**Exp** – Design a system for LPG gas burner such that whenever it is turned on a green LED staff blinking and if it stays on for more than 2000 ms, instead of the green LED, a Red LED starts blinking.

**Theory**

**Concept Used** – We used the basic working of Arduino and how to program an Arduino. We also used the concept of photoresistor to make a LDR using an Arduino and how to setup a circuit consisting of LED’s, photoresistor, resistor and Arduino.

**Learning and Observation** – We got to knew about the photoresistor, how to use it in a circuit with Arduino. It’s real time application which could be used for better well being of the society.

**Problems and Troubleshooting** – The problem occurred was to make the Red LED blink after 2000 ms and switching off the green LED.

**Precaution** – Circuit should be neat and clean. We should keep the power supply in check. We should use resistor whenever necessary to control the current. We should see whether the led is connected in right way or not.

**Learning Outcome** – Photoresistor and its real time applications.

**CODE**

const int redledPin = 10;

const int greenledPin = 9;

int redledState = LOW;

int greenledState = LOW;

unsigned long previousMillis = 0;

const long interval = 2000;

int sensorValue = 0;

void setup() {

pinMode(redledPin, OUTPUT);

pinMode(greenledPin, OUTPUT);

pinMode(A0, INPUT);

Serial.begin(9600);

}

void loop() {

sensorValue = analogRead(A0);

Serial.println(sensorValue);

analogWrite(9, map(sensorValue, 0, 1023, 0, 255));

delay(100);

unsigned long currentMillis = millis();

if ((currentMillis - previousMillis >= interval )&& sensorValue > map(sensorValue, 0, 1023, 0, 255)) {

previousMillis = currentMillis;

if (greenledState == LOW) {

greenledState = HIGH;

} else {

greenledState = LOW;

}

digitalWrite(greenledPin, greenledState);

}

if (currentMillis > 2000){

greenledState = LOW;

digitalWrite(greenledPin, greenledState);

if (redledState == LOW) {

redledState = HIGH;

} else {

redledState = LOW;

}

}

digitalWrite(redledPin, redledState);

}