Experiment NO 5

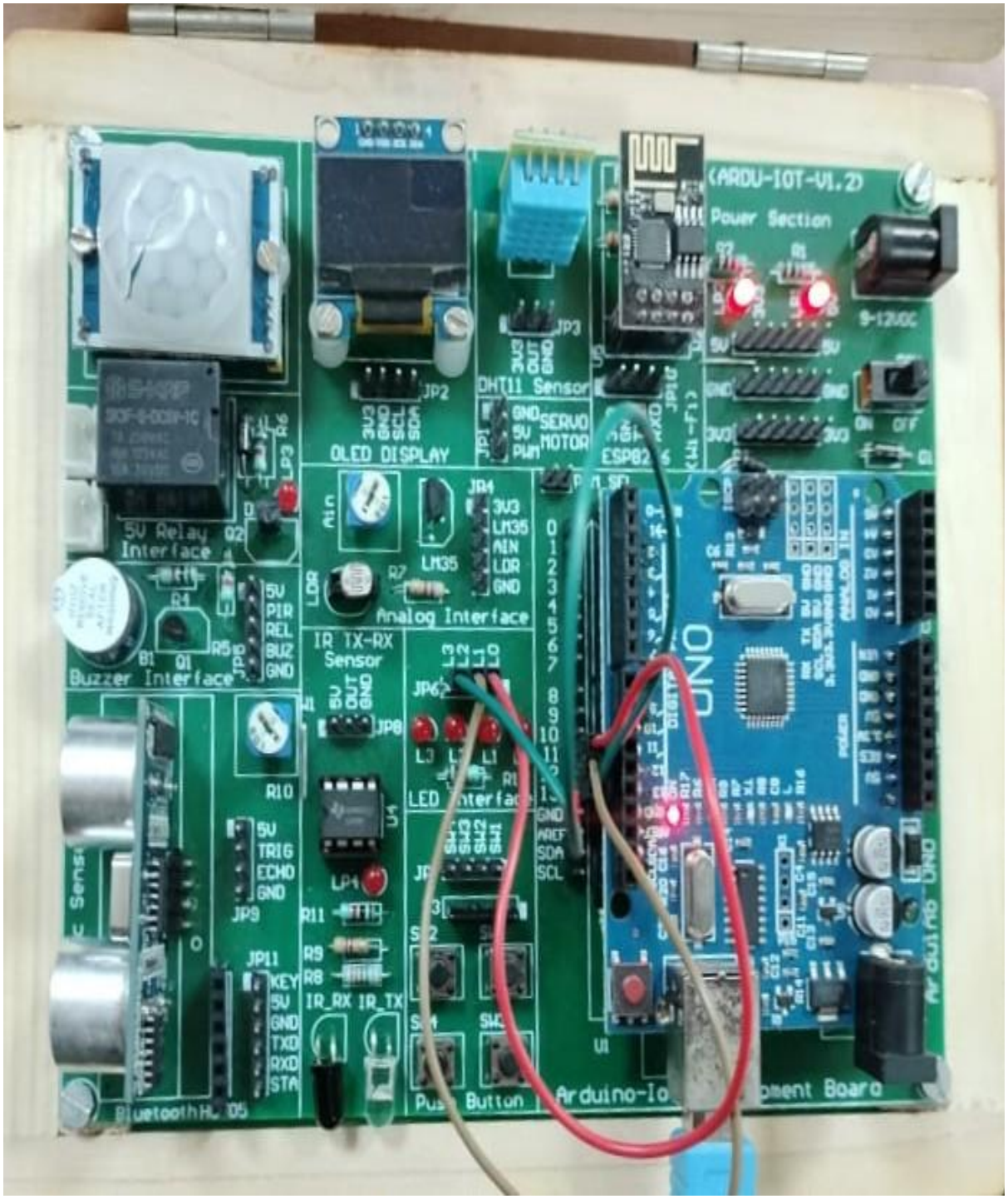
CODE :-

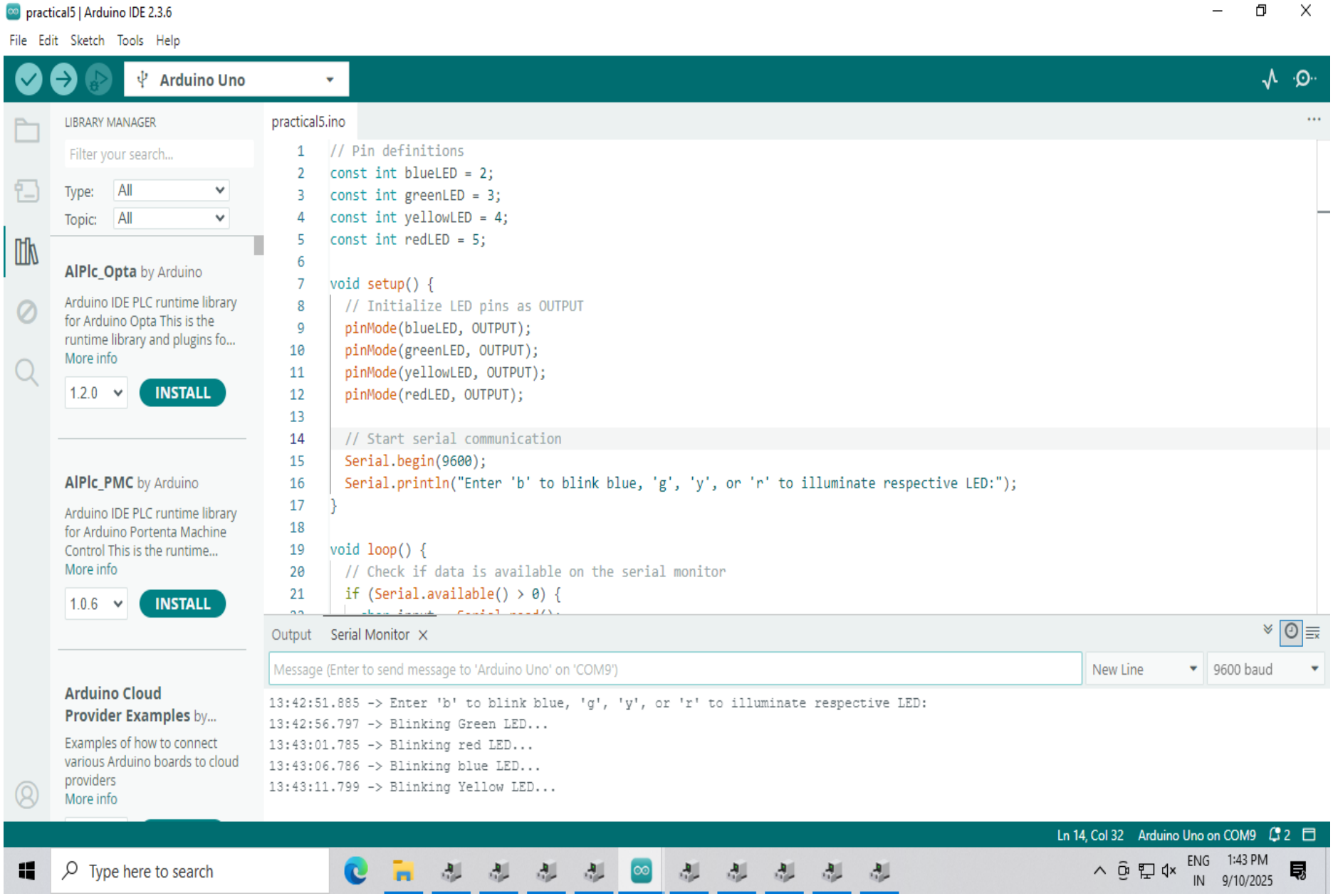
```
// Pin definitions
const int blueLED = 2;
const int greenLED = 3;
const int yellowLED = 4;
const int redLED = 5;
void setup() {
  // Initialize LED pins as OUTPUT
  pinMode(blueLED, OUTPUT);
  pinMode(greenLED, OUTPUT);
  pinMode(yellowLED, OUTPUT);
  pinMode(redLED, OUTPUT);

  // Start serial communication
  Serial.begin(9600);
  Serial.println("Enter 'b' to blink blue, 'g', 'y', or 'r' to illuminate respective LED:");
}

void loop() {
  // Check if data is available on the serial monitor
  if (Serial.available() > 0) {
    char input = Serial.read();

    // Ignore newline and carriage return characters
    if (input == '\n' || input == '\r') {
      return;
    }
```

```
// Turn off all LEDs before processing new input
digitalWrite(blueLED, LOW);
digitalWrite(greenLED, LOW);
digitalWrite(yellowLED, LOW);
digitalWrite(redLED, LOW);

// Handle user input
switch (input) {
  case 'b':
    Serial.println("Blinking blue LED...");
    for (int i = 0; i < 5; i++) {
      digitalWrite(blueLED, HIGH);
      delay(500);
      digitalWrite(blueLED, LOW);
      delay(500);
    }
    break;

  case 'g':
    Serial.println("Blinking Green LED...");
    for (int i = 0; i < 5; i++) {
      digitalWrite(greenLED, HIGH);
      delay(500);
      digitalWrite(greenLED, LOW);
      delay(500);
    }
    break;
```

```
      case 'y':
        Serial.println("Blinking Yellow LED...");
        for (int i = 0; i < 5; i++) {
          digitalWrite(yellowLED, HIGH);
          delay(500);
          digitalWrite(yellowLED, LOW);
          delay(500);
        }
        break;
      case 'r':
        Serial.println("Blinking red LED...");
        for (int i = 0; i < 5; i++) {
          digitalWrite(redLED, HIGH);
          delay(500);
          digitalWrite(redLED, LOW);
          delay(500);
        }
        break;
      default:
        Serial.print("Invalid input: ");
        Serial.println(input);
        break;
    }
  }
}
```

OUTPUT :-


(ARDU-IOT-V1.2)
Power Section
9-12VDC
OLED DISPLAY
DHT11 Sensor
SERVO MOTOR
ESP8266
5V Relay Interface
Buzzer Interface
Analog Interface
LM35
IR TX-RX Sensor
LED Interface
Push Button
Bluetooth HC-05
UNO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More info
practical5.ino
1 // Pin definitions
2 const int blueLED = 2;
3 const int greenLED = 3;
4 const int yellowLED = 4;
5 const int redLED = 5;
6
7 void setup() {
8 // Initialize LED pins as OUTPUT
9 pinMode(blueLED, OUTPUT);
10 pinMode(greenLED, OUTPUT);
11 pinMode(yellowLED, OUTPUT);
12 pinMode(redLED, OUTPUT);
13
14 // Start serial communication
15 Serial.begin(9600);
16 Serial.println("Enter 'b' to blink blue, 'g', 'y', or 'r' to illuminate respective LED:");
17 }
18
19 void loop() {
20 // Check if data is available on the serial monitor
21 if (Serial.available() > 0) {
Output Serial Monitor
Message (Enter to send message to 'Arduino Uno' on 'COM9')
New Line
9600 baud
13:42:51.885 -> Enter 'b' to blink blue, 'g', 'y', or 'r' to illuminate respective LED:
13:42:56.797 -> Blinking Green LED...
13:43:01.785 -> Blinking red LED...
13:43:06.786 -> Blinking blue LED...
13:43:11.799 -> Blinking Yellow LED...
Ln 14, Col 32 Arduino Uno on COM9 2
Type here to search
ENG IN
1:43 PM 9/10/2025