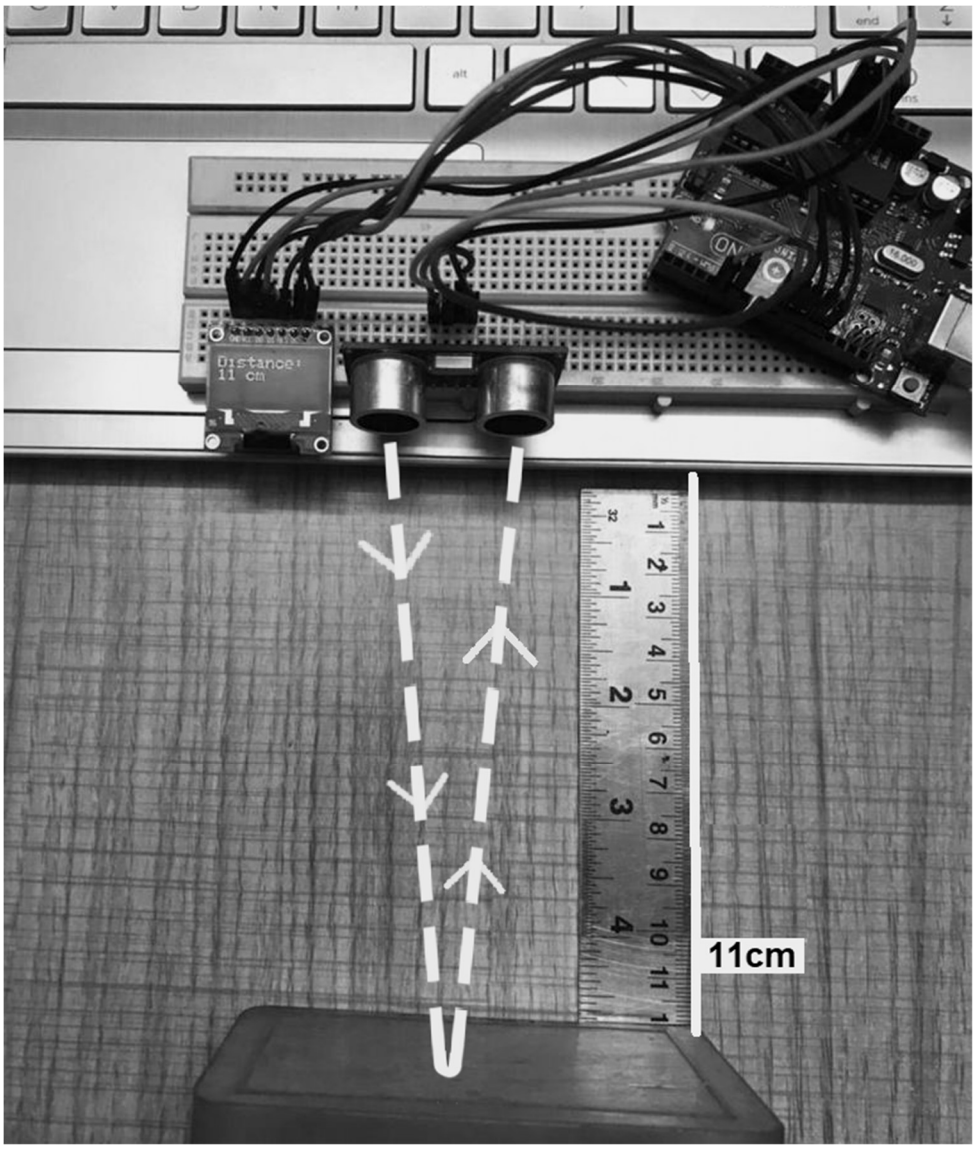
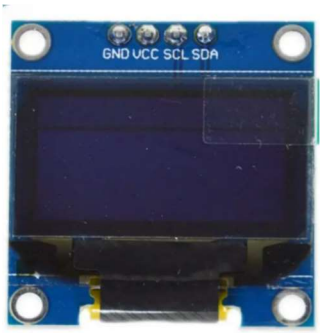
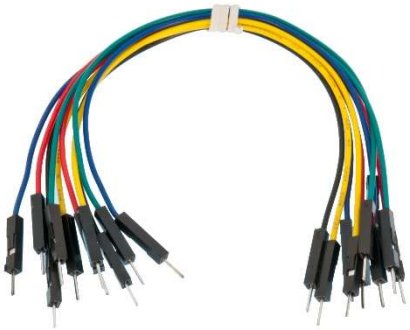
```
#include <SPI.h>
#include <Wire.h>
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>

#define SCREEN_WIDTH 128 // OLED display width, in pixels
#define SCREEN_HEIGHT 64 // OLED display height, in pixels
// defines pins numbers
const int trigPin = 5;
const int echoPin = 6;
// defines variables
long duration;
int distance;
// Declaration for SSD1306 display connected using software SPI
(default case):
#define OLED_MOSI   9
#define OLED_CLK   10
#define OLED_DC    11
#define OLED_CS    12
#define OLED_RESET 13
Adafruit_SSD1306 display(SCREEN_WIDTH, SCREEN_HEIGHT,
  OLED_MOSI, OLED_CLK, OLED_DC, OLED_RESET, OLED_CS);

void setup() // Runs only once
{
  Serial.begin(9600);
  // SSD1306_SWITCHCAPVCC = generate display voltage from 3.3V
internally
  if(!display.begin(SSD1306_SWITCHCAPVCC)) {
    Serial.println(F("SSD1306 allocation failed"));
```

```
    for(;;); // Don't proceed, loop forever
  }
  pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
  pinMode(echoPin, INPUT); // Sets the echoPin as an Input
  display.display();
  delay(2000); // Pause for 2 seconds
  display.clearDisplay();
}

void loop() // Runs infinite number of time
{
  display.clearDisplay();
  display.setTextSize(3); // Draw 2X-scale text
  display.setTextColor(WHITE);
  display.setCursor(5, 0);
  // Collecting Sensor Data
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = duration * 0.034 / 2;
      // use distance formula: d = vt / 2

  // Output
  display.print(distance);
  display.println(" cm");
  display.display();
  delay(1000);
}
```


Distance:
11 cm
11cm


HC-SR04
Vcc
Trig
Echo
Gnd


GND VCC SCL SDA

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