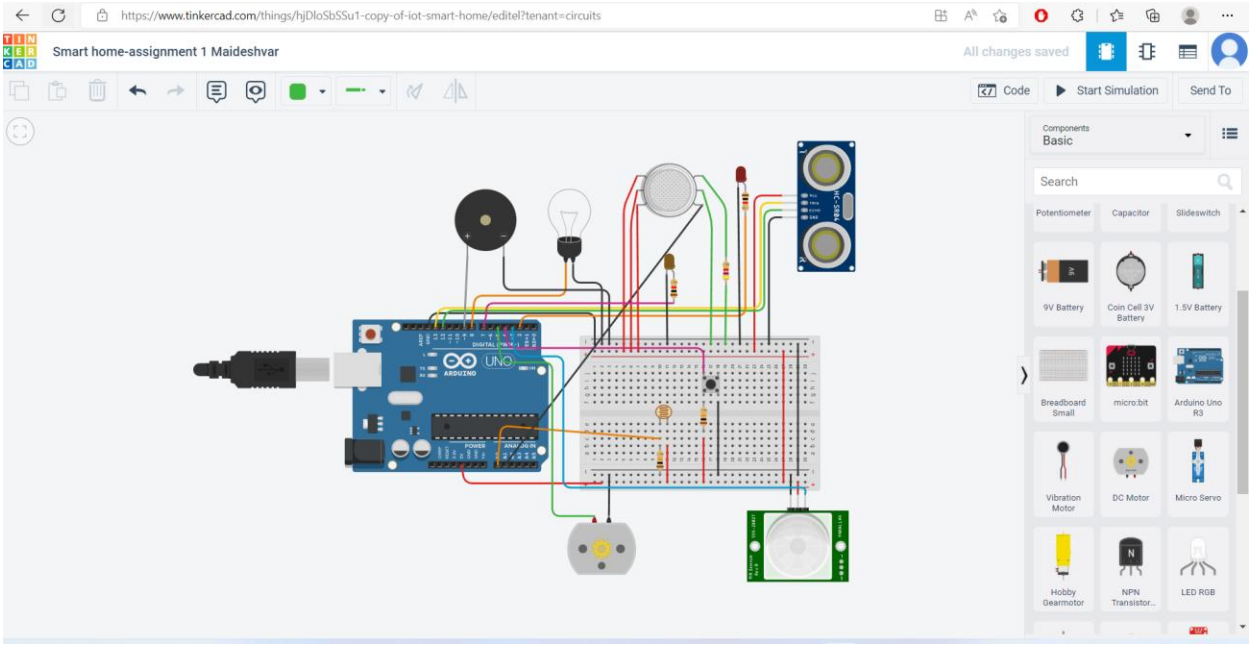
ASSIGNMENT 1

SMART HOME USING ARDUNIO



CODE:

```
int sensorReading = 0;

int inches = 0;

int cm = 0;

int triggerPin = 13;

int echoPin = 12;

int defult = 0;

long readUltrasonicDistance(int triggerPin,int echoPin)

{

  pinMode(triggerPin, OUTPUT);

  digitalWrite(triggerPin, LOW);

  delayMicroseconds(2);
```

```
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  return pulseIn(echoPin, HIGH);
}
int adcPin = 0;
int adcValue = 0;
float v;
float rs,ppm;
int buttonState = 0;
void setup() {
            pinMode(8, OUTPUT);
            pinMode(A0, INPUT);
            Serial.begin(9600);
   pinMode(2, OUTPUT);
   cm = 0.01723*readUltrasonicDistance(triggerPin, echoPin);
   default = cm;
            Serial.print(default);
             pinMode(3, INPUT);
             pinMode(9, OUTPUT);
            pinMode(5, OUTPUT);
            pinMode(4, INPUT);

  //Motor
```

```
  pinMode(7, OUTPUT);
  pinMode(A1, INPUT);
}
void loop()
        sensorReading = analogRead(A0);

  if(sensorReading < 900){
   digitalWrite(8, HIGH);
  }else{
   digitalWrite(8, LOW);
  }
  cm = 0.01723*readUltrasonicDistance(triggerPin, echoPin)  ;
  if(cm < defult){
     digitalWrite(2,HIGH);
     delay(50);
        digitalWrite(2,LOW);
  }else{
    digitalWrite(2,LOW);

  }
        int value = digitalRead(3);
        if (value == 1)
        {
        tone(9, 440,  1000);
  }
```

```
        buttonState = digitalRead(4);
  if(buttonState == 1){
        digitalWrite(5,0);
  }
  else{
    digitalWrite(5,HIGH);
  }
  int sensor_gas = analogRead(A1);


 if(sensor_gas >= 400){
        digitalWrite(7,HIGH);
 }
 else{
  digitalWrite(7,LOW);
 }
 delay(1000);
}
```