FINAL CODE FOR OUR PROJECT:

```
#include <SoftwareSerial.h>

SoftwareSerial SIM900(10, 11);
// Define the pin for the MQ-5 gas sensor
int gasSensorPin = A0;    // Analog pin A0 for sensor output
int buzzerPin = 3;        // Digital pin 8 for the piezo buzzer

String f1001 = "+91XXXXXXXXXX"; // student1 father cell phone number
String f1002 = "+91XXXXXXXXXX";
void setup() {
  Serial.begin(9600);
  delay(2000);   // Initialize serial communication
  pinMode(gasSensorPin, INPUT); // Set the sensor pin as INPUT
  pinMode(buzzerPin, OUTPUT);
  Serial.begin(9600);
             // Nodemcu is connected over here

  SIM900.begin(9600); // original 19200. while enter 9600 for sim900A
                  // Init SPI bus
         // Set the buzzer pin as OUTPUT
}

void loop() {
  int sensorValue = analogRead(gasSensorPin); // Read sensor value

  // Print the sensor value to the Serial Monitor
  Serial.print("Gas Sensor Value: ");
  Serial.println(sensorValue);

  int threshold = 120; // Set a threshold value (adjust as needed)

  // If the sensor value crosses the threshold, indicate gas leakage
  if (sensorValue > threshold)
   {
    sendsms(" GAS DETECTED PLEASE TAKE CAUTION", f1001);
        delay(1000);
    Serial.println("Gas Leakage Detected!");
    // Sound the buzzer
    digitalWrite(buzzerPin, HIGH);
    delay(1000); // Buzz for 1 second
    digitalWrite(buzzerPin, LOW);
    delay(1000); // Wait for 1 second
```

```
  } else {
    digitalWrite(buzzerPin, LOW); // Turn off the buzzer if no gas leakage
  }
}

void sendsms(String message, String number)
{
String mnumber = "AT + CMGS = \""+number+"\"";
   SIM900.print("AT+CMGF=1\r");
  delay(1000);
 SIM900.println(mnumber);  // recipient's mobile number, in international format

  delay(1000);
  SIM900.println(message);                    // message to send
  delay(1000);
  SIM900.println((char)26);                   // End AT command with a ^Z, ASCII code 26
  delay(1000);
  SIM900.println();
  delay(100);                             // give module time to send SMS
 // SIM900power();
}
```

IMAGES: