

## Home Automation:

### C++ Code:

```
int trig=4;
int echo=3;
void setup()
{
    Serial.begin(9600);
    pinMode(12, OUTPUT);
    pinMode(2, OUTPUT);
    pinMode(8, INPUT);
    pinMode(7, OUTPUT);
    pinMode(trig, OUTPUT);
    pinMode(echo, INPUT);
}
void loop()
{
    float dur=pulseIn(echo, HIGH);
    float dist=(dur*0.0343)/2;
    int m=digitalRead(8);
    double a=analogRead(A3);
    double v=a/1024;
    double tvolt=v*5;
    double o=tvolt-0.5;
    double t=o*100;
    if (t>50)
    {
        digitalWrite(2, HIGH);
    }
    else
    {
        digitalWrite(2, LOW);
    }
    if(m==1)
    {
        digitalWrite(12, HIGH);
    }
}
```

```
    }  
    else  
    {  
        digitalWrite(12, LOW);  
    }  
    //digitalWrite(trig,LOW);  
    //digitalWrite(trig,HIGH);  
  
    if(dist<=100)  
    {  
        digitalWrite(7,HIGH);  
    }  
    else  
    {  
        digitalWrite(7,LOW);  
    }  
}
```