

Synopsis



Project Name

Measuring distance of nearby objects and display on serial monitor

30-03-2021

Who all contributed to the Project ?

Pabitra Jana

Statement of the Problem

Measuring distance of nearby objects and display on serial monitor

Aims and Objectives

1. Measuring distance of nearby objects
2. And display on serial monitor

Literature Review

Nil

Research Methodology

Internet

You tube

PDF

References

1. www.arduino.cc
2. www.Tinkercad.com

```
const int trigPin = 10;
const int echoPin = 9;

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
}

void loop() {
  // Clears the trigPin
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  // Sets the trigPin on HIGH state for 10 micro seconds
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  // Reads the echoPin, returns the sound wave travel time in microseconds
  duration = pulseIn(echoPin, HIGH);
  // Calculating the distance
  distance = duration * 0.034 / 2;
  // Prints the distance on the Serial Monitor
  Serial.print("Distance: ");
  Serial.println(distance);
  delay(10);
}
```



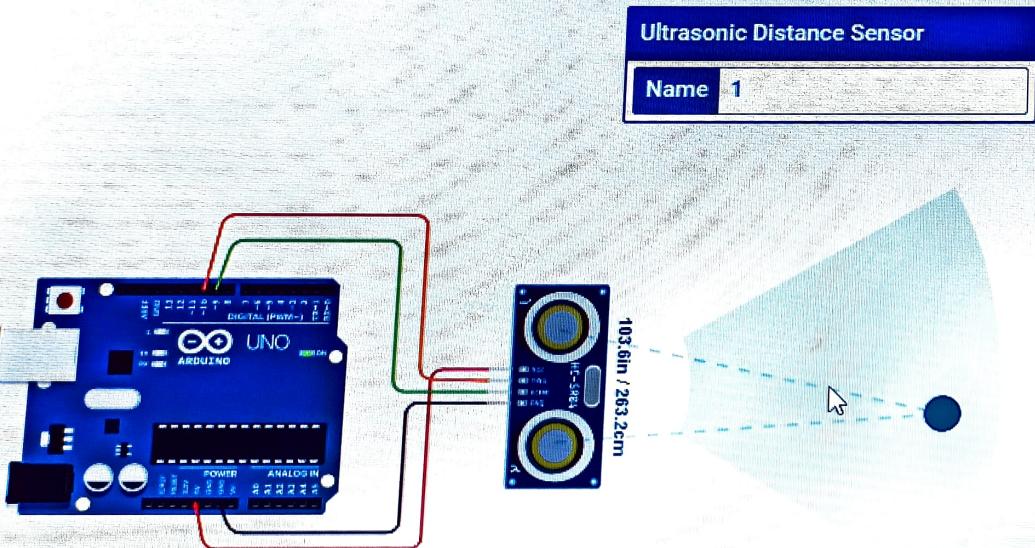
Simulator time: 00:00:16.475

Code

Stop Simulation

Export

Share



Ultrasonic Distance Sensor

Name 1

103.6in / 263.2cm

Text

```
1 const int trigPin = 10;
2 const int echoPin = 9;
3
4 long duration;
5 int distance;
6
7 void setup() {
8   pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
9   pinMode(echoPin, INPUT); // Sets the echoPin as an Input
10  Serial.begin(9600); // Starts the serial communication
11 }
12
13 void loop() {
14   // Clears the trigPin
15   digitalWrite(trigPin, LOW);
16   delayMicroseconds(2);
17   // Sets the trigPin on HIGH state for 10 micro seconds
18   digitalWrite(trigPin, HIGH);
19 }
```

Serial Monitor

Distance: 259
Distance:

Send Clear



Kup-Blorr

All changes saved



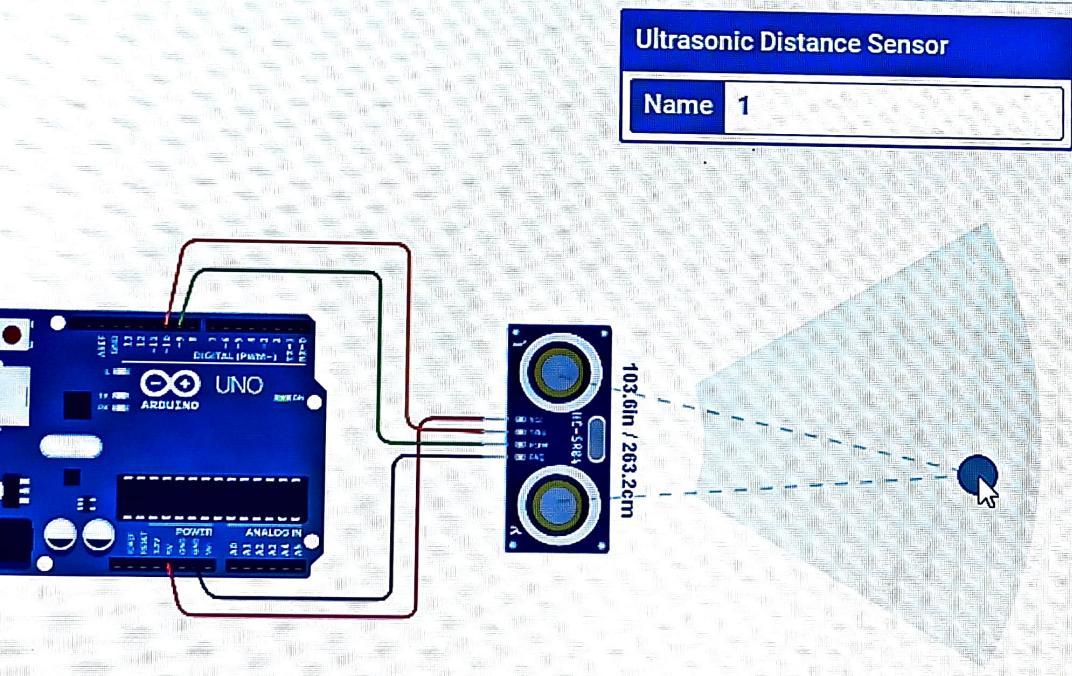
Simulator time: 00:00:08.008

Code

Stop Simulation

Export

Share



Text

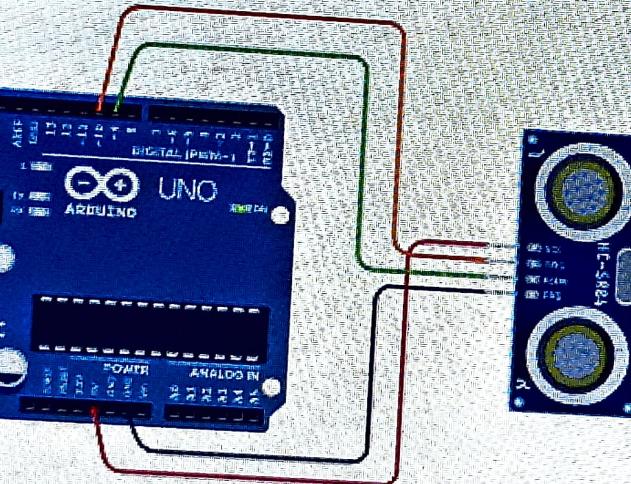
```
1 const int trigPin = 10;
2 const int echoPin = 9;
3
4 long duration;
5 int distance;
6
7 void setup() {
8   pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
9   pinMode(echoPin, INPUT); // Sets the echoPin as an Input
10  Serial.begin(9600); // Starts the serial communication
11 }
12
13 void loop() {
14   // Clears the trigPin
15   digitalWrite(trigPin, LOW);
16   delayMicroseconds(2);
17   // Sets the trigPin on HIGH state for 10 micro seconds
18   digitalWrite(trigPin, HIGH);
19 }
```

Serial Monitor

Distance: 259
Distance: 259

Send

Clear



Ultrasonic Distance Sensor

Name _____

Text

```
1 const int trigPin = 10;
2 const int echoPin = 9;
3
4 long duration;
5 int distance;
6
7 void setup() {
8   pinMode(trigPin, OUTPUT); // Sets the trigPin as an output
9   pinMode(echoPin, INPUT); // Sets the echoPin as an input
0   Serial.begin(9600); // Starts the serial communication
1 }
2
3 void loop() {
4   // Clears the trigPin
5   digitalWrite(trigPin, LOW);
6   delayMicroseconds(2);
7   // Sets the trigPin on HIGH state for 10 microseconds
8   digitalWrite(trigPin, HIGH);
9 }
```

Serial Monitor

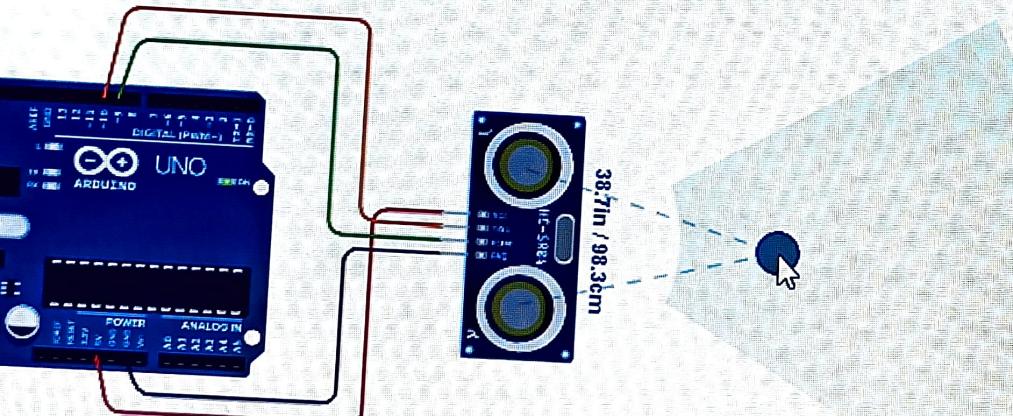


Code

Stop Simulation

Export

1 (Arduino Uno R)



Ultrasonic Distance Sensor

Name 1

38.7in / 98.3cm

Text

```
1 const int trigPin = 10;
2 const int echoPin = 9;
3
4 long duration;
5 int distance;
6
7 void setup() {
8     pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
9     pinMode(echoPin, INPUT); // Sets the echoPin as an Input
10    Serial.begin(9600); // Starts the serial communication
11 }
12
13 void loop() {
14     // Clears the trigPin
15     digitalWrite(trigPin, LOW);
16     delayMicroseconds(2);
17     // Sets the trigPin on HIGH state for 10 micro seconds
18     digitalWrite(trigPin, HIGH);
19 }
```

Serial Monitor

Distance: 96
Distance: 96

Send Clear

06:55 PM