

Assignment 1

Name	A.Abins
Register number	963519106001

CODE:

```
int sensorValue = 0;
```

```
int greenled = 6;
```

```
int redled = 8;
```

```
int buzzer_pin = 11;
```

```
int sen1Value = 0;
```

```
int A;
```

```
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);
```

```
}
```

```
void setup()
```

```
{
```

```
    Serial.begin (9600);
```

```
    pinMode(11, OUTPUT);
```

```
    pinMode(6, OUTPUT);
```

```
    pinMode(8, OUTPUT);
```

```

pinMode(4, INPUT);
pinMode(12, OUTPUT);
pinMode(13, OUTPUT);
pinMode(A1, INPUT);
}

void loop()
{
  //----Gas Sensor----//
  //-----
  int sensorValue = analogRead(A0);
  Serial.println(sensorValue);

  if(sensorValue > 100)
  {
    digitalWrite (buzzer_pin, HIGH);
    digitalWrite (redled, HIGH);
  }
  else
  {
    digitalWrite (buzzer_pin, LOW);
    digitalWrite (redled, LOW);
  }
  delay(1000);

  //----- //-----UltrasonicDistance-----//
  //-----
  sen1Value = 0.01723*readUltrasonicDistance(3,2);

  if(sen1Value<10)
  {

```

```

    Serial.print(" || Door Open! ; Distance = ");
    Serial.print(sen1Value);
    digitalWrite (buzzer_pin, HIGH);
    digitalWrite (greenled, HIGH);
}
else
{
    Serial.print(" || Door Closed! ; Distance = ");
    Serial.print(sen1Value);
    digitalWrite (buzzer_pin, LOW);
    digitalWrite (greenled, LOW);
}
delay(1000);

//-----
//-----PIR sensor-----// //-----
if (digitalRead(4)==1)
{
    digitalWrite(12,HIGH);
    delay(1000);
}
else
{
    digitalWrite(12,LOW);
    delay(100);
}
}

```

