovski

January 26, 2016

It’s the same.

REPLY

Yash Thakkar

January 30, 2016

Hey Dejan sir, nice project i was so excited to do and i started doing it but once i compiled code in both ardunio and proc it don’t gave error, but my servo doesn’t move once ardunio is compiled and once if i compile proc then it opens the Graph and that too moving can u fix it out.

Thank You for wonderful share.

Yash Thakkar

January 30, 2016

And i tried to change the pin to 8 9 and 10 in my uno but the program was same then it should create the error but though no error and no movement. please help solving my problem.

REPLY

splendor

February 4, 2016

sir...
where code for change the distance?
i search but didnt find.. can you help me show where code i must change?
i need you advice
Thanks for your attention

REPLY

Palwinder singh

February 5, 2016

How do i connect to tv?

REPLY

VasaG

February 5, 2016

Hello Sir!
We have followed your video for a test in school and we enjoyed it very much. But when we try it ourselves we can get all the programs working and the code into the arduino Mega, but the servo motor turns very slowly and the sensor is not working like it should. The Processing screen is just showing red all the time but is going in the same speed as the servo. Do you have any advice?
Thank you for answers!

REPLY

Dejan Nedelkovski

February 7, 2016

Make sure your servo motors works properly using different codes just for the servo, as well as make sure your Ultrasonic sensor works properly (you can check that through the codes of my tutorials for the particular topic). As for the servo motor you can also try to change the speed of rotation by changing the delay time in the Arduino code in the for loop for the servo. As for the Processing IDE part, make sure you use the last (latest) updated version of the code which is at the bottom of the post.

REPLY

JS

February 6, 2016

Working! So cool!!! Many many thanks!!!

REPLY

Dejan Nedelkovski

February 7, 2016

Great! Nice to hear that!

REPLY

Enesh Fernando

February 8, 2016

Can some one please mention a download link for the above libraries for this project. Thank you. Libraries are not available.

REPLY

Dejan Nedelkovski

February 9, 2016

You don’t need any extra libraries for this project. Just make sure you have the latest versions of Arduino IDE and Processing IDE.

REPLY

Enesh Fernando

February 11, 2016

Processing IDE is not working. I think there might be a problem with the screen resolution. I amended the resolution, but still processing is not working. No problem with the Arduino code. Problem arises with the processing code. Can you please clarify.

Thank you

Andreas Langberg

February 11, 2016

Nice guide! Made one myself and it works perfectly. In Linux, however, you get nullpointexceptions regularly from the tyyACM port. This isn't a problem as long as you throw the exception away and let it continue, which in your current version it does not. Simplest fix is to

surround your serialEvent() function with a trycatch 🙂
should make it skip less in windows as well.

REPLY

Dejan Nedelkovski

February 11, 2016

Great! Nice to hear that! 🙂

REPLY

EDISON KHO

February 12, 2016

hello DEJAN i got a radar half screen what could be the problem i need help

REPLY

Dejan Nedelkovski

February 13, 2016

This question has already been answered in the previous comments.

REPLY

nkg

February 13, 2016

i get error in processing program => COM3 port is busy

REPLY

Dušan

February 18, 2016

Hi Dejan, first I have to say that I saw your other projects and I am glad to see that we also have succesful arduino developers in our neighborhood. 😀 . Now I have to ask you something: I need to change measuring distance to use max range of 6m.What part of .pde code I need to

modify (I know I have to modify pixsDistance but dont know how). I was hoping that you could help me.
Wish you good luck with your projects 😀

REPLY

Dejan Nedelkovski

February 19, 2016

Thanks!
Here's the point with the range:
"pixsDistance = iDistance*((height-height*0.1666)*0.025); // covers the distance from the sensor from cm to pixels"
This line corresponds to 40cm range. "iDistance" is distance from the sensor in cm and "(height-height*0.1666)" is the size of the radar in pixels depending on your screen resolution and these two things require no change. What you need to change is the "0.025" coefficient according to your desire range.
Let's say you want 2 meters range which is 5 times bigger then 40cm, so in that case the coefficient would be 0.025 / 5 = 0.05.

Let me know if this worked for you.

REPLY

Maria

February 21, 2016

hi sir good day thank for the amazing project I like it . but im not experience , I want to ask u about 1 thing i upload the arduino code its good done uploading but at the prociccing i get the error :

COULD not load Font OCRAExtened-30.vlw. Make sure that the font has been copied to the data folder of your sketch

REPLY

Dejan Nedelkovski

February 22, 2016

This question has already been answered in the

comments below.

REPLY

alaa

April 10, 2016

sir my processing shows a message could not load font OCRAExtended-30.vlw. make sure that the font has been copied to the data folder of your sketch. what does that mean?

Dejan Nedelkovski

April 10, 2016

Go through the comments, you will find the answer.

Sandeep

February 22, 2016

Greetings sir.
I have copied and pasted the code of Processing IDE as said before, but i am unable to get any of the background that was shown before each code.
For sample, I had tried the program you have given to generate arcs(the first processing IDE program).
But I am not getting any display when I hit play.
Is it necessary for the arduino to be connected to get the display in the processing IDE?

REPLY

Dejan Nedelkovski

February 23, 2016

Of course, first you need to upload the Arduino Sketch and have everything connected and then run the Processing program.

REPLY

Ryuzaki

February 28, 2016

excuse me, i want to ask..
Is this project can use the Arduino UNO ?

Dejan Nedelkovski

February 28, 2016

Yes,you can use Arduino UNO.

maroih

February 27, 2016

hello thanks for ur effort i just wanna ask if i must realise radar but with elecromagnetic waves how i can ??

REPLY

Dejan Nedelkovski

February 27, 2016

Well that would be a completely different project

and I can’t see how I can help you.

REPLY

jackpot

March 2, 2016

Too long program that does not work, what a waste of time, bogus programmer

REPLY

Dejan Nedelkovski

March 3, 2016

Read the other comments of this tutorial and you will see that the most of the people have managed to get it working. So the program is working, the problem has to be with you, you are probably doing something wrong.

REPLY

Abdul rauf

March 3, 2016

Hello sir...!!
i want to try your project but i have a question that can i use two ultrasonic sensors instead of one to make my Radar at 360 degree?

REPLY

Dejan Nedelkovski

March 3, 2016

It can be done but modifications of the both Arduino and Processing source codes will be required.

REPLY

Abdul rauf

May 10, 2016

thanks for your reply sir, can you please guide me a little bit about the modifications.?
i'll be very grateful to you.

Abdul rauf

May 10, 2016

```
void drawObject() {
pushMatrix();
translate(960,1000); // moves the starting
coordinats to new location
strokeWeight(9);
stroke(255,10,10); // red color
pixsDistance = iDistance*22.5; // covers the
distance from the sensor from cm to pixels
// limiting the range to 40 cms
if(iDistance<40){
// draws the object according to the angle and
the distance
line(pixsDistance*cos(radians(iAngle)),-
pixsDistance*sin(radians(iAngle)),950*cos(radians(i
950*sin(radians(iAngle)));
```

}
popMatrix();
}
i've copied all the code before proccesing into the arduino ide and it gives the below error while verifying the code.
error= "pushMatrix is not declared in this scope"
please help.

---

rached

March 3, 2016

thnx for the project it worked for me thnx again this is the video https://youtu.be/N9FxTwBmWCk

REPLY

Dejan Nedelkovski

March 3, 2016

Cool! I'm glad to see that.

REPLY

John

March 5, 2016

Hi, if i want to make the radar “full screen” how can i do?
Thank you.

REPLY

Dejan Nedelkovski

March 6, 2016

Sketch > Present

REPLY

De Alon

March 6, 2016

pushMetrix() and popMetrix() was not declared in this program.
Make sure these function whether should be declare or not.

REPLY

Albin George

March 10, 2016

Hello sir,
While i'm trying to run the processing code the processing window get hanged and these errors are shown.
Could not run the sketch (Target VM failed to initialize).
For more information, read revisions.txt and Help ? Troubleshooting.
Can you help me to solve the error.

REPLY

abhilash

March 12, 2016

how to over come the problem of “import does not name a type”

REPLY

Vineet

March 16, 2016

Hello Sir, it has been a great fun doing this project.
But can you please tell me how can I increase the range of the radar more than 40 cms.
The range of the project given here is 40 cms.
Kindly .

REPLY

Dejan Nedelkovski

March 16, 2016

This question has already been answered in the comments section.

REPLY

SAI KRISHNA

March 16, 2016

Can anyone tell the code by adding hall sensor to this program?

REPLY

Franco

March 20, 2016

Hi, if i want to add arc line how can i do? Thanks

REPLY

Dejan Nedelkovski

March 21, 2016

You can find more info for the Processing IDE drawing function at it's official website.

REPLY

girisankar

March 24, 2016

import processing.serial.*; // imports library for serial communication
import java.awt.event.KeyEvent; // imports library for reading the data from the serial port
import java.io.IOException;
HER ARDUINO SHOWS AN ERROR MESSAGE 'import' does not name a type

REPLY

Dejan Nedelkovski

March 24, 2016

You have misunderstood the concept of the project.

The Arduino Code needs to be uploaded to the Arduino IDE. Then the Processing IDE code needs to be ‘Run’ from Processing IDE, not Arduino IDE.

REPLY

girisankar

March 25, 2016

tankz now i get it

girisankar

March 25, 2016

sir my processing shows a message could not load font OCRAExtended-30.vlw. make sure that the font has been copied to the data folder of your sketch. what does that mean? im new in this field pls help me

girisankar

March 26, 2016

im using processing 3.0

REPLY

girisankar

March 26, 2016

no lines are appearing in the display and now no errors are showing in processing

REPLY

omANGo

March 26, 2016

any arduino board will work? even mini pro???

REPLY

Dejan Nedelkovski

March 26, 2016

Yes.

REPLY

omANGo

March 28, 2016

thanks, and also, if i use pro mini do i have to change any of source code you made?

Sandipan Mukherjee

March 27, 2016

Hello....
My console window in processing is not showing...no matter how many times i press run...what should i do?

REPLY

Dejan Nedelkovski

March 27, 2016

Provide some more info about the problem. I cannot say anything with just this being sad.

REPLY

Sandipan Mukherjee

March 27, 2016

I have copied the 2 programs for arduino and processing as given…..but after connecting the arduino uno to my laptop and running the code in processing the console window is not appearing…….the program is uploaded in the arduino and the connections are fine….i am getting the output on the serial monitor…….i am a beginner so i am not sure where i am going wrong..

REPLY

Narasimha

March 29, 2016

THANKS FOR YOUR CODE AND IT WORKS VERY WELL
.COULD WE INTERFACE THIS ANRDUINO AND PROCESSING WITH LAB VIEW

REPLY

PARTH

March 31, 2016

hello sir !!
There is error opening serial portCOM3:port is busy and blank window is appeared. what should i do ??

REPLY

Dejan Nedelkovski

April 1, 2016

Go through the comments, you will find the answer.

REPLY

Sandipan Mukherjee

April 4, 2016

Can the given processing code work on Processing 3.0.2.....for some unknown reason i am not getting any output after i run the code because or is there any additional steps i need to take before/after uploading the arduino code and then immediately running the processing code

REPLY

Imtiaz Ahmed

April 7, 2016

sir i m not getting any output on screen of ide processing
it does not show anything
can you please tell do i need anyother java software

install in pc???
java.lang.NullPointerException i got this error

REPLY

Imtiaz Ahmed

April 7, 2016

you are awesome dude

REPLY

Ramashish Verma

April 9, 2016

can i able use dc motor instead of servo motor..

REPLY

Dejan Nedelkovski

April 10, 2016

Sure, but you will have to modify the schematics and the code.

REPLY

Peter

April 9, 2016

How to make your processing code to draw more range than 40?I cant make it correctly(It will be nice to show ,how to make it to show 60cm and more)

REPLY

Dejan Nedelkovski

April 10, 2016

This question has already been answered in the comments below.

REPLY

pankaj singh

April 13, 2016

hello sir, when i am uploading my arudino uno code into arduino software program is uploaded but my servo motor is not rotated why sir.

REPLY

Dejan Nedelkovski

April 13, 2016

Recheck your connection. Make sure you have everything connected properly and the pins match with the code.

REPLY

RKS

April 14, 2016

we have used your code word to word and even worked out the font and screen resolution errors. But in the end we are facing a problem. when we disconnect the sensor, the green line shows but as soon as we connect the sensor the green lines disappear and only the red lines are visible. The sensor doesn't detect anything as the distance is always 0 but the red lines move from 15-165 degrees. we thought there was something wrong with the sensor so we changed it but that didn't help. so please help.

REPLY

Dejan Nedelkovski

April 14, 2016

Well do you get correct values in the Arduino Serial Monitor from the sensor or it's 0 all the time?

REPLY

RKS

April 15, 2016

In the serial monitor we get 15,0.16,0.17,0.18 and so on. So I guess the distance is always zero. What does this mean? How do we fix this problem?
Thankyou

Dejan Nedelkovski

April 18, 2016

Check my ultrasonic sensor tutorial and see whether that one will work. If not probably your sensor isn't working.

RKS

April 24, 2016

yes, our sensor wasn't working. After replacing it, the project has been working perfectly now. Thanks a lot!

Dejan Nedelkovski

April 26, 2016

Great, nice to hear that!

Ahmed Moustafa

April 14, 2016

Hello Sir,
How can I use this code to drive my robot for the nearest object ?
I have the nearest object angel and distance, but I don't know how to control the motors for this position

REPLY

Dejan Nedelkovski

April 14, 2016

Well it depends on the motors, check some of my

tutorials about motors.

REPLY

Nausikaa

April 15, 2016

I tried to use this code but it seems that the bottom half is in Javascript instead of c++ or any other compatible code, so it won't work with my Arduino. How could I fix this?

REPLY

pankaj singh

April 16, 2016

hi sir, how to connect the processing code through arduino uno code.

REPLY

mohcine

April 16, 2016

can we use arduino uno?

REPLY

Dejan Nedelkovski

April 18, 2016

Yes, you can.

REPLY

Oscar David

April 21, 2016

Hello
I need the range is 1 meter, where in the processing code must be configured to have that scope?

REPLY

Dejan Nedelkovski

April 22, 2016

This question has already been answered in the comments below.

REPLY

abdeladem

April 21, 2016

Dear Dejan
thank you so much for your great projet ,so to make it works i’ve changed :
“COM4” to “COM12” in Pocessing code.
“OCRAExtended-30.vlw” to “OCRAExtended-48.vlw” wich already exist in my computer.
and since i’m not familier with IDE Processing i still trying to change the resolution wich comes for (1920, 1080) screen i guess ,in way to make it compatible with my own 1280*1024.

if could help me that’s gonna be great .
thank you

REPLY

Dejan Nedelkovski

April 22, 2016

There is another code at the bottom of the post which is for a custom resolution.

REPLY

Gilles

April 21, 2016

Thanks a lot for the project.
We had a lot of fun with my son !

REPLY

Dejan Nedelkovski

April 22, 2016

Great, nice to hear that!

REPLY

Rickey Singh

April 21, 2016

Hello Sir, for the updated display code I am getting an error which reads:

exit status 1
‘import’ does not name a type

This error is for this code “import java.io.IOException;”

REPLY

Dejan Nedelkovski

April 22, 2016

You are messing things up. You are using an Arduino code in Processing IDE.

REPLY

RS

May 3, 2016

I figured out what I was doing wrong and the project is working well.
Can I integrate the display on an LCD?
I have a 3.2′ TFTLCD Shield for Arduino Mega2560.
Also, do you have any advise on the code and pin connections for this LCD display?

Dejan Nedelkovski

May 4, 2016

It might be done but you need to create your own code which wouldn’t be that simple.

John

April 27, 2016

Hello
Should I use mini servo for this procect? If I use a bigger servo,do I need to modify anything in the code?

REPLY

Dejan Nedelkovski

April 29, 2016

Well it depends whether the servo is driven in the same way as the mine.

REPLY

haziq

April 28, 2016

hello sir dejan, how do we connect the ultrasonic sensor with the laptop screen? which code should i modify?

REPLY

Dejan Nedelkovski

April 29, 2016

Through the Arduino, the Serial Communication and Processing IDE.

REPLY

haziq

April 29, 2016

sir dejan, i still blurred on the step.. can you please show me in detail? i am still new with arduino ..

haziq

April 29, 2016

sir dejan, or maybe you just give me the lines for arduino code to connect the ultrasonic sensor with laptop screen.. thankyou

Marc Tran

April 29, 2016

Hello dejan,
Thank you for the great project!!!
I have a question regarding the display. after clicking the run button in processing, my display only shows partial screen of the scanning radar. Changing the display resolution does not fix the problem. I also change to different font. Please help.
Thanks in advance.

REPLY

Dejan Nedelkovski

May 2, 2016

Did you use the updated code at the bottom of the article?

REPLY

Marc

May 4, 2016

Thanks for the reply,

Yes, I used the updated code at the bottom of the article. As instructed I change the size() to 1600 x 900 as recommended by my display setting.

Vinay Bhat

May 8, 2016

Sir im using ubuntu and i have problem with that processing code. Its says port error!!
Help!!

REPLY

Dejan Nedelkovski

May 9, 2016

Well yes, the line for defining the port should should be modified. Each OS needs different definition.

REPLY

Ubernez

May 13, 2016

Hi, My daughter is about to do this project with her weekend Science group (all 12 years old).
I just wanted to say that the code and the video and the explanations are excellent, and I think this will be an excellent project for them.

I am also going to use it to introduce the concept of Radians to them, as a side note.

Many thanks for your all your efforts and explanations and tutorials. A truly inspirational site.

REPLY

Dejan Nedelkovski

May 13, 2016

I'm so glad to hear this, thank you!

REPLY

Ubernez

May 19, 2016

My daughter has done the project, and it worked perfectly first go!
Excellent.
(Did not use the updated code version, just the original).
Many thanks again.

Dejan Nedelkovski

May 20, 2016

Great, I’m so glad to hear this!

Ciprian

May 24, 2016

Hello Sir,

I have a problem with Processing. Last time I used this app everything functioned. Now the radar’s drawing is broke. I can’t attach a picture to show you what is happening. Radar appear regular when I open Processing but it doesn’t scan the near environment. It just draw a bold red line from the center to the begining degree of scanning.

REPLY

Dejan Nedelkovski

May 24, 2016

You might be having a problem with the ultrasonic sensor not giving the correct values. Check them via the Arduino Serial Monitor first.

REPLY

Ciprian

May 24, 2016

The sensor is working 😕 , the servo-motor is working

Ciprian

May 24, 2016

I tried to change pins in the testing program for the sensor with the pins 10 and 11 and the sensor is working. do you know another software like processing?

D Alon

May 24, 2016

I made it.....thanks for the guidance

REPLY

Dejan Nedelkovski

May 24, 2016

Great, have fun! 🙂

REPLY

Klaus

May 26, 2016

Very cool project! Thanks for sharing! Worked great after I fixed the problem with the font.

REPLY

Dejan Nedelkovski

May 27, 2016

Thanks, nice to hear that it worked for you!

REPLY

Pierre

May 29, 2016

Hi Dejan,

Thanks for making this project available, it’s very impressive. We brought it to a group of about 60 students and they made it. All were very impressed with the results.
I’ve done it on my computer and it works very well. On the student laptops, coming with many different setups, screen resolutions and operating systems, we had issues on some. The main one was with resolution. Even using your last code for all screen resolution, and changing the “size (1920, 1080); ” line with their respective screen resolution did not change the size of the radar graph. We

can only see the top left corner of the radar, with the base and angles-distances out of the screen. This mainly happened with the lower screen resolutions, around 1360, 768. I think other feedbacks mentioned this as well, I'm trying to troubleshoot on my computer but if you can help it would be great.
Others were getting error messages when compiling the Arduino code, I'm thinking it could be linked to their antivirus softwares as they were getting prompts from it. Anyway we'll work through this one.

Thanks again for sharing this code, it made the kids very happy!

REPLY

Pierre

May 29, 2016

Hi again,

The resolution issue is solved. I think I had used a previous version of your code, I see that all graphics are sized for width and height of the size() function.

Thanks!

REPLY

Dejan Nedelkovski

May 29, 2016

Great, I'm so glad to hear that it worked for you and that the students had fun making it. 🙂

REPLY

Daniel Fernandes

June 2, 2016

Hi friend! Great design!
How would the code to display this on a TFT LCD screen 3.2" ?
Thank you

REPLY

Dejan Nedelkovski

June 3, 2016

Thanks. Well I don’t have such an code, but it’s probably possible to be done.

REPLY

rozzers

June 10, 2016

Hey Dejan. Great instruction. Heres a demo of a makealike with the help of one of my kids..

https://youtu.be/ny7O03J-pRE

REPLY

Dejan Nedelkovski

June 16, 2016

Thanks! That's really great. 🙂

REPLY

builder14

June 15, 2016

Great project! However I did have a problem downloading the processing sketch for the screen. Do you know why? Thanks.

REPLY

Dejan Nedelkovski

June 16, 2016

Thanks!There shouldn't be any problem. What kind of problem do you have?

REPLY

Carlos

June 18, 2016

Hello

I am really new using arduino. I see that the code that you gave us is in 6 parts. How i mixed up?

thank you

REPLY

Dejan Nedelkovski

June 24, 2016

There is one Arduino code and one Processing IDE code. Everything is stated well in the post, which of them where it needs to be used.

REPLY

slboys

July 13, 2016

Is there a way to do this with a three-pin ultrasonic sensor? Or, if there isn't, what is the fourth pin for?

REPLY

Dejan Nedelkovski

July 13, 2016

Well the one with 3 pins is a bit different module but it can be used for the same project. You just need to modify the code appropriately.

REPLY

Jonny

July 19, 2016

Hi Dejan I would like to know how did you set up the screen and how to connect it in order to have the green radar lines going on if you could explain me this thank

you I already scrolled the other comments…

Jonny

REPLY

Dejan Nedelkovski

July 19, 2016

Hi there. Everything is already explained in the article, I don’t see what else can I say…

REPLY

Jonny

July 20, 2016

Hi Dejan thanks for the prompt reply, I am trying to compile the code but i get errors could you send me a link of the latest code bro thank you!

Jonny

Jonny

July 20, 2016

Hi Dejan the error message that i am getting is ‘import’ does not name a type what should i do with it? thank you!

REPLY

vivek

July 21, 2016

Hey, great project!!! 🙂
But I wanted to know how can we make it rotate 360 degrees because the servo can rotate up to 190 degrees. Can we have a wireless radar configuration for making it rotate 360 degrees or a sensor equivalent to 360 radiation pattern?
pls help me out!!!
Thank u

REPLY

Dejan Nedelkovski

July 24, 2016

Thanks!
Sure, everything is possible but I don’t see how I can help you.

REPLY

LEAVE A REPLY

Your email address will not be published.

Comment

Name*

Email*

Website

SUBMIT

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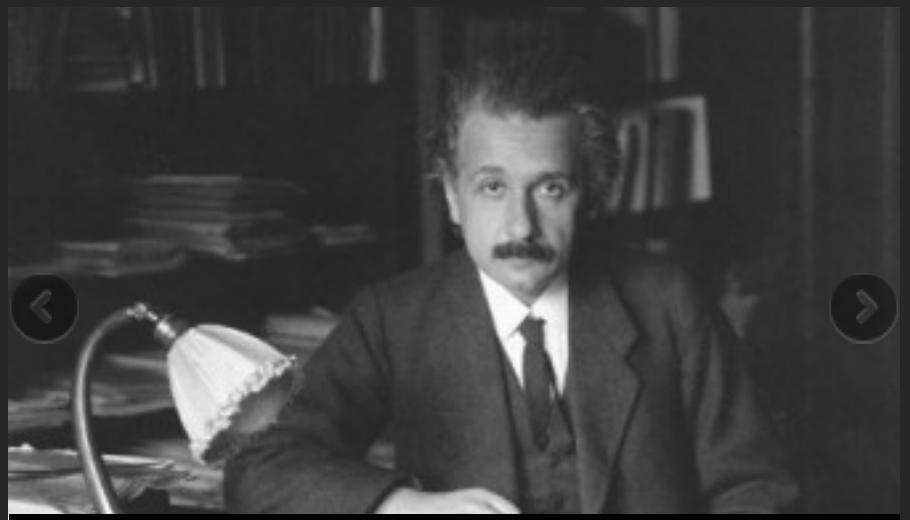

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