Sensors 1 Project Submission

Intro: We are incorporating sensors to create a radar that detects objects.

In simple words this is how the project works. The ultrasonic sensor is mounted on a servo motor which rotates sideways. The sensor scans area within its distance (around 200cm far).

If there is no object in a specified range let's say that there is nothing in front of the sensor at about a distance of 40cm then all green lines are display on the radar.

On the other hand, if we place an object within the 40cm range then the sensor detects the object and that is indicated by the red lines on the radar.

Component:
hardware components we need for this project.
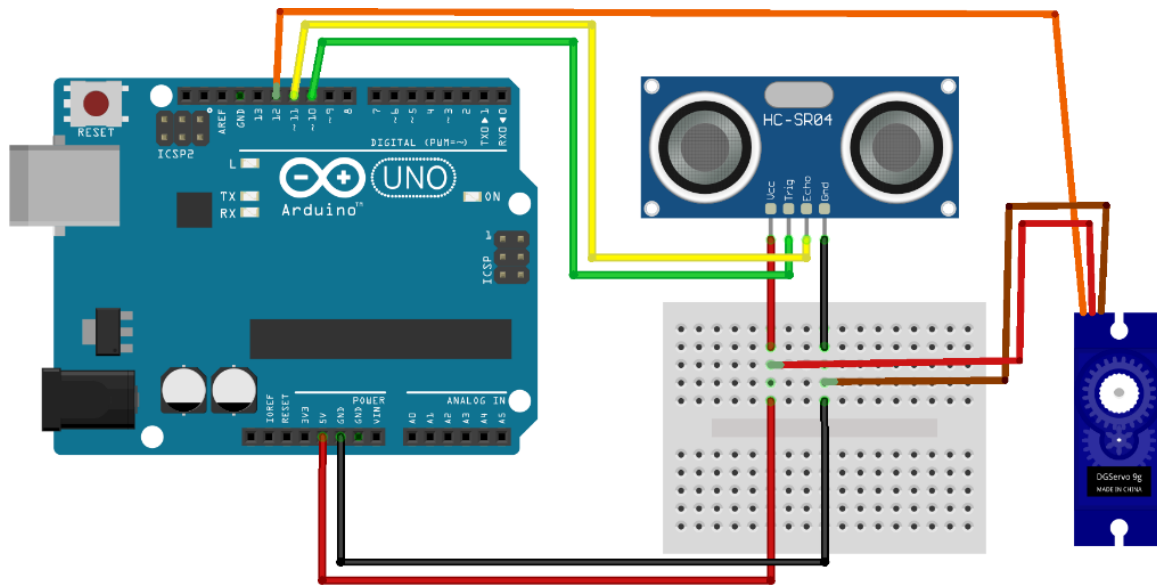
1x Arduino

1x ultrasonic sensor

1x servo motor

1x small breadboard

5x Male to Male jumper wires

4x Male to Female Jumper wires

Circuit:

connected the Ultrasonic sensor with the Arduino Board in the following way: -

VCC -5V

GND-GND PIN

TRIG -10

ECHO-11

Then next connect the servo motor as follows: -

RED wire - 5V

BROWN wire- GND

ORANGE - 12

Code:

coding part 1: Arduino IDE

Arduino code is present on my GitHub

coding Part 2: Processing

Processing code is present on my GitHub

Step 4: Check in the code line 20. You will find the port number Witten as "COM13". You must match it with the COM number you used in your Arduino IDE. For example, your port can be "COM5" or "COM6" etc.

Step 5: Mention the PORT name and then run the program.

Result:
Try bringing an object near the sensor and you will see a difference in the pattern of the radar