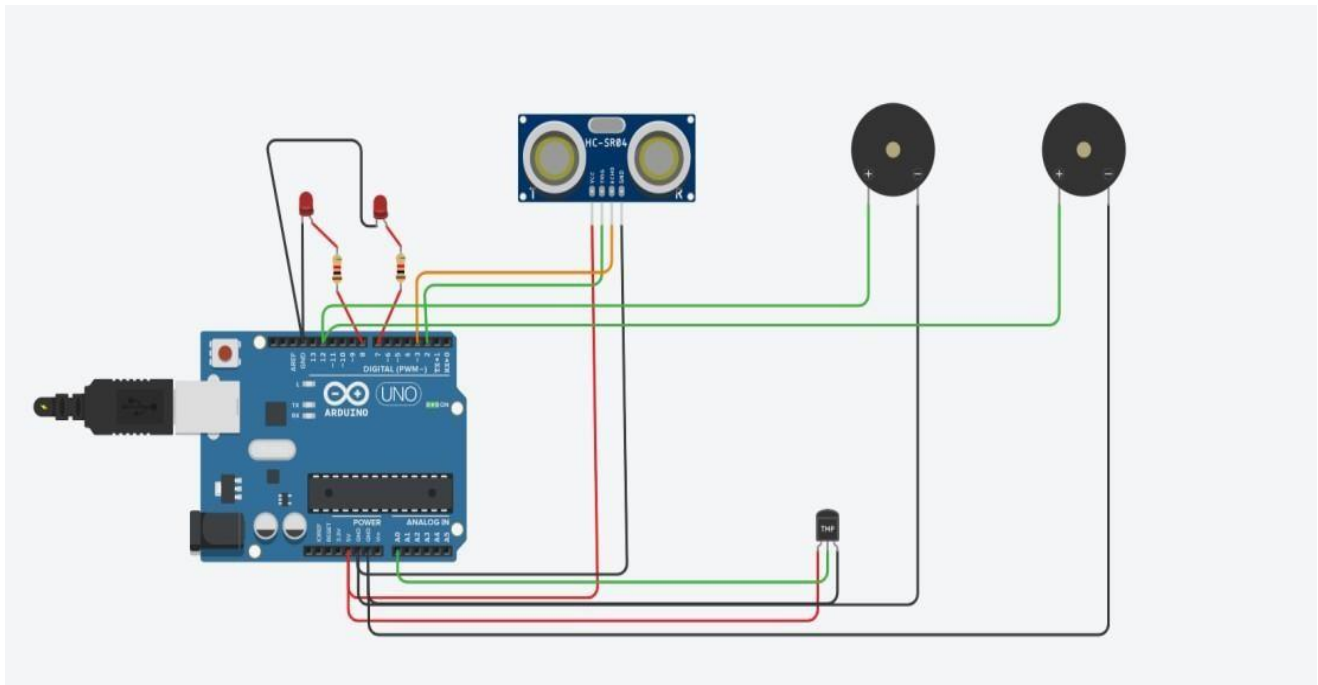**NAME** : TAMILSELVAN.S

ROLL NO : 20L419

TOPIC : Home Automation using Arduino

OUTPUT: -

Assignment-1

Code:-

```
int t=2; int e=3;
void setup()
{
      Serial.begin(9600); pinMode(t,OUTPUT); pinMode(e,INPUT);
      pinMode(12,OUTPUT);
}
void loop()
{
       digitalWrite(t,LOW);
      digitalWrite(t,HIGH); delayMicroseconds(10); digitalWrite(t,LOW);
      float dur=pulseIn(e,HIGH); float dis=(dur*0.0343)/2;
      Serial.print("Distance is: ");
      Serial.println(dis);

}
if(dis>=100)//(in terms of centimeter)
{
      digitalWrite(8,HIGH); digitalWrite(7,HIGH);
}
if(dis>=100)
{
      for(int i=0; i<=30000; i=i+10)
```

```
    {
        tone(12,i); delay(1000); noTone(12);

        delay(1000);
    }
}
double a= analogRead(A0); double t=(((a/1024)*5)-0.5)*100;
Serial.print("Temp Value: "); Serial.println(t);
delay(1000);
//LED ON
if(t>=100)//(in terms of celsius)
{
    digitalWrite(8,HIGH); digitalWrite(7,HIGH);
}
if(t>=100)
{
 for(int i=0; i<=30000; i=i+10)
{
    tone(12,i); delay(1000); noTone(12); delay(1000);
}
}
if(t<100)
{
    digitalWrite(8,LOW); digitalWrite(7,LOW);
}
```