Tutorial NodeMCU V2: I2C 16x2 LCD (nodemcu-hcsr04-i2c-lcd.ino)

1. Hookup the following connection.

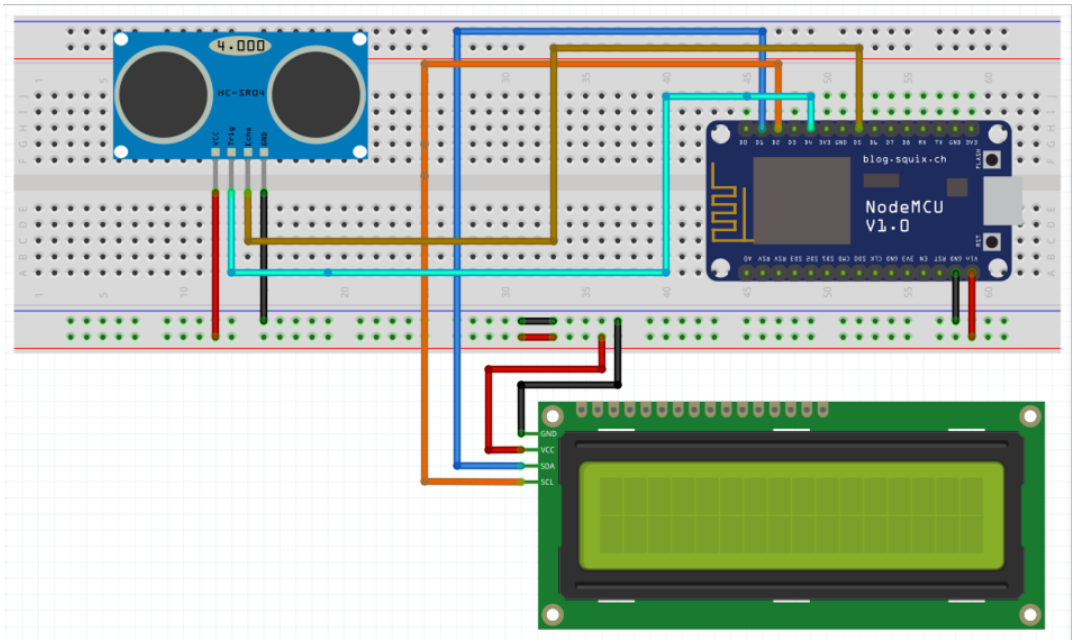


Figure 1: The connection of I2C LCD, ultrasonic sensor & NodeMCU V2

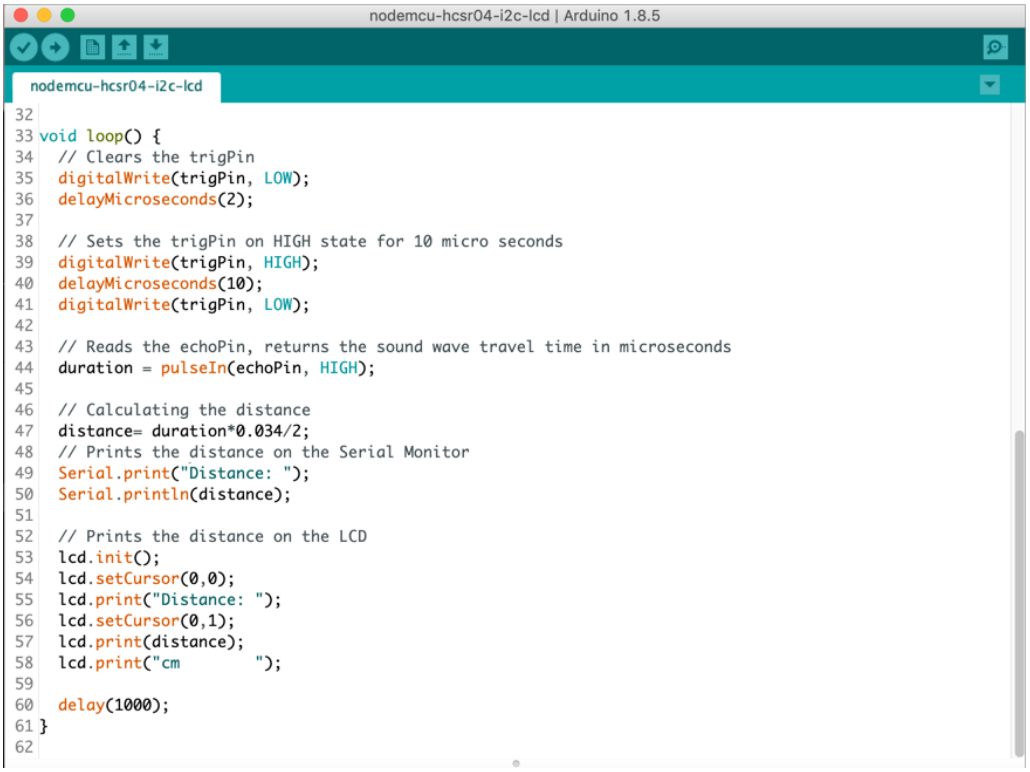
2. Program listing for the project2.

nodemcu-hcsr04-i2c-lcd | Arduino 1.8.5

nodemcu-hcsr04-i2c-lcd

```
#include <LiquidCrystal_I2C.h>

LiquidCrystal_I2C lcd(0x27,16,2);  // set the LCD address to 0x27 for a 16 chars and 2 line display

// defines pins numbers
const int trigPin = D4;
const int echoPin = D5;
// scl - d1
// sda - d2

// defines variables
long duration;
int distance;

void setup() {
pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
pinMode(echoPin, INPUT); // Sets the echoPin as an Input
Serial.begin(9600); // Starts the serial communication

  lcd.init();    // initialize the lcd

  lcd.backlight(); // Enable or Turn On the backlight
  lcd.setCursor(1,0); //lcd.setCursor(x,y)
  lcd.print("SELAMAT DATANG "); // Start Print text to Line 1
  lcd.setCursor(5,1); //lcd.setCursor(x,y)
  lcd.print("KE PMJ"); // Start Print text to Line 2
  delay(1000); //delay 1sec

}
```

Figure 2a




```
32
33 void loop() {
34   // Clears the trigPin
35   digitalWrite(trigPin, LOW);
36   delayMicroseconds(2);
37
38   // Sets the trigPin on HIGH state for 10 micro seconds
39   digitalWrite(trigPin, HIGH);
40   delayMicroseconds(10);
41   digitalWrite(trigPin, LOW);
42
43   // Reads the echoPin, returns the sound wave travel time in microseconds
44   duration = pulseIn(echoPin, HIGH);
45
46   // Calculating the distance
47   distance= duration*0.034/2;
48   // Prints the distance on the Serial Monitor
49   Serial.print("Distance: ");
50   Serial.println(distance);
51
52   // Prints the distance on the LCD
53   lcd.init();
54   lcd.setCursor(0,0);
55   lcd.print("Distance: ");
56   lcd.setCursor(0,1);
57   lcd.print(distance);
58   lcd.print("cm        ");
59
60   delay(1000);
61 }
62
```

Figure 2b