

## Ultrasonic code for arduino board

```
#define TRIG_PIN 9 // Define the digital output pin for the ultrasonic
sensor's trigger
#define ECHO_PIN 10 // Define the digital input pin for the ultrasonic
sensor's echo

void setup() {
    Serial.begin(9600);
    pinMode(TRIG_PIN, OUTPUT);
    pinMode(ECHO_PIN, INPUT);
}

void loop() {
    // Send a pulse to the ultrasonic sensor to trigger a measurement
    digitalWrite(TRIG_PIN, LOW);
    delayMicroseconds(2);
    digitalWrite(TRIG_PIN, HIGH);
    delayMicroseconds(10);
    digitalWrite(TRIG_PIN, LOW);

    // Read the duration of the echo signal (in microseconds)
    long duration = pulseIn(ECHO_PIN, HIGH);

    // Calculate the distance in centimeters using the speed of sound (343 m/s)
    // and the formula: Distance = (Duration * Speed of Sound) / 2
    float distance_cm = (duration * 0.0343) / 2;

    // Print the measured distance to the serial monitor
    Serial.print("Distance: ");
    Serial.print(distance_cm);
    Serial.println(" cm");

    delay(1000); // Wait for a second before taking the next measurement
}
```