HOME AUTOMATION ASSIGNMENT-1

PROGRAM:

```
#include<Servo.h>
int dist = 0;
int gassensor = 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);
}
Servo mainServo;
void setup()
{
  mainServo.attach(8, 500, 2500);
  pinMode(13,OUTPUT);
  pinMode(4,INPUT);
  pinMode(12,OUTPUT);
  pinMode(A0, INPUT);
  pinMode(12, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  dist = 0.01723 * readUltrasonicDistance(7, 7);
```

```
  if (dist <= 100) {
    mainServo.write(90);
    delay(1000);
  } else {
    mainServo.write(0);
    delay(1000);
  }
  if (digitalRead(4) == 1) {
    digitalWrite(13, HIGH);
    //delay(1000);
  } else {
    digitalWrite(13, LOW);
    //delay(1000);
  }
  gassensor = analogRead(A0);
  if (gassensor >= 250) {
    tone(12, 523, 1000);
    delay(10);
  }
}
```