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); //low is logic gate denote 0

// set trig pin to 0v or GND

  delayMicroseconds(2); // wait for 2 microsecond

  digitalWrite(TRIG\_PIN, HIGH); ////low is logic gate denote 1

// set trig pin to 5v

  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;

//343m/s conversion 0.0343cm

// it divide by 2 becoz the sound wave travel to object and again back to it

  // 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

}