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Experiment Number 2

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Branch ::	CSE - IoT	Sec/Grp ::	1/A
Semester ::	5th	Date ::	28th Aug, 2021
Subject ::	WSN Lab	CODE ::	CSD-331

1. Aim :

To control 3 colored RGB LED with Arduino Uno.

2. Task :

Find the k-th largest element in an unsorted array.

3. Requirements :

1. Arduino Uno

2. Breadboard

3. onnecting wires

4. RGB LED

5. Resistors (230 ohm)

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4. Steps / Source Code :

1. Take an Arduino Uno and a breadboard.

2. Connect 11,12,13 pin numbers of Arduino board to the connection slots on breadboard and the ground pin to the pin in the negatively charged slot of the breadboard.

3. Connect three 230-ohm resistors on the breadboard.

4. Connect the RGB LED on the breadboard and then write the code for simulation.

```
#define LEDR 13
#define LEDG 11
#define LEDB 12

void setup()
{
    pinMode(LEDR, OUTPUT);
    pinMode(LEDG, OUTPUT);
    pinMode(LEDB, OUTPUT);
}

int r = 0;
int g = 0;
int b = 0;

void loop()
{
    r = random(0, 255);
    g = random(0, 255);
    b = random(0, 255);
    analogWrite(LEDR, r);
    analogWrite(LEDG, g);
    analogWrite(LEDB, b);
    delay(1000);
}
```

5. Observations :


```
1  #define LEDR 13
2  #define LEDG 11
3  #define LEDB 12
4  void setup()
5  {
6    pinMode(LEDR, OUTPUT);
7    pinMode(LEDG, OUTPUT);
8    pinMode(LEDB, OUTPUT);
9  }
10 int r=0;
11 int g=0;
12 int b=0;
13 void loop()
14 {
15   r=random(0,255);
16   g=random(0,255);
17   b=random(0,255);
18   analogWrite(LEDR, r);
19   analogWrite(LEDG, g);
20   analogWrite(LEDB, b);
21   delay(1000);
22
23 }
```

Serial Monitor

```
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Serial Monitor