EXPERIMENT NO: 2

Roll No: ***Class: BE*** ***Division: A*** ***Date: / / 2024***

TITLE: Interface RGB LED with Arduino and program to display all possible colours.

AIM: Understand the connection and configuration of RGB LED and its use in programming.

Task 1: Interface RGB LED with arduino, to display Red, Green, Blue, white colours.

Sr. No	Color	Red	Green	Blue	(R ,G, B)
1	Red				
2	Green				
3	Blue				
4	White				

Source Code:

```
# define RED 3
# define GREEN 5
# define BLUE 6
void setup() {
  pinMode(RED, OUTPUT);
  pinMode(GREEN, OUTPUT);
  pinMode(BLUE, OUTPUT);
}
void setColor(int r, int g, int b){
  analogWrite(RED,r);
  analogWrite(GREEN,g);
  analogWrite(BLUE,b);
}
void loop() {
  setColor(0,255,255);
  delay(1000);
  setColor(255,0,255);
  delay(1000);
  setColor(255,255,0);
  delay(1000);
  setColor(0,0,0);
  delay(1000);
}
```

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Output:

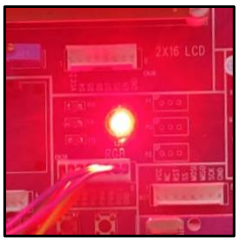

Fig 1 RED

Fig 2 GREEN

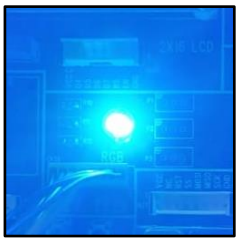

Fig 3 BLUE

Fig 4 WHITE

Observations:

Task 2: Interface RGB LED with Arduino, to display rainbow colors in sequence.

Sr. No	Color	Red	Green	Blue	(R ,G, B)
1	Red				
2	Orange				
3	Yellow				
4	Green				
5	Blue				
6	Indigo				
7	Violet				

Source Code:

```
# define RED 3
# define GREEN 5
```

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```
# define BLUE 6
void setup() {
  pinMode(RED, OUTPUT);
  pinMode(GREEN, OUTPUT);
  pinMode(BLUE, OUTPUT);
}
void setColor(int r, int g, int b){
  analogWrite(RED,r);
  analogWrite(GREEN,g);
  analogWrite(BLUE,b);
}
void loop() {
  setColor(0,255,255); // R
  delay(2000);
  setColor(0,200,255); // O
  delay(2000);
  setColor(0,0,255); // Y
  delay(2000);
  setColor(255,0,255); // G
  delay(2000);
  setColor(255,128,0); // B
  delay(2000);
  setColor(255,255,0); // I
  delay(2000);
  setColor(100,255,0); // V
  delay(2000);
}
```

Output:

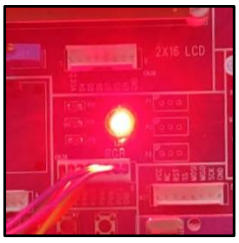

Fig 2 RED

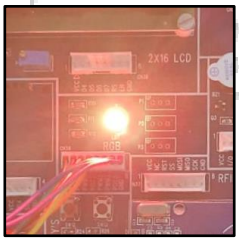

Fig 2 ORANGE

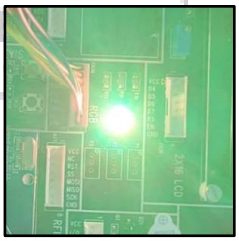

Fig 3 YELLOW

Fig 4 GREEN

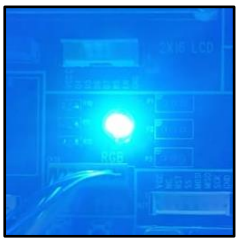

Fig 5 BLUE

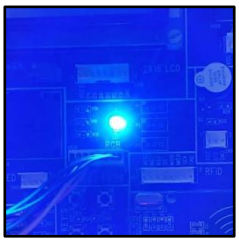

Fig 6 INDIGO

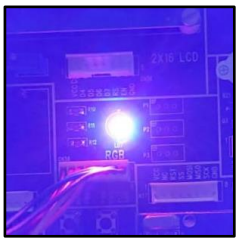

Fig 7 VIOLET

EXPERIMENT NO: 2

Observations:

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