Module 7 – Working with an Ultrasonic Sensor

For this module you will need:

- ESP32
- Breadboard
- Female to Male Jumper Wires
- Ultrasonic sensor

Be sure the ESP32 is unplugged, and the battery pack power switch is OFF.

We will now interface an Ultrasonic Sensor to the ESP32 (a microcontroller).

Doing so will allow us to measure the distance to an obstacle in front of the robot car.

Assemble the diagram shown here:

Jumper the two red rails together

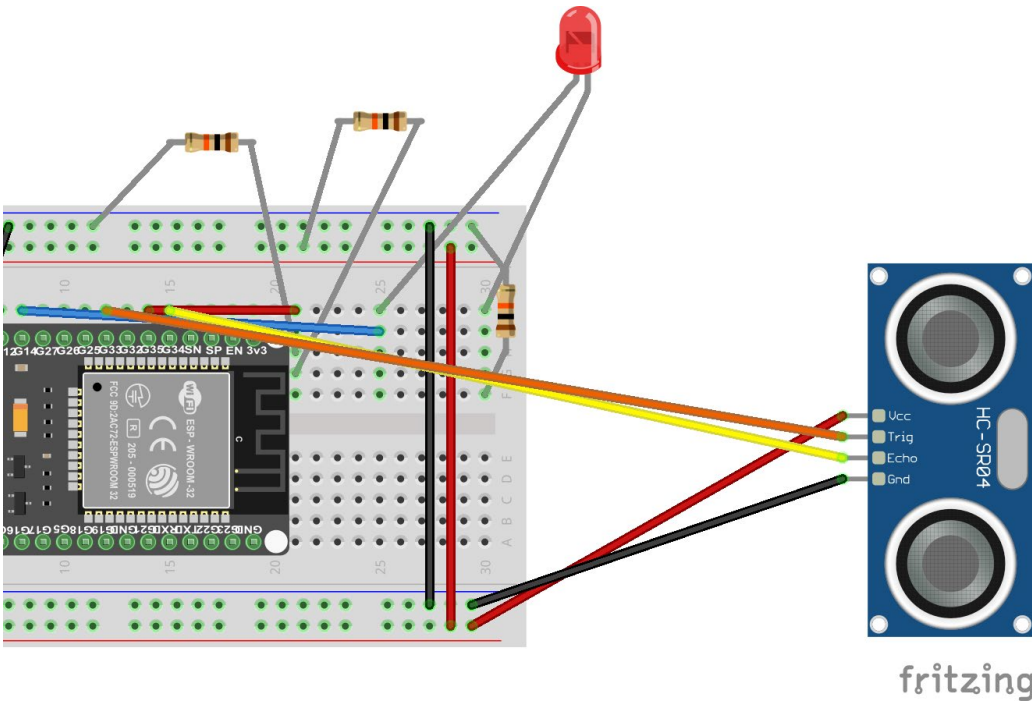
Jumper the two blue rails together

Connect the ultrasonic Vcc to a red rail

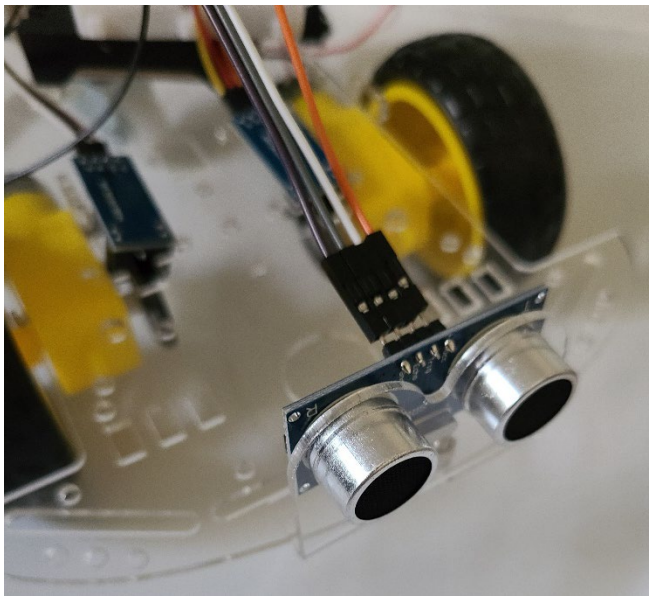
Connect the ultrasonic Gnd to a blue rail

Connect the ultrasonic Echo to G34

Connect the ultrasonic Trig to G33

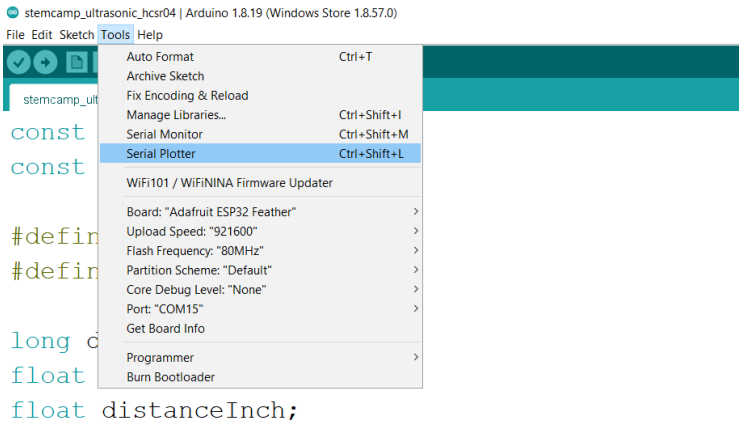


With the jumper cables connected to the ultrasonic sensor, bend the pins back as picture below and insert into the ultrasonic sensor holder.

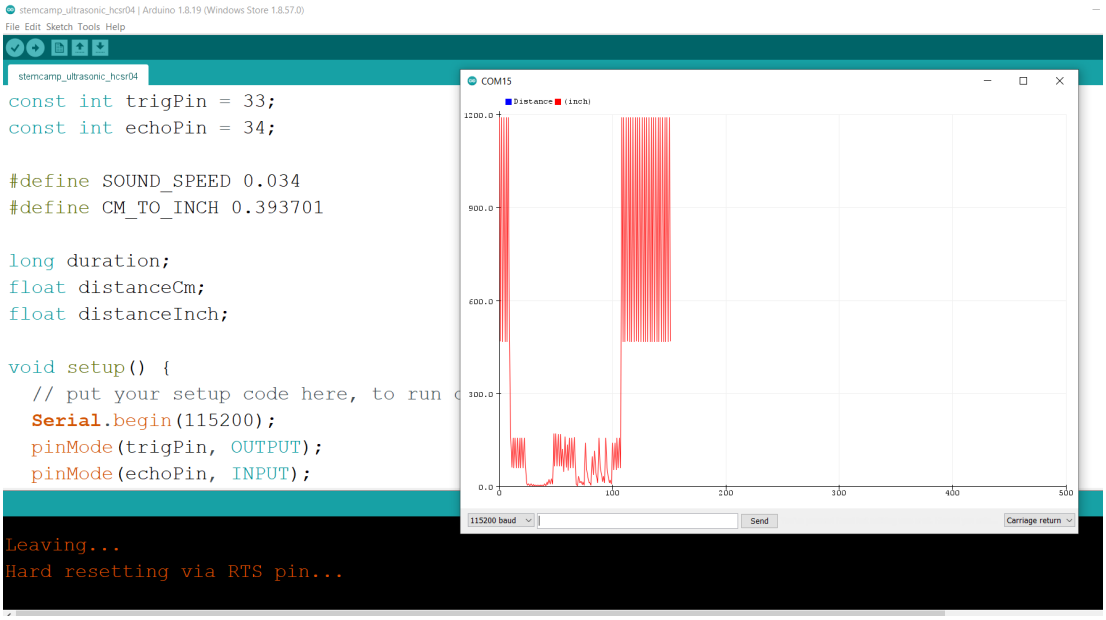


In the Arduino IDE, open the file **stem_camp_ultrasonic.ino**

Go to ***Tools->Serial Plotter***



You will see the distance that the ultrasonic sensor detects in the serial monitor.



See if you can work with your team to turn the LED on and off depending on a certain distance.