Lab 7 : Program 15

Date : 04/11/20
Experiment : RGB LED and LCD
Aim: To demonstrate a RGB LED and LCD display

Hardware:

- RGB LED
- LCD
- Arduino Uno
- Resistors

Source Code:

```
#include <LiquidCrystal.h>
int red = 6 ;
int blue = 10 ;
int green = 9 ;

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

void redc()
{
 lcd.setCursor(0, 0);
 analogWrite(red, 255);
 analogWrite(blue, 0);
 analogWrite(green, 0);
 lcd.print("RED  ");
}

void bluec()
{
 lcd.setCursor(0, 0);
 analogWrite(red, 0);
 analogWrite(blue, 255);
 analogWrite(green, 0);
 lcd.print("BLUE ");
}
```

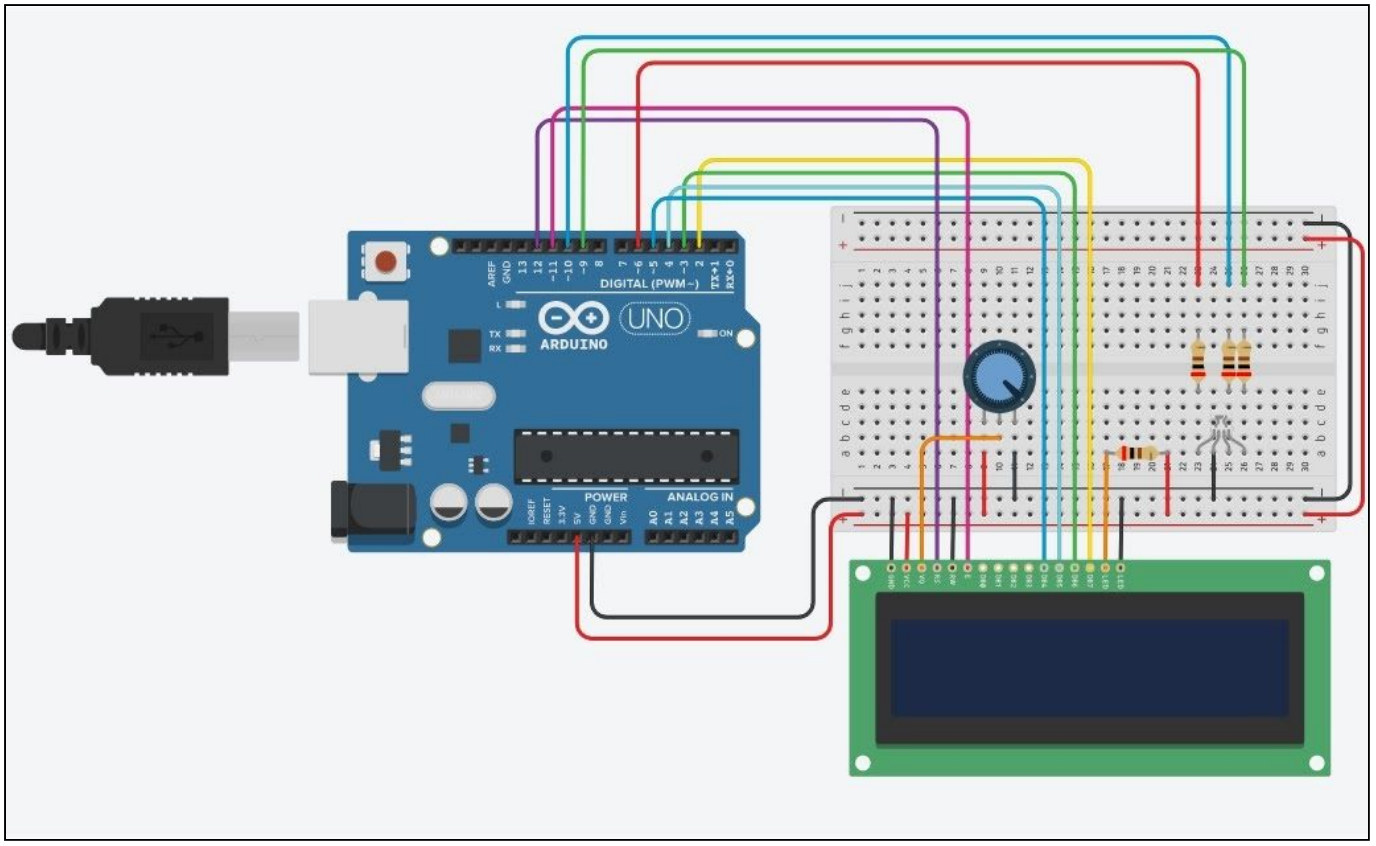
```
void greenc()
{
 lcd.setCursor(0, 0);
 analogWrite(red, 0);
 analogWrite(blue, 0);
 analogWrite(green, 255);
 lcd.print("GREEN");
}

void setup()
{
 pinMode(red,OUTPUT);
 lcd.begin(16, 2);
 pinMode(blue,OUTPUT);
 pinMode(green,OUTPUT);
}

void loop()
{
  redc();
  delay(1000);
  bluec();
  delay(1000);
  greenc();
  delay(1000);
}
```

Observation:
The colour of the LED is displayed on the LCD.

Circuit :



Write Up:

Source Code

```
#include <LiquidCrystal.h>

  int red = 6;
  int blue = 10;
  int green = 9;

  LiquidCrystal lcd (12, 11, 5, 4, 3, 2);

  void redc ()
  { lcd.setCursor (0,0);
    analogWrite (red, 255);
    analogWrite (blue, 0);
    analogWrite (green, 0);
    lcd.print ("RED   ");
  }

  void bluec()
  {
    lcd.setCursor(0,0);
    analogWrite (red, 0);
    analogWrite (blue, 255));
    analogWrite (green, 0);
    lcd.print ("BLUE  ");
  }

  void greenc()
  { lcd.setCursor (0,0);
    analogWrite (red, 0);
    analogWrite (blue, 0);
    analogWrite (green, 255);
    lcd.print ("GREEN");
  }
```

```
void setup()
{
  pinMode(red, OUTPUT);
  lcd.begin(16, 2);
  pinMode(blue, OUTPUT);
  pinMode(green, OUTPUT);
}
void loop()
{
   redc();
   delay(1000);
   bluec();
   delay(1000);
   greenc();
   delay(1000);
}
```