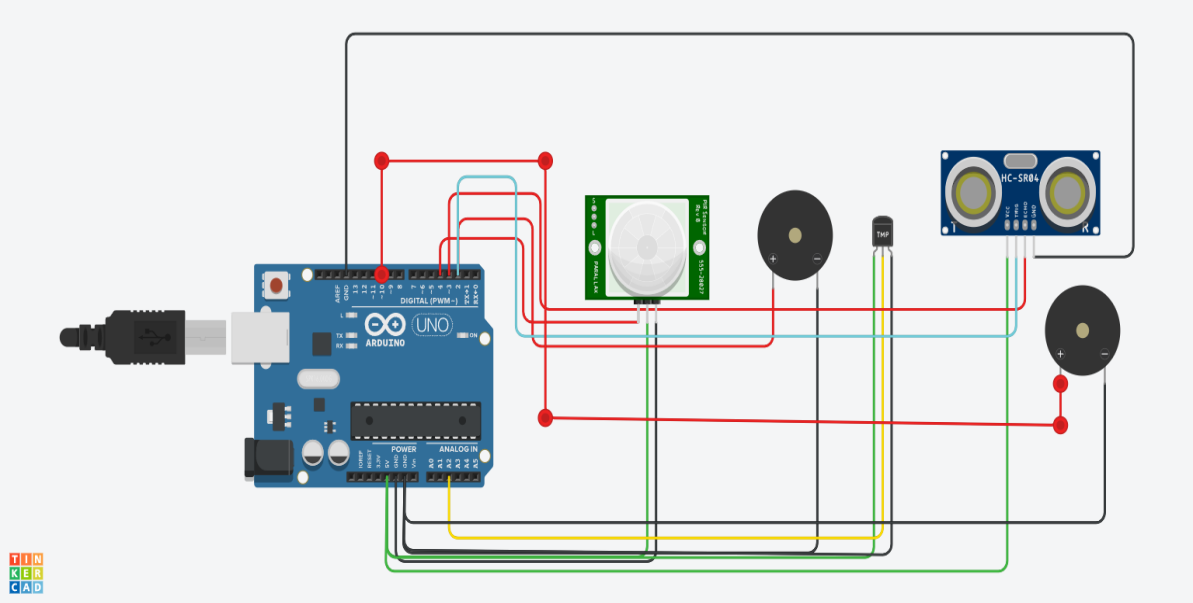
ASSIGNMENT 1

SMART HOME AUTOMATION

CIRCUIT:



CODE:

```
int trigger_pin = 2;
int echo_pin = 3;
int buzzer_pin = 10;
int time;
int distance;
void setup()
{
  Serial.begin(9600);
  pinMode(2,OUTPUT);
  pinMode(4,INPUT);
```

```
  pinMode (trigger_pin, OUTPUT);
  pinMode (echo_pin, INPUT);
  pinMode (buzzer_pin, OUTPUT);
}
void loop()
{
  int motion = digitalRead(4);
  double data = analogRead(A2);
  double n =data/1024;
  double volt= n*5;
  double off=volt-0.5;
  double temp= off*100;
  if(temp>60){
    tone(2,1000,1000);
  }
  else if(motion==1){
     tone(2,2000,1000);
  }
  else{
    noTone(2);
  }
  digitalWrite (trigger_pin, HIGH);
    delayMicroseconds (10);
    digitalWrite (trigger_pin, LOW);
    time = pulseIn (echo_pin, HIGH);
```

```
  distance = (time * 0.034) / 2;

 if (distance <= 10)
      {
      Serial.println (" Door Open ");
      Serial.print (" Distance= ");
      Serial.println (distance);
      digitalWrite (buzzer_pin, HIGH);
      delay (500);
      }
 else {
      Serial.println (" Door closed ");
      Serial.print (" Distance= ");
      Serial.println (distance);
      digitalWrite (buzzer_pin, LOW);
      delay (500);
     }

}
```