

## Smoke detector :

The screenshot shows the Arduino IDE interface with a simulation titled "Smoke detection". The simulation area displays an Arduino Uno R3 connected to a breadboard. A smoke sensor is connected to the breadboard, and a blue LED is connected to the Arduino's digital pins. The sensor is emitting a cloud of smoke, indicating a detected smoke event. A "Gas Sensor" component is shown in the top right corner with a name field set to "1".

The code in the Text editor is as follows:

```
1 int led = 13;
2 const int gas = 0;
3 int gaspin = A0;
4
5 void setup()
6 {
7   Serial.begin(9600);
8 }
9
10 void loop()
11 {
12   float sensorValue = analogRead(gaspin);
13   if (sensorValue >= 250)
14   {
15     digitalWrite(led, HIGH);
16     Serial.print(sensorValue);
17     Serial.println("ALERT Smoke Detected");
18     delay(sensorValue);
19   }
20   else
21   {
22     digitalWrite(led, LOW);
23     Serial.print("sensor value: ");
24     Serial.println(sensorValue);
25     Serial.println("SAFE!!");
26   }
27   delay(1000);
28 }
```

The Serial Monitor shows the following output:

```
SAF!!
sensor value: 244.00
SAFE!!
276.00ALERT Smoke Detected
279.00ALERT Smoke Detected
279.00ALERT Smoke Detected
279.00ALERT Smoke Detected
279.00ALERT Smoke Detected
```

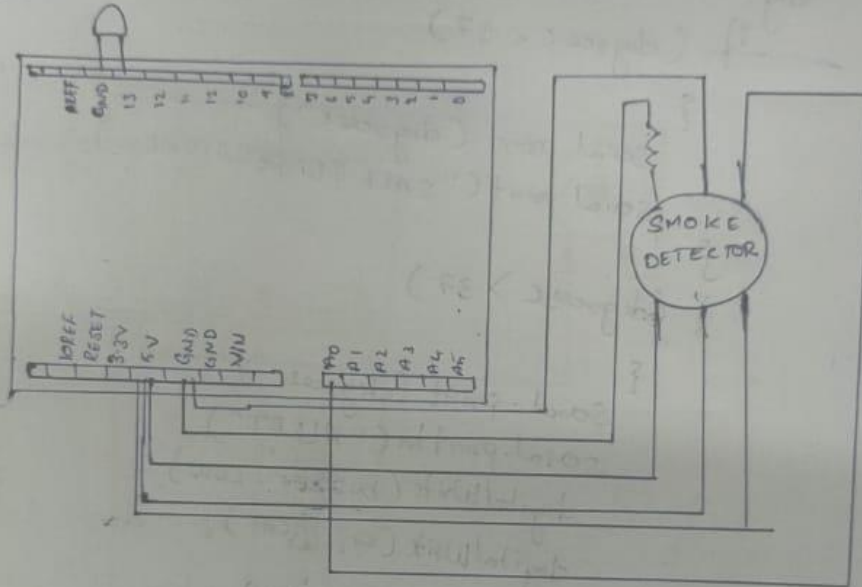
Program 7

Shiva Poorneth . Kodali  
IBM18CS100

Program title:- Smoke detection.

Aim:- To demonstrate smoke detector:-

Circuit:-



Code:-

```
int led = 13;
```

```
const int gas = 0;
```

```
int gaspin = A0;
```

```
void setup()
```

```
{
```

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

```
}
```

```
void loop()
```

```
{
```

```
  float sensorValue = analogRead(gaspin);
```

```
  if (sensorValue >= 250)
```

```
  {
```

```
    digitalWrite(led, HIGH);
```

```

    Serial.print (sensorValue);
    Serial.println ("Alert smoke detected");
    delay (sensorValue);
}
else
{
    digitalWrite (led, Low HIGH);
    Serial.print (sensorValue);
    Serial.println (sensorValue);
    Serial.println ("SAFE!");
}
delay (1000);
}

```

Output :-

The led will light up when smoke is in 250cm of the smoke detector.

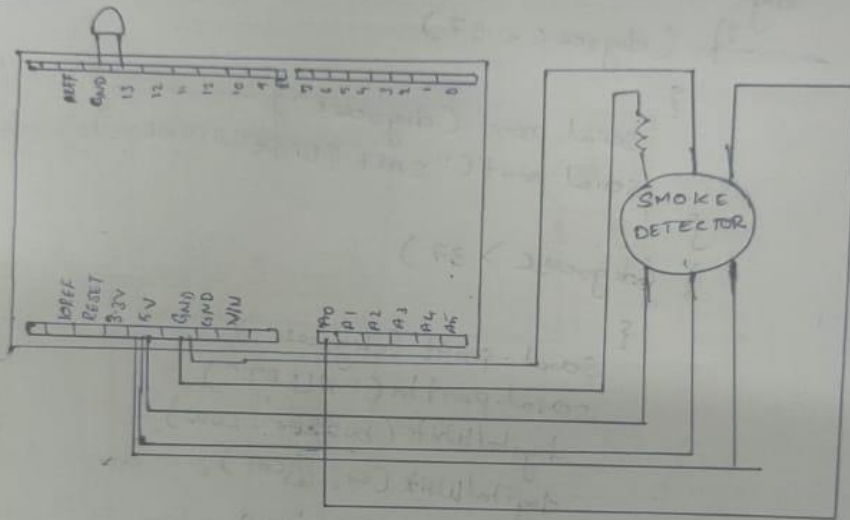
Program 7

Shiva Poorneth . Kodale  
IBM18CS100

Program title:- Smoke detection.

Aim:- To demonstrate smoke detector:-

Circuit:-



Code:-

```
int led = 13;
const int gas = 0;
int gaspin = A0;

void setup()
{
  Serial.begin(9600);
}

void loop()
{
  float sensorValue = analogRead(gaspin);
  if (sensorValue >= 250)
  {
    digitalWrite(led, HIGH);
  }
}
```

```

    Serial.print (sensorValue);
    Serial.println ("Alert smoke detected");
    delay (sensorValue);
}
else
{
    digitalWrite (led, LOWHIGH);
    Serial.print (sensorValue);
    Serial.println (sensorValue);
    Serial.println ("SAFE!");
}
delay (1000);
}

```

Output :-

The led will light up when smoke is in 250cm of the smoke detector.

vibration motor

Saved

Simulator time: 00:00:03.315

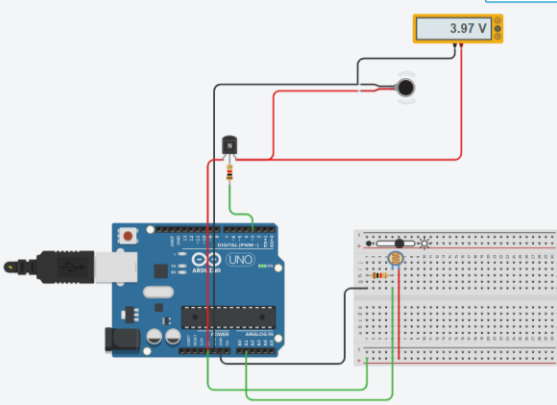
Code Stop Simulation Export Share

1 (Arduino Uno R3)

Photoresistor

Name 1

3.97 V



```
1 int motorPin = 3;
2 int sensorPin = A1;
3 int threshold = 400;
4
5 void setup()
6 {
7   pinMode(motorPin, OUTPUT);
8   Serial.begin(9600);
9 }
10
11 void loop()
12 {
13   int sensorValue = analogRead(sensorPin);
14   Serial.println(sensorValue);
15   if(sensorValue > threshold)
16   {
17     digitalWrite(motorPin, HIGH);
18   }
19   else
20   {
21     digitalWrite(motorPin, LOW);
22   }
23 }
```

Serial Monitor

581  
581  
581  
581  
581  
581  
581

Send Clear