

# IBM

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Assignment 1  
Smart Home

## Source code:

```
int t=2;
int e=3;

void setup(){
  Serial.begin(9600);
  pinMode(t,OUTPUT);
  pinMode(e,INPUT);
  pinMode(12,OUTPUT);
} void loop(){
  digitalWrite(t,LOW);
  digitalWrite(t,HIGH);
  delayMicroseconds(10);
  digitalWrite(t,LOW);
  float dur=pulseIn(e,HIGH);
  float dis=(dur*0.0343)/2;
  Serial.print("Distance is:");
  Serial.println(dis);
  if(dis>=100) {
    digitalWrite(8,HIGH);
    digitalWrite(7,HIGH);
  }
  if(dis>=100)
```

```

{
for(int i=0;i<=30000;i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
double a= analogRead(A0);
double t=((a/1024)*5)-0.5)*100;
Serial.print("Temp Value:"); S
Serial.println(t);
delay(1000);
if(t>=100) {
digitalWrite(8,HIGH);
digitalWrite(7,HIGH);
}
if(t>=100)
{
for(int i=0;i<=30000;i=i+10)
{
tone(12,i);
delay(1000);
noTone(12);
delay(1000);
}
}
if(t<100)
{

```

```
digitalWrite(8,LOW);
```

```
digitalWrite(7,LOW);
```

}

}

**CIRCUIT DIAGRAM:**

