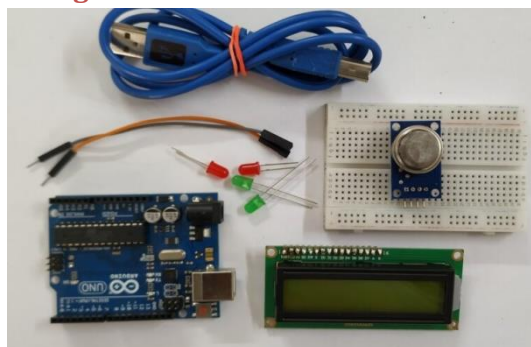# IBM ASSIGNMENT- 1

TEAM ID : PNT2022TMID52179

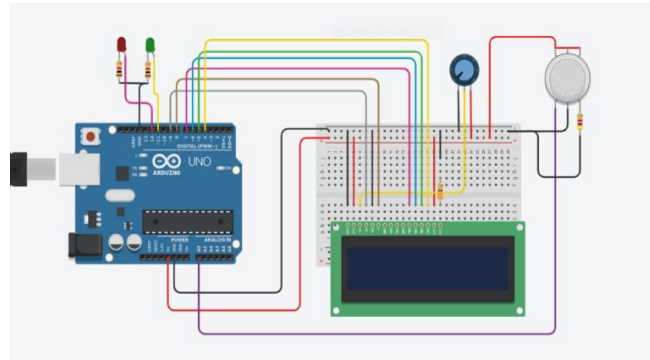**NAME: MALATHI. P**

ROLL NO: 963019106002

Make a smart home with sensors using Arduino UNO

LPG Gas leakage detector using arduino Components Required

- **Arduino UNO**
- **MQ-6 gas sensor**
- **16×2 LCD module**
- **10K potentiometer**
- **Red and green LEDs**
- **220 ohms resistors**
- **Jumper wires and a breadboard**
- **USB cable for uploading the code**

CIRCUIT LAYOUT:

CODE :

```
#include "LiquidCrystal.h"

LiquidCrystal lcd(9,8,7,6,5,4);

int GAS_VAL = 0;

void setup()

{

 pinMode(A0, INPUT); // MQ-6 A0 Pin

Serial.begin(9600);

 lcd.begin(16,2);

 pinMode(11,OUTPUT); // LED Green

 pinMode(12,OUTPUT); // LED Red

 lcd.setCursor(0,0);

 lcd.print("   GAS SENSOR  ");

}

void loop()

{

GAS_VAL = analogRead(A0);

 Serial.println(GAS_VAL);

 if (GAS_VAL > 500)

 {
```

```
  lcd.setCursor(0,1);

lcd.print("  LPG Detected    ");

digitalWrite(11,HIGH);

 digitalWrite(12,LOW);

 }

 Else

 {

 lcd.setCursor(0,1);

 lcd.print("LPG Not Detected    ");

 digitalWrite(11,LOW);

digitalWrite(12,HIGH);

 }

 delay(10);

}
```

Output: