

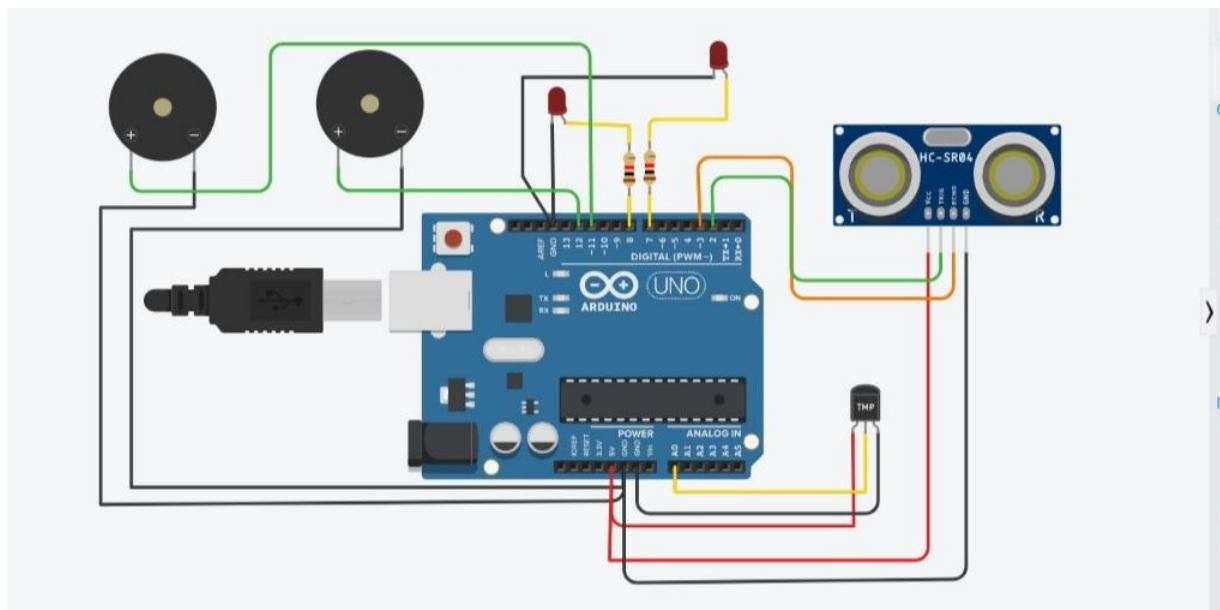
ASSIGNMENT-1

SMART HOME

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CIRCUIT DIAGRAM:



SOURCE CODE:

```
// C++ code
```

```
//
```

```
int trig=2;
```

```
int echo=3;
```

```
void setup()
```

```
{
```

```
  Serial.begin(9600);
```

```
  pinMode(trig,OUTPUT);
```

```
  pinMode(echo,INPUT);
```

```
  pinMode(12,OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  //ultrasonic sensor
```

```
  digitalWrite(trig,LOW);
```

```
  digitalWrite(trig,HIGH);
```

```
  delayMicroseconds(10);
```

```
  digitalWrite(trig,LOW);
```

```
  float dur=pulseIn(echo,HIGH);
```

```
  float dis=(dur*0.0343)/2;
```

```
Serial.print("Distance is: ");
```

```
Serial.println(dis);
```

```
//LED ON
```

```
if(dis>=100)
```

```
{
```

```
    digitalWrite(8,HIGH);
```

```
    digitalWrite(7,HIGH);
```

```
}
```

```
//Buzzer For ultrasonic Sensor
```

```
if(dis>=100)
```

```
{
```

```
for(int i=0; i<=30000; i=i+10)
```

```
{
```

```
tone(12,i);
```

```
delay(1000);
```

```
noTone(12);
```

```
delay(1000);
```

```
}
```

```
}
```

```
//Temperate Sensor  
double a= analogRead(A0);  
double trig=((a/1024)*5)-0.5)*100;  
Serial.print("Temp Value: ");  
Serial.println(trig);  
delay(1000);
```

```
//LED ON  
if(trig>=100)  
{  
    digitalWrite(8,HIGH);  
    digitalWrite(7,HIGH);  
}
```

```
//Buzzer for Temperature Sensor  
if(trig>=100)  
{  
    for(int i=0; i<=30000; i=i+10)  
    {  
        tone(12,i);
```

```
delay(1000);  
noTone(12);  
delay(1000);  
}  
  
//LED OFF  
if(trig<100)  
{  
    digitalWrite(8,LOW);  
    digitalWrite(7,LOW);  
}  
}
```

OUTPUT:



