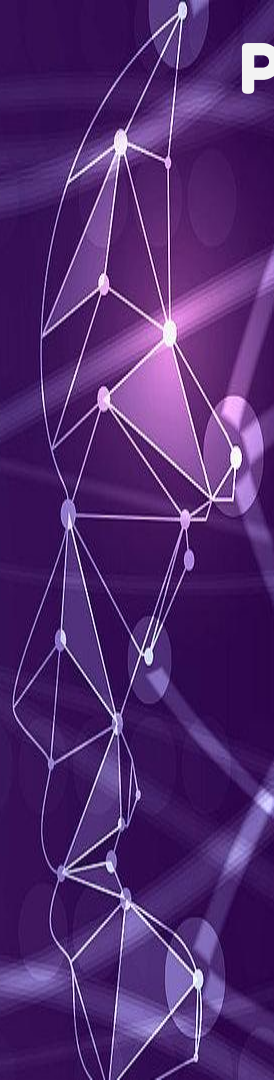
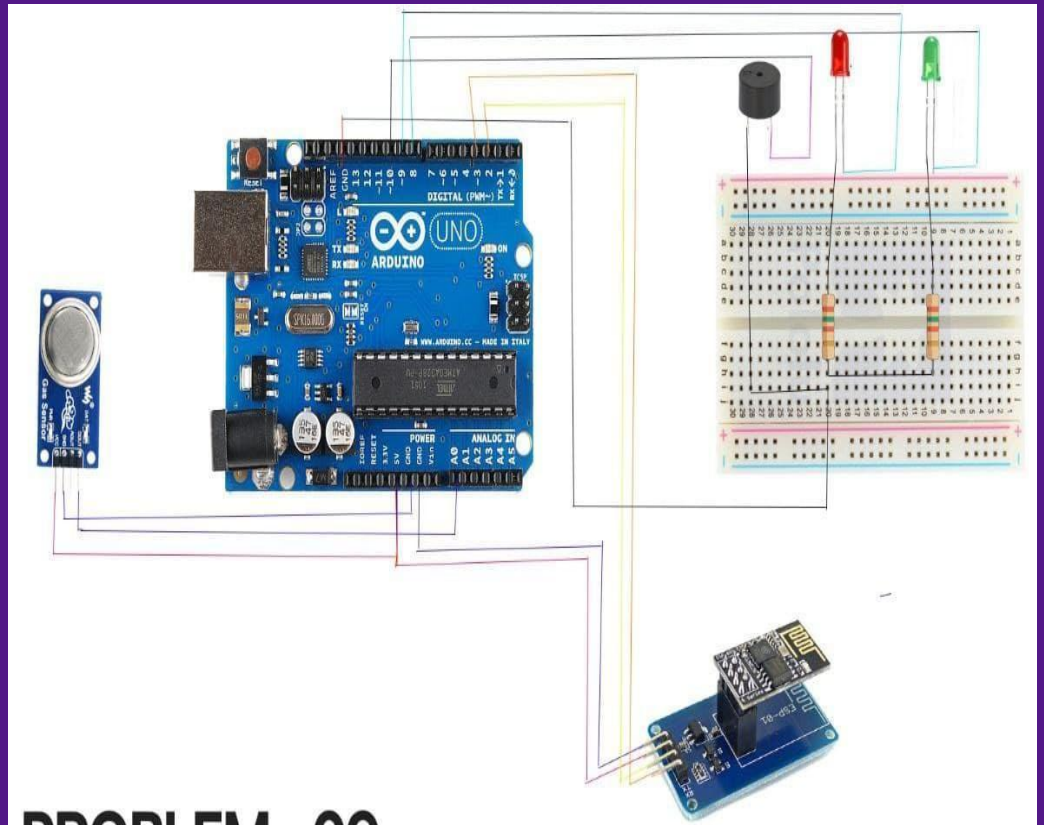
Problem Statement

- SAFETY FROM FIRE HAZARDS AND SPREAD OF HAZARDOUS GASES



Components:

- **01** Arduino
- **01** ESP8266 WiFi Module attached with ESP01 module
- **01** MQ2 gas sensor
- **01** Green & Red LED
- **01** Buzzer
- **02** 220 OHM Resistors
- **01** Breadboard
- **Many** Connecting Wires



PROBLEM - 09

```
//Team name : Protocol6
//Team Leader : B Zahid Hussain
//problem statement number : 9
#include <SoftwareSerial.h>
#define DEBUG true
SoftwareSerial wifi_module(2,3);
int red_led_pin = 9;
int green_led_pin = 8;
int buzzer_pin = 10;
int smoke_sensor_pin = A0;
void setup()
{
  Serial.begin(9600);
  wifi_module.begin(9600); // Set the baudrate according to your esp8266
  pinMode(red_led_pin, OUTPUT);
  pinMode(green_led_pin, OUTPUT);
  pinMode(buzzer_pin, OUTPUT);
  pinMode(smoke_sensor_pin, INPUT);
  esp8266_command("AT+RST\r\n",2000,DEBUG); // reset module
  esp8266_command("AT+CWMODE=2\r\n",1000,DEBUG); // configure as access point
  esp8266_command("AT+CIFSR\r\n",1000,DEBUG); // get ip address
  esp8266_command("AT+CIPMUX=1\r\n",1000,DEBUG); // configure for multiple
connections
  esp8266_command("AT+CIPSERVER=1,80\r\n",1000,DEBUG); // turn on server on port 80
}
void loop()
{
  int analogSensor = analogRead(smoke_sensor_pin);
  if (analogSensor > 350)
  {
    digitalWrite(red_led_pin, HIGH);
    digitalWrite(green_led_pin, LOW);
    tone(buzzer_pin, 1000, 200);
  }
  else
  {
    digitalWrite(red_led_pin, LOW);
    digitalWrite(green_led_pin, HIGH);
    noTone(buzzer_pin);
  }
  if(wifi_module.available())
  {
    if(wifi_module.find("+IPD,"))
    {
     delay(1000);
     int connectionId = wifi_module.read()-48;
     String webpage = "<h1>IOT Smoke Detection System</h1>";
```

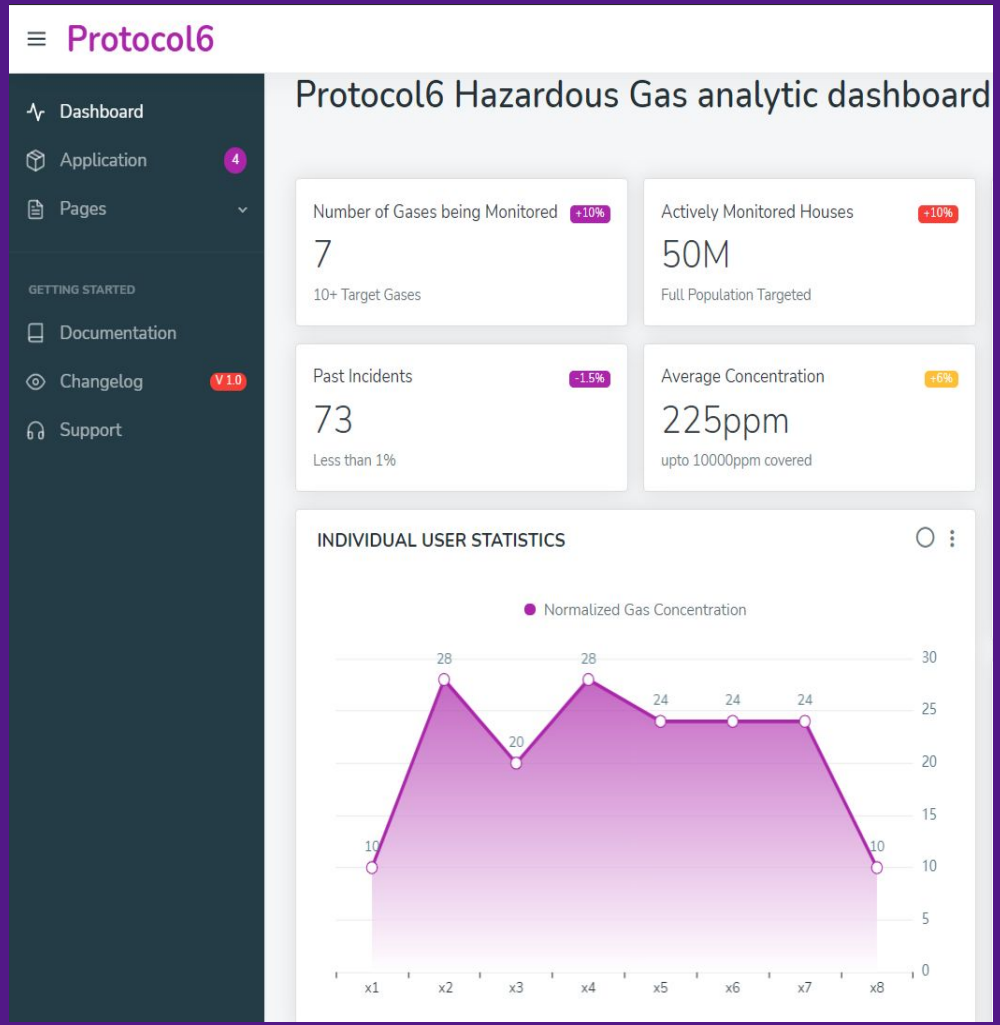
FEASIBILITY

01 Easy to setup

02 Low Cost

03 Quick Response

04 Intuitive Dashboard



Dashboard will Contain

01 Number of actively monitored houses

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02 Total number of past incidents

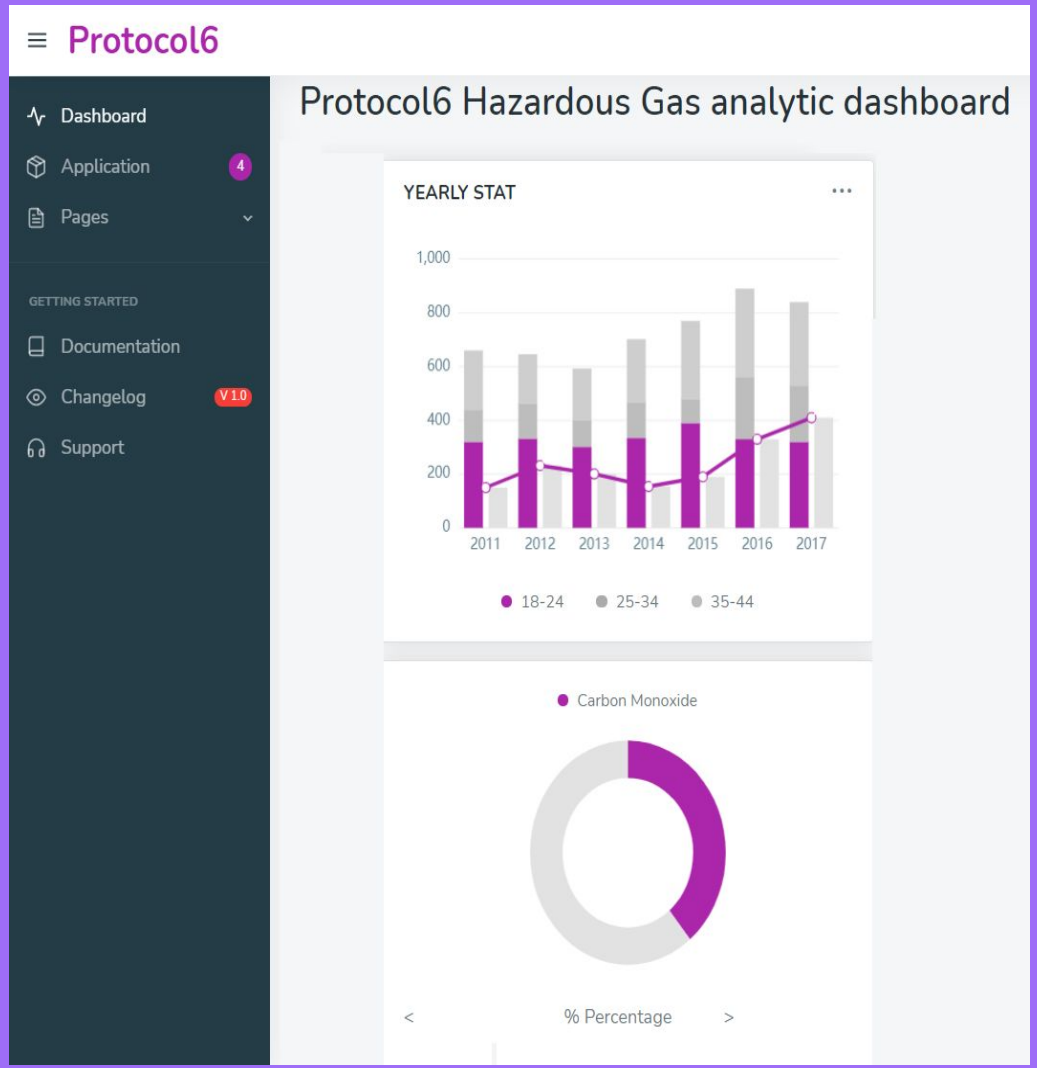
03 Number of gases that are being monitored

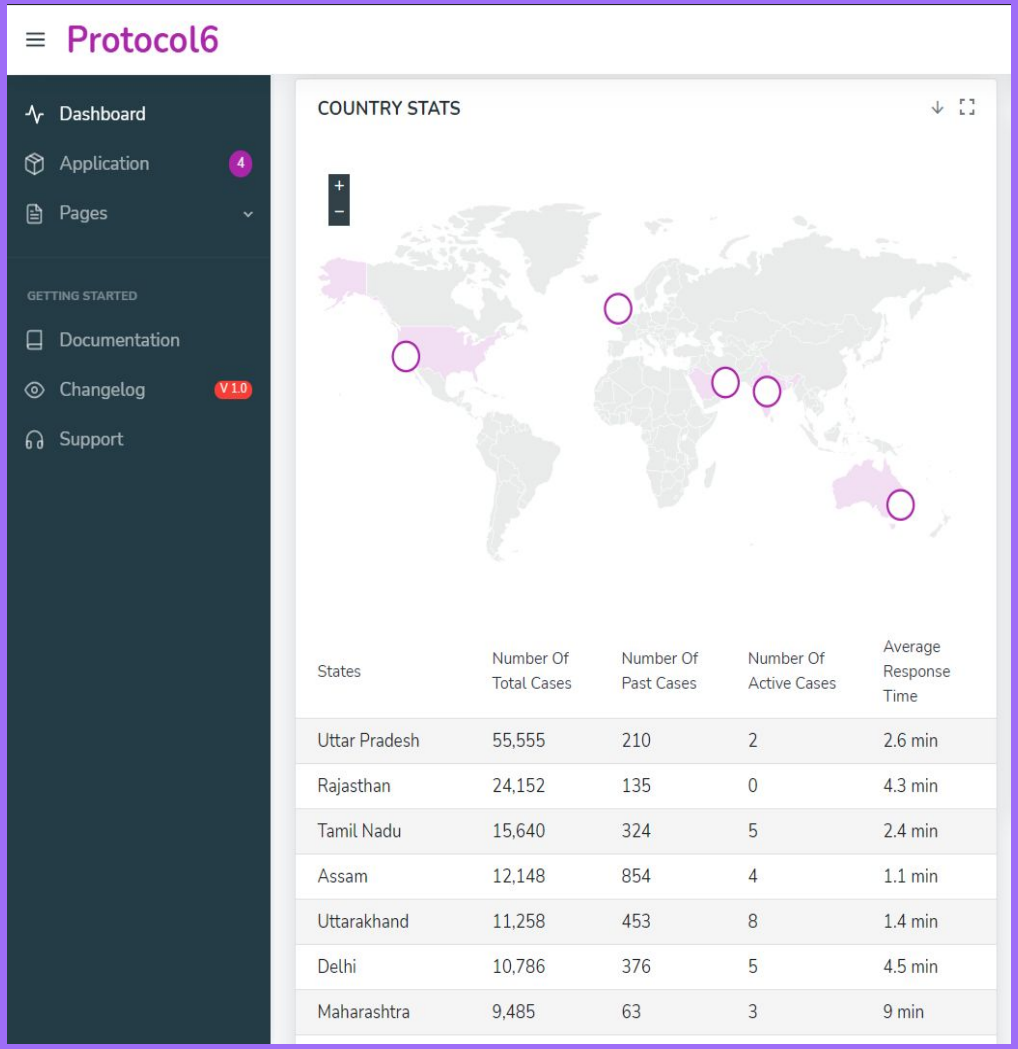
04 Individual user statistics

Dashboard will Contain

05 Yearly statistics `

06 Individual gas concentration percentage

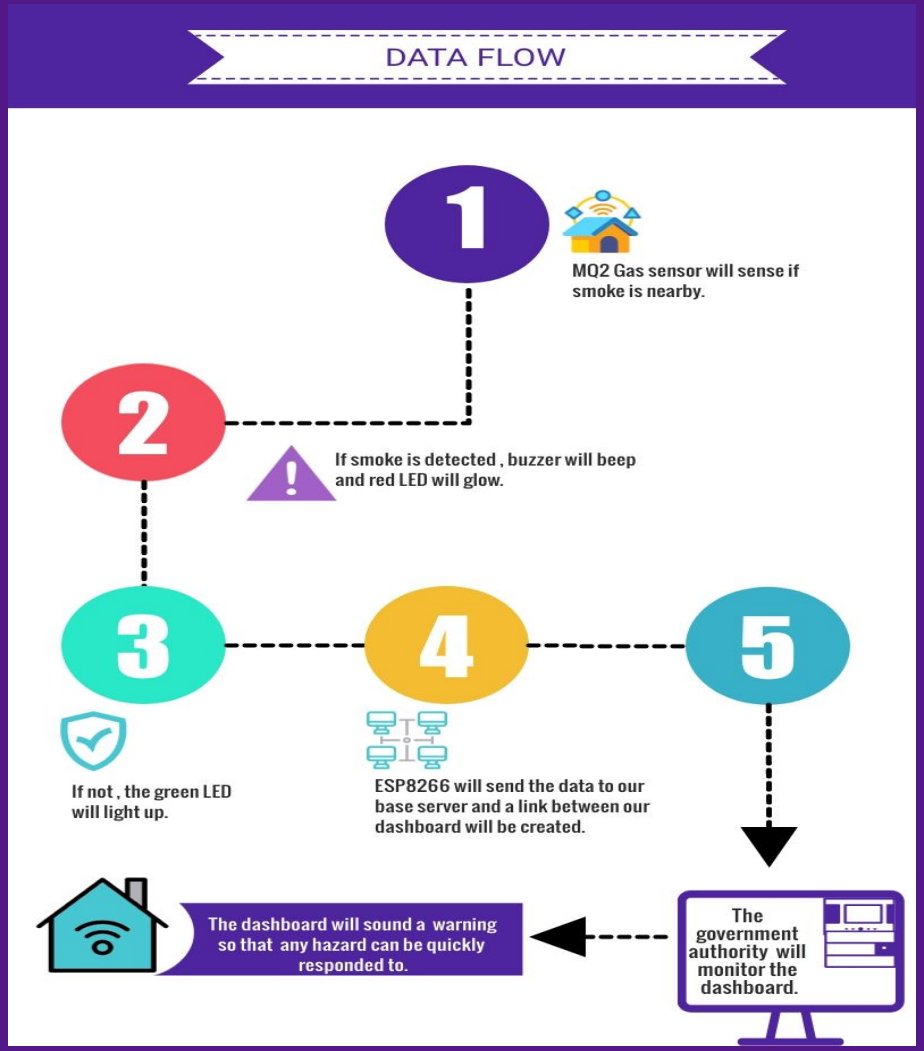




Dashboard will Contain

07 Interactive country map

08 State wise statistics



HOW IT WORKS

Get instant alert when the gas concentration increases to specified level

“The future belongs to those who believe in the beauty of their dreams”

THANK YOU !

Questions Are Welcome!