ASSIGNMENT – 1: HOME AUTOMATION

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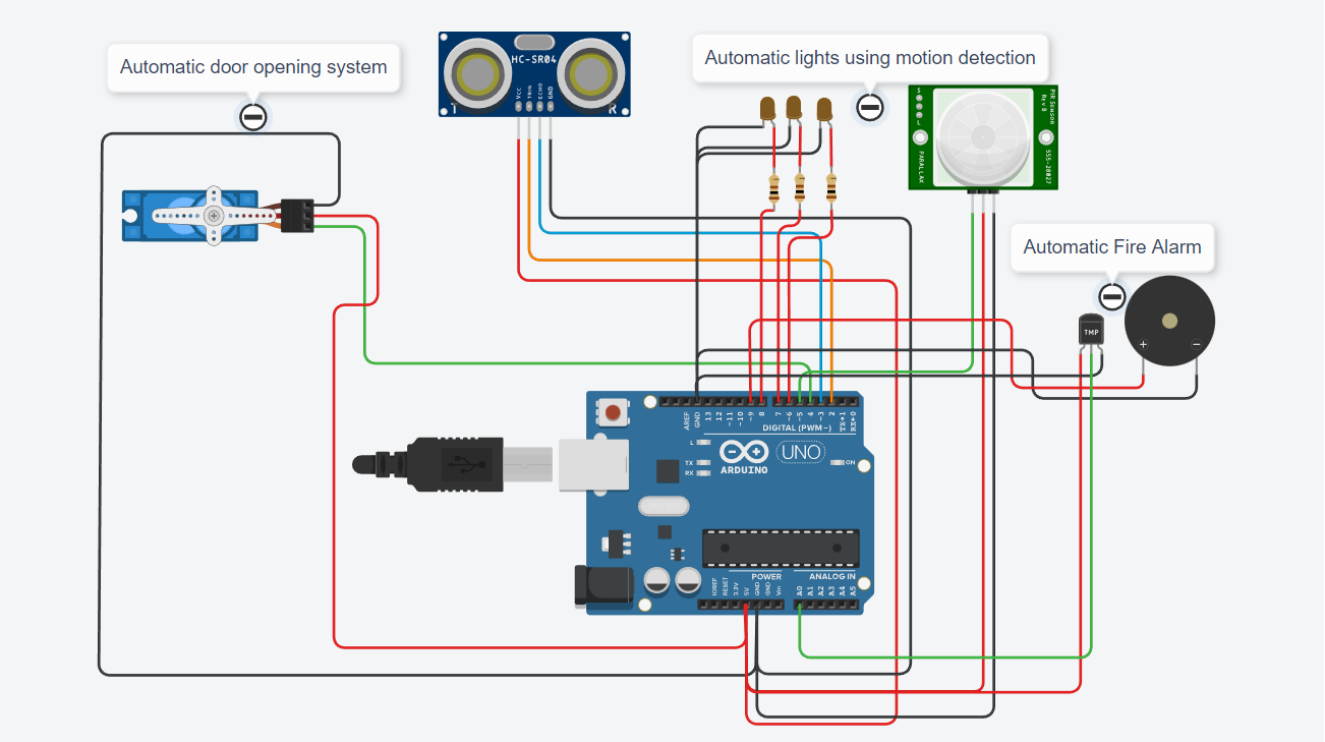
CIRCUIT DIAGRAM:



CODE:

```
#include <Servo.h>
Servo s;
int trig=2;
int ec=3;
int PIR=5;
int led1=6;
int led2=7;
int led3=8;
```

```
int buzz=9;
void setup()
{
  Serial.begin(9600);
  pinMode(trig,OUTPUT);
  pinMode(ec,INPUT);
  pinMode(PIR,INPUT);
  pinMode(led1,OUTPUT);
  pinMode(led2,OUTPUT);
  pinMode(led3,OUTPUT);
  pinMode(buzz,OUTPUT);
  s.attach(4);
  s.write(0);
  digitalWrite(led1,LOW);
  digitalWrite(led2,LOW);
  digitalWrite(led3,LOW);
}
void autodoor()
{
 digitalWrite(trig,LOW);
 digitalWrite(trig,HIGH);
 delayMicroseconds(10);
 digitalWrite(trig,LOW);
 float duration = pulseIn(ec,HIGH);
 float dist = (duration*0.0343)/2;
```

```
 //Serial.println(dist);
 if(dist<100)
 {
   open();
 }
}
void open()
{
  for (int i=0;i<=90;i++)
   {
     s.write(i);
     delay(100);
   }

   delay(5000);
   for (int j=90;j>=0;j--)
   {
     s.write(j);
     delay(100);
   }
}
void autolight()
{
  int p = digitalRead(5);
  if(p)
```

```
  {
    digitalWrite(led1,HIGH);
    digitalWrite(led2,HIGH);
    digitalWrite(led3,HIGH);
    delay(5000);
    digitalWrite(led1,LOW);
    digitalWrite(led2,LOW);
    digitalWrite(led3,LOW);
  }
}
void firealarm()
{
  double a = analogRead(A0);

  double t = (((a/1024)*5)-0.5)*100;
  Serial.println(t);
  if(t>60)
  {
    tone(buzz,20000);
    delay(10000);
    noTone(9);
  }
}
void loop()
{
```

```
autodoor();
delay(1000);
autolight();
delay(1000);
firealarm();
delay(1000);
}
```