Name – Parag Gattani

Program No. – 15

Program Title – RGB LED

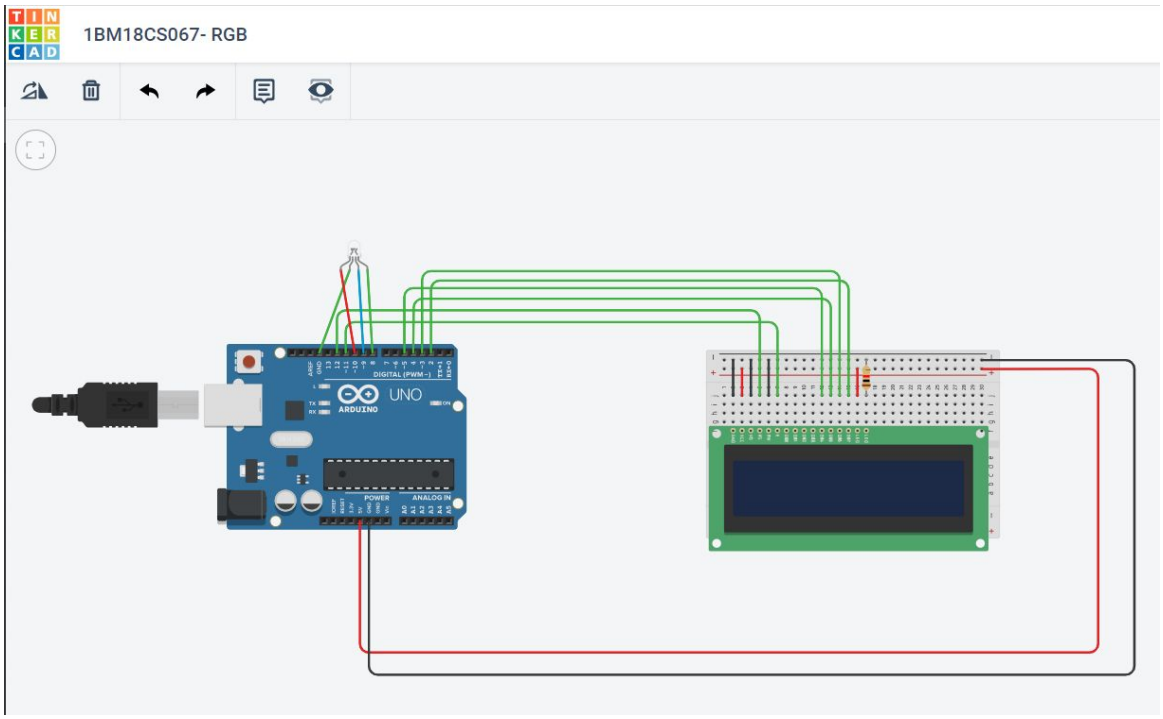
AIM

Design a smart irrigation system (Potentiometer, Servo motor shaft).

HARDWARES REQUIRED

- Arduino Board, Breadboard Small
- LED RGB, LCD 16x2, Resistor

CIRCUIT DIAGRAM



WRITE-UP

Name - Parag Gattani
USN - 1BM18CS067

4/11/2020

Exp-15

RGB LED

Aim

Design a smart irrigation system.

Hardwares Required.

Arduino Board, Breadboard small, LED RGB, LCD 16×2, Resistor.

Code

```
# include < liquid Crystal.h >
Liquid Crystal lcd(12, 11, 5, 4, 3, 2);

int red_light_Pin = 10;
int green_light_Pin = 8;
int blue_light_Pin = 9;

void setup()
 {
    pinMode ( red_light_pin, OUTPUT);
    pinMode ( green_light_pin, OUTPUT);
    pinMode ( blue_light_pin, OUTPUT);
 }
void loop()
 {
    lcd . setCursor (0, 0);
    RGB_color ( 255, 0, 0);
    lcd . print ( "RED");
    delay (1000);
    lcd.clear();
```

```
RGB_color (0, 0, 255);
lcd.print ("Blue");
delay(1000);
lcd.clear();

RGB_color (255, 255, 255);
lcd.print ("WHITE");
delay(1000);
lcd.clear();
}

void RGB_color (int red, int green, int blue)
{
analogWrite (red_light_pin, red);
analogWrite (green_light_pin, green);
analogWrite (blue_light_pin, blue);
}
```

CODE

```
#include <LiquidCrystal.h>
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
//Parameters: (rs, enable, d4, d5, d6, d7)
int red_light_pin= 10;
int green_light_pin = 8;
int blue_light_pin = 9;
void setup() {
  pinMode(red_light_pin, OUTPUT);
  pinMode(green_light_pin, OUTPUT);
  pinMode(blue_light_pin, OUTPUT);
}
void loop() {
  lcd.setCursor(0,0);

  RGB_color(255, 0, 0); // Red
```

```
  lcd.print("RED");
  delay(1000);
  lcd.clear();

  RGB_color(0, 255, 0); // Green
  lcd.print("GREEN");
  delay(1000);
  lcd.clear();

  RGB_color(0, 0, 255); // Blue
  lcd.print("BLUE");
  delay(1000);
  lcd.clear();

  RGB_color(255, 255, 255); // White
  lcd.print("WHITE");
  delay(1000);
  lcd.clear();
}
void RGB_color(int red_light_value, int green_light_value, int blue_light_value)
 {
```

```
  analogWrite(red_light_pin, red_light_value);
  analogWrite(green_light_pin, green_light_value);
  analogWrite(blue_light_pin, blue_light_value);
}
```

OUTPUT

Designed a smart irrigation system (Potentiometer, Servo motor shaft).