PRACTICAL - 2

AIM: Implementing a basic traffic control system using Arduino.

Code

```
int r=2;
int g=3;
int y=4;

void setup() {
        Serial.begin(9600);
        pinMode(r, OUTPUT);
        pinMode(g, OUTPUT);
        pinMode(y, OUTPUT);
        digitalWrite(r, LOW);
        digitalWrite(g, LOW);
        digitalWrite(y, LOW);
}

void traffic() {
        digitalWrite(g, HIGH);
        Serial.println("Green LED ON, GO");
        delay(5000);
        digitalWrite(g, LOW);
        digitalWrite(y, HIGH);
        Serial.println("Yellow LED ON, WAIT");
        delay(5000);
        digitalWrite(y, LOW);
        digitalWrite(r, HIGH);
        Serial.println("RED LED ON, STOP");
        delay(5000);
        digitalWrite(r, LOW);
        Serial.println("All OFF");
}

void loop(){
        traffic();
        delay(10000);
}
```

Circuit Diagram

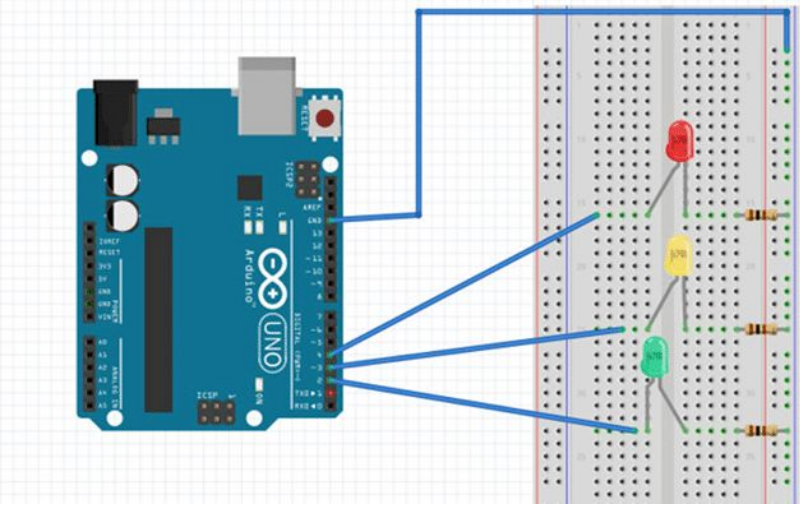

Fig 2.1 - Circuit Diagram for Arduino Traffic Lights System

Output on Arduino with LED Green, Yellow, Red and All OFF

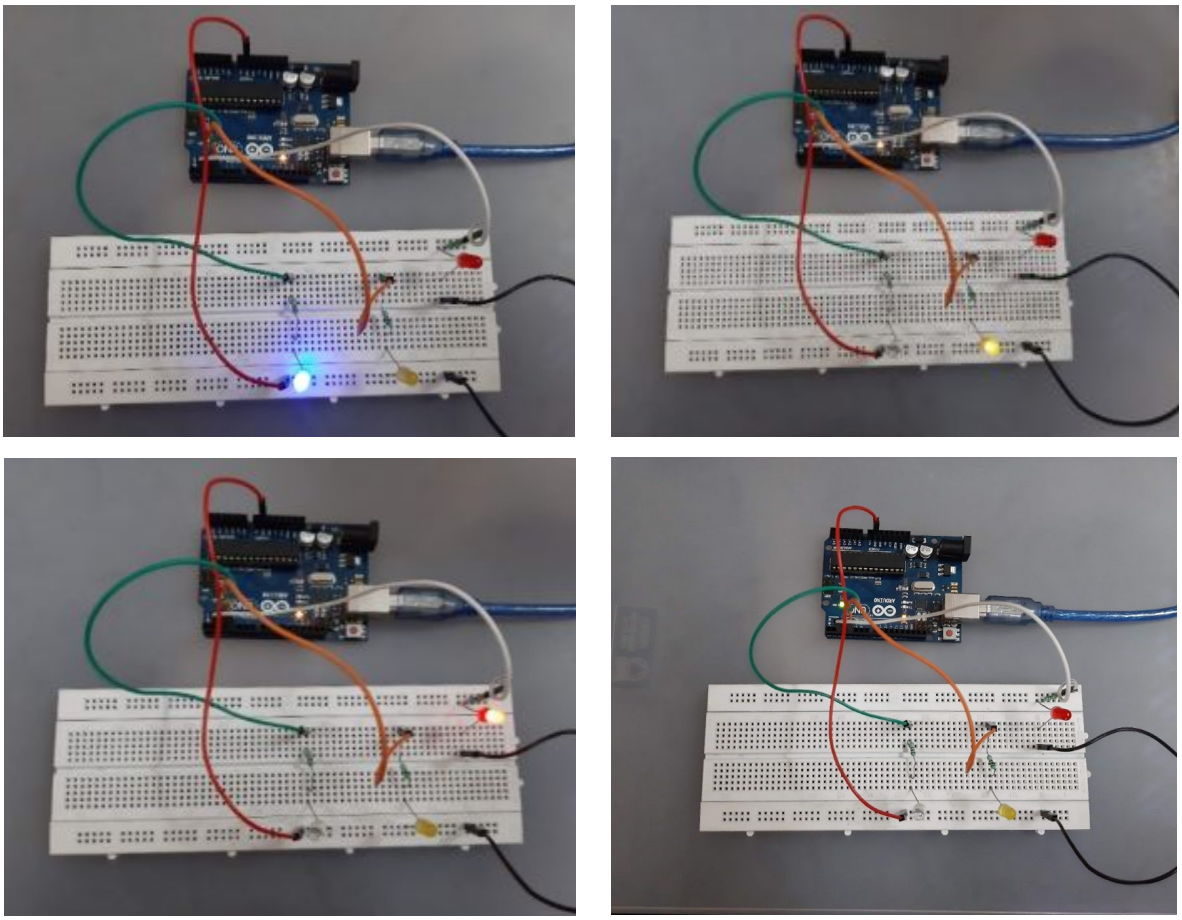

Fig 2.2 - LED Green ON, LED Yellow ON, LED Red ON, ALL LEDs OFF

Serial Monitor Output

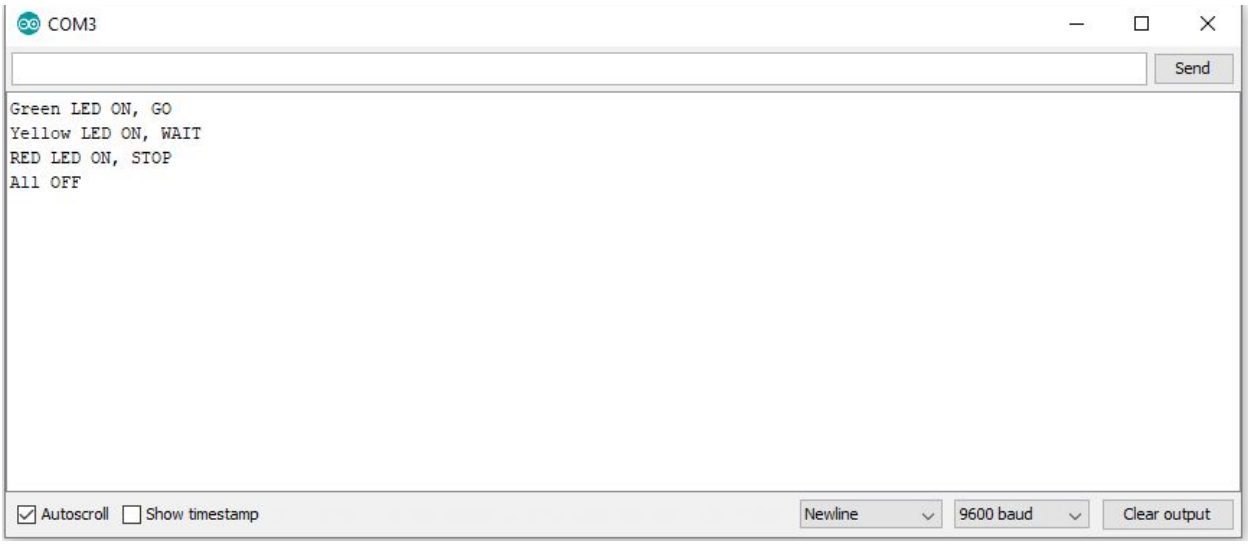

Fig 2.3 - Serial Monitor Output on Laptop