

IOT LAB - 5th Sem

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Program No : 10

Program Title : Ultrasound Distance Sensor

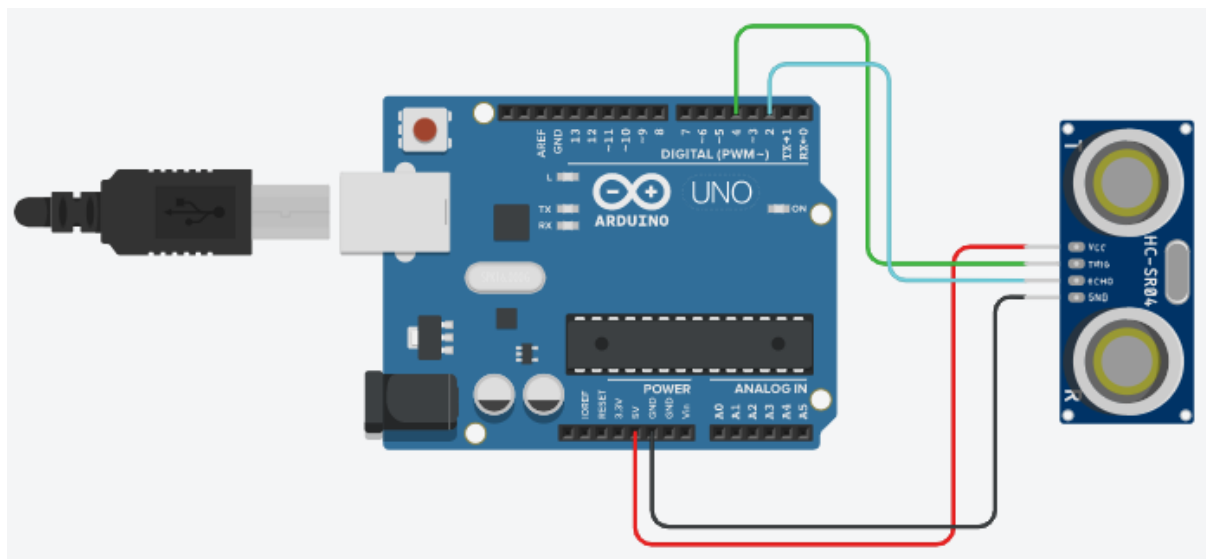
Aim :

To measure distance using an ultrasound sensor and an Arduino Uno board.

Hardware Required :

- Arduino Uno Board
- HC-SR04 Ultrasound Sensor

Circuit Diagram :



Written Code :

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Sayed

```
int trigPin = 4;  
int echoPin = 2;  
long duration, cm, inches;
```

```
void setup()  
{  
  Serial.begin(9600);  
  pinMode(trigPin, OUTPUT);  
  pinMode(echoPin, INPUT);  
}
```

```
void loop()  
{  
  digitalWrite(trigPin, LOW);  
  delayMicroseconds(5);  
  digitalWrite(trigPin, HIGH);  
  delayMicroseconds(10);  
  digitalWrite(trigPin, LOW);  
  pinMode(echoPin, INPUT);  
  duration = pulseIn(echoPin, HIGH);  
  cm = (duration / 2) / 29.1;  
  inches = (duration / 2) / 74;  
  Serial.print("Distance:");  
  Serial.print(inches);  
  Serial.print("in, ");  
  Serial.print(cm);  
  Serial.print("cm");  
  Serial.print("\n");  
  delay(2000);  
}
```

Observation /Output :

The distance was measured using the ultrasound sensor.