Lab 4 : Program 10

Date: 07/10/20
Experiment : Ultrasonic Sensor
Aim: To determine distance between two objects using an ultrasonic sensor.

Hardware:

- Arduino Uno
- Ultrasonic Sensor

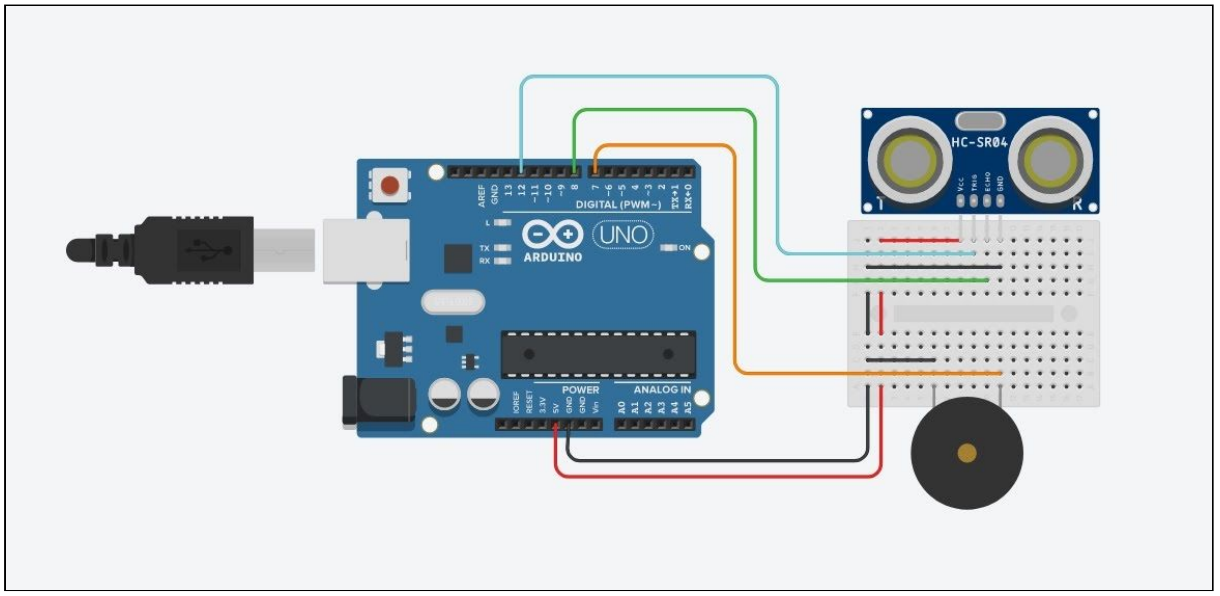
Source :

```
int signalpin = 12 ;
int echopin = 8 ;
int buzzer = 7 ;

void setup(){
  Serial.begin(9600);
  pinMode(signalpin, OUTPUT);
  pinMode(echopin, INPUT);
  pinMode(buzzer, OUTPUT);
}

void loop()
{
  digitalWrite(signalpin, LOW);
  delayMicroseconds(2);
  digitalWrite(signalpin,HIGH);
  delayMicroseconds(10);
  digitalWrite(signalpin,LOW);

  float distance = pulseIn(echopin , HIGH);
    distance = (distance/2)*0.0349 ;
  Serial.println((String)" Distance = "+distance+" cm.");

  if (distance <50){
    digitalWrite(buzzer,HIGH);
```

```
  }
  else{
    digitalWrite(buzzer,LOW);
  }
}
```

Observation : Distance is measured using an Ultrasonic sensor.

Circuit :



Write Up:

IOT Lab 4 — Distance (ultrasonic Sensor) — 7/10/20

Source Code

```
int signalPin = 12;
int echoPin = 8;
int buzzer = 7; float distance;
void setup()
{ Serial.begin(9600);
  pinMode(signalPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(buzzer, OUTPUT);
}
void loop()
{
  digitalWrite(signalPin, LOW);
  delayMicroseconds(2);
  digitalWrite(signalPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(signalPin, LOW);
  distance = pulseIn(echoPin, HIGH);
  distance = (distance/2) * 0.0349;
  Serial.println((String)"Distance =" + distance + "cm");
  if (distance < 100)
  { digitalWrite(buzzer, HIGH);
  }
  else
  { digitalWrite(buzzer, LOW);
  }
}
```