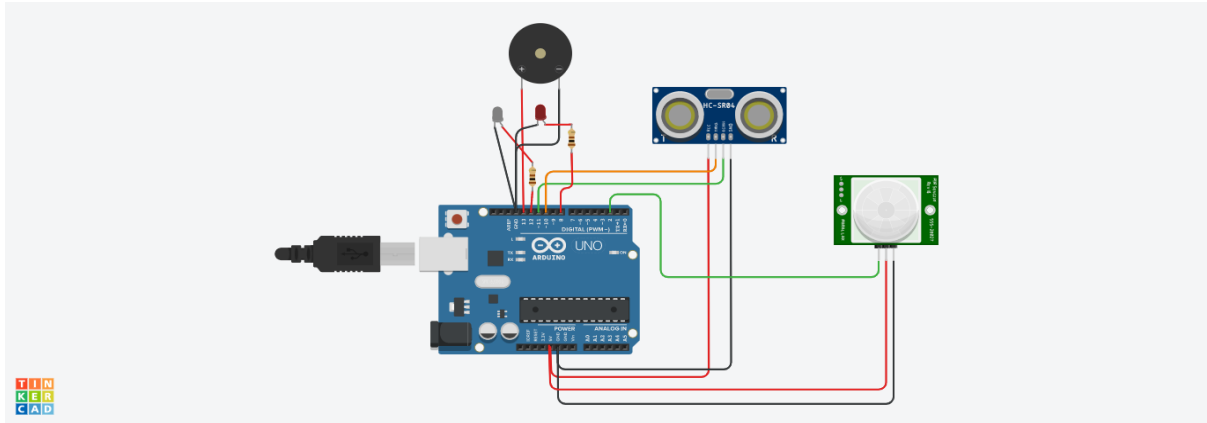# IBM ASSIGNMENT – 1
HOME AUTOMATION

CIRCUIT:

CODE:

```
#define Trig 10

#define Echo 11

#define Led 8

int pinSensor =2;

int pinLed=12;

int pinBuzzer =13;

int pirSensor=0;

void setup()

{

  pinMode(2,INPUT);

  pinMode(12,OUTPUT);

  pinMode(13,OUTPUT);

  pinMode(Trig, OUTPUT);

  pinMode(Echo, INPUT);

  pinMode(Led, OUTPUT);

}

void loop()
```
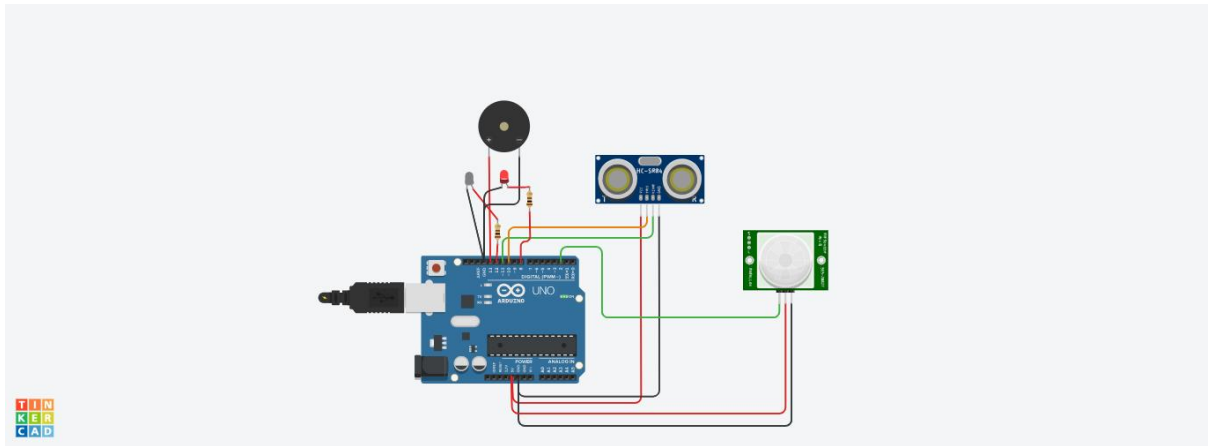
```
{
  long width, distance;
  digitalWrite(Trig, 0);
  delayMicroseconds(2);
  digitalWrite(Trig, 1);
  delayMicroseconds(10);
  digitalWrite(Trig, 0);
  width = pulseIn(Echo, 1);
  distance = width/58.2;
  Serial.print(" Distance is: ");
  Serial.print(distance);
  Serial.println(" cm");
  if (distance<100)
    digitalWrite(Led,1);
  else
    digitalWrite(Led,0);
  delay(1000);

  pirSensor=digitalRead(pinSensor);
  if(pirSensor==HIGH)
  {
    digitalWrite(pinLed, HIGH);
    tone(pinBuzzer, 1000, 500);
  }
  else
  {
    digitalWrite(pinLed, LOW);
  }
  delay(10);
}
```

OUTPUT:

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