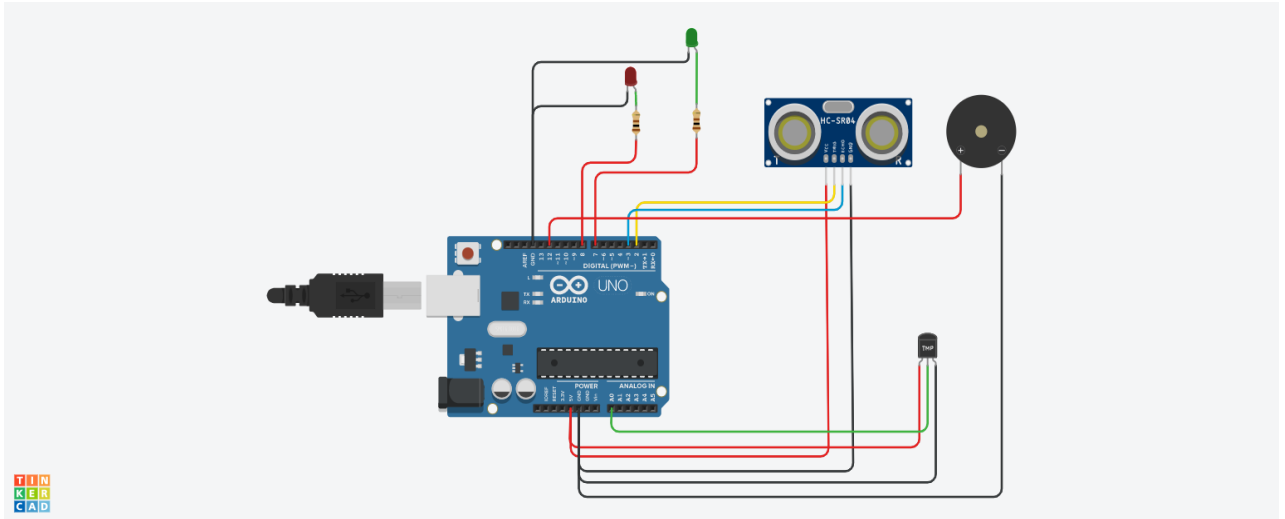# Assignment-1

Home automation

Program:

```
int redBulb = 8;
int greenBulb = 7;
int echo = 3;
int trigger = 2;
int buzzer = 12;

void setup(){
  Serial.begin(9600);
  pinMode(buzzer, OUTPUT);
  pinMode(greenBulb, OUTPUT);
  pinMode(redBulb, OUTPUT);
  pinMode(trigger, OUTPUT);
  pinMode(echo, INPUT);
}
```

```
void loop(){
  double avalue = analogRead(A0);
  double temperature = (((avalue/1024)*5)-0.5)*100;

  digitalWrite(trigger, LOW);
  digitalWrite(trigger, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigger, LOW);
  float duration = pulseIn(echo, HIGH);
  float distance = (duration * 0.0343)/2;

  if(temperature > 50){
    digitalWrite(greenBulb, LOW);
    digitalWrite(redBulb, HIGH);
  }
  else{
    digitalWrite(greenBulb, HIGH);
        digitalWrite(redBulb, LOW);
  }

  if(distance < 150)
    digitalWrite(buzzer, HIGH);
  else
    digitalWrite(buzzer, LOW);
}
```