

## CODE FOR Home Automation using Arduino

```
int t=2;
```

```
int e=3;
```

```
void setup()
```

```
{
```

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

```
  pinMode(t,OUTPUT);
```

```
  pinMode(e,INPUT);
```

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

```
}
```

```
void loop()
```

```
{
```

```
  //ultrasonic sensor
```

```
  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);
```

```
  //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 t=((a/1024)*5)-0.5)*100;
```

```
Serial.print("Temp Value: ");
```

```
Serial.println(t);
```

```
delay(1000);
```

```
//LED ON
```

```
if(t>=100)
```

```
{
```

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

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

```
//Buzzer for Temperature Sensor
```

```
if(t>=100)  
{  
  for(int i=0; i<=30000; i=i+10)  
  {  
    tone(12,i);  
    delay(1000);  
    noTone(12);  
    delay(1000);  
  }  
}
```

```
//LED OFF
```

```
if(t<100)  
{  
  digitalWrite(8,LOW);  
  digitalWrite(7,LOW);  
}  
}
```