Basic Programs

Program 1

- Statement : Blink Led connected at pin 13 of Arduino

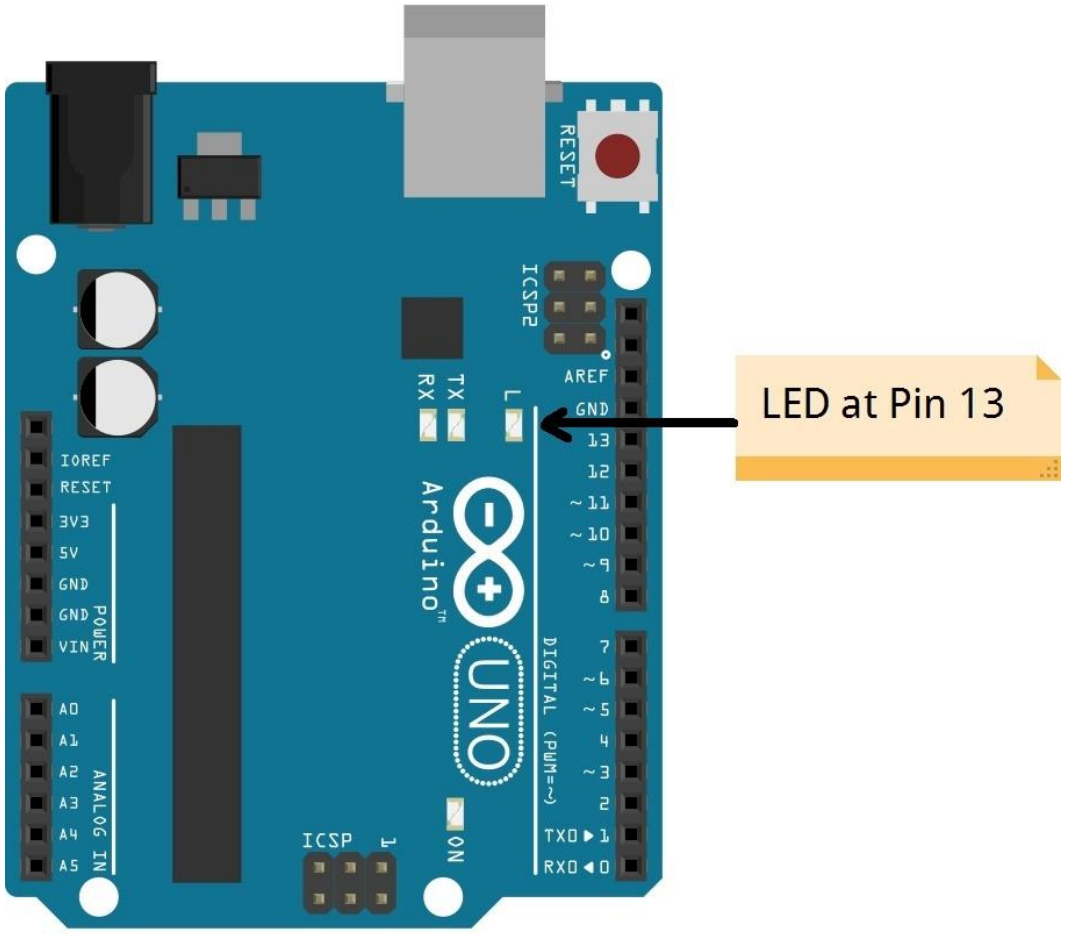
- Blink: Turn ON & turn OFF after some delay

- **Components Required:**

1. Arduino Board
2. Program Downloading Cable

Note: Use onboard led of pin 13.

Circuit Will be……



Program

```
int led = 13;
void setup()
{
  pinMode(led,OUTPUT);
}

void loop()
{

  digitalWrite(led,HIGH);
  delay(1000);
  digitalWrite(led,LOW);
  delay(2000);
}
```

Program 2

- Statement: Write a program in Arduino to blink led for 6 times only.

- Note: setup loop runs only ones

- Use loop concept

Program 3

- Statement: Write a program in Arduino to generate Chaser Effect(use 8 LEDs for this)

- Chaser Effect: Led are turning on one by one.

- **Components Required:**

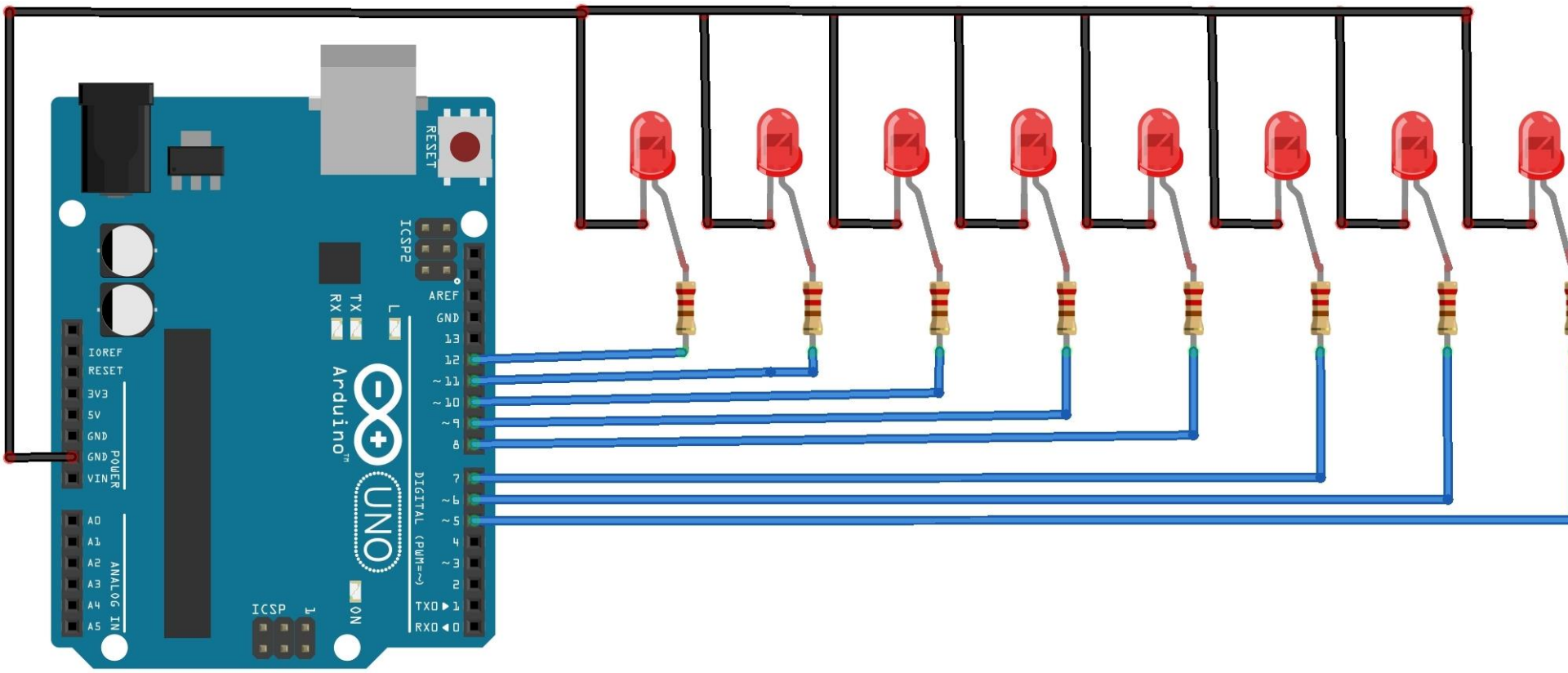
1. Arduino Board
2. 8 Led
3. Resistors(for one LED one resistor)
4. Wires
5. USB Cable

Program Logic

- For 8 Leds we will need 8 Arduino pins(either 0-13 or A0-A5)

- Delay is necessary for observation of Output.

Circuit will be.....



Program 3

- Statement : Write a program

for switch and led.

Condition: When switch is pressed

led will be turn ON

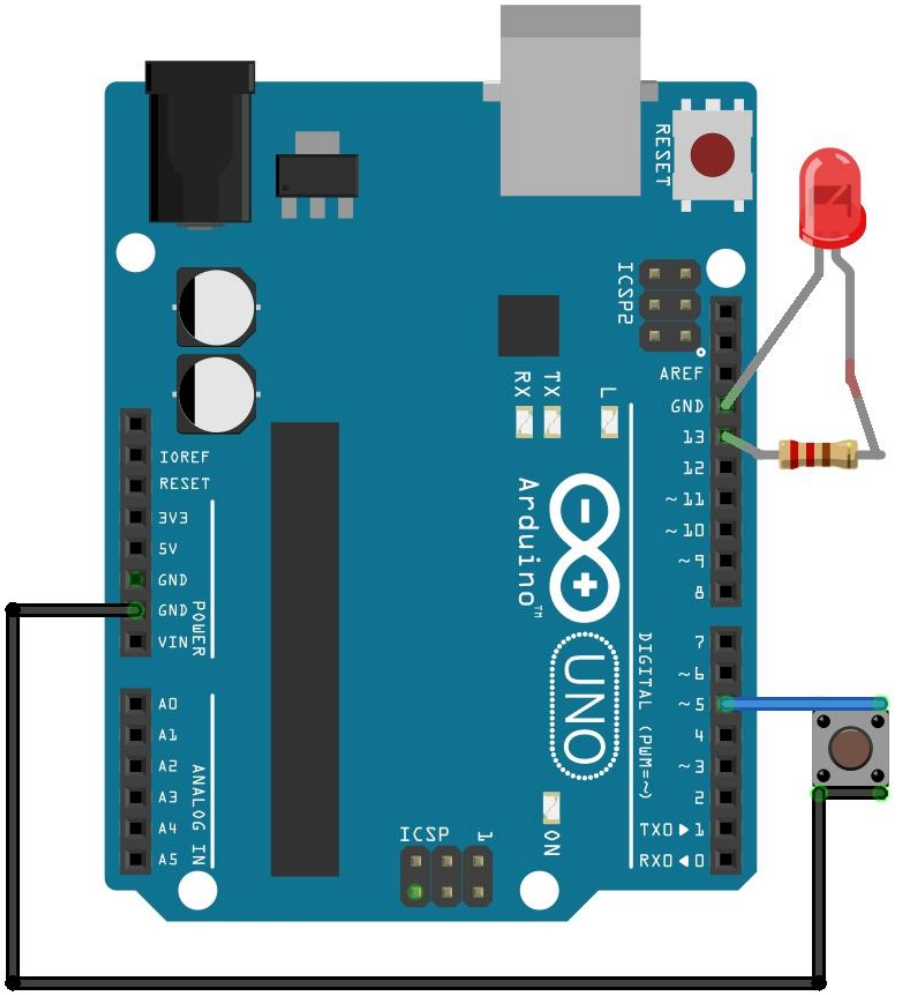
otherwise it should

remain OFF.

- **Components Required:**

1. Arduino Board
2. 1 X Led
3. 1X resistor(1 KOhm)
4. 1 X Tactile switch
5. Wires
6. Program Downloading Cable

Circuit will be….



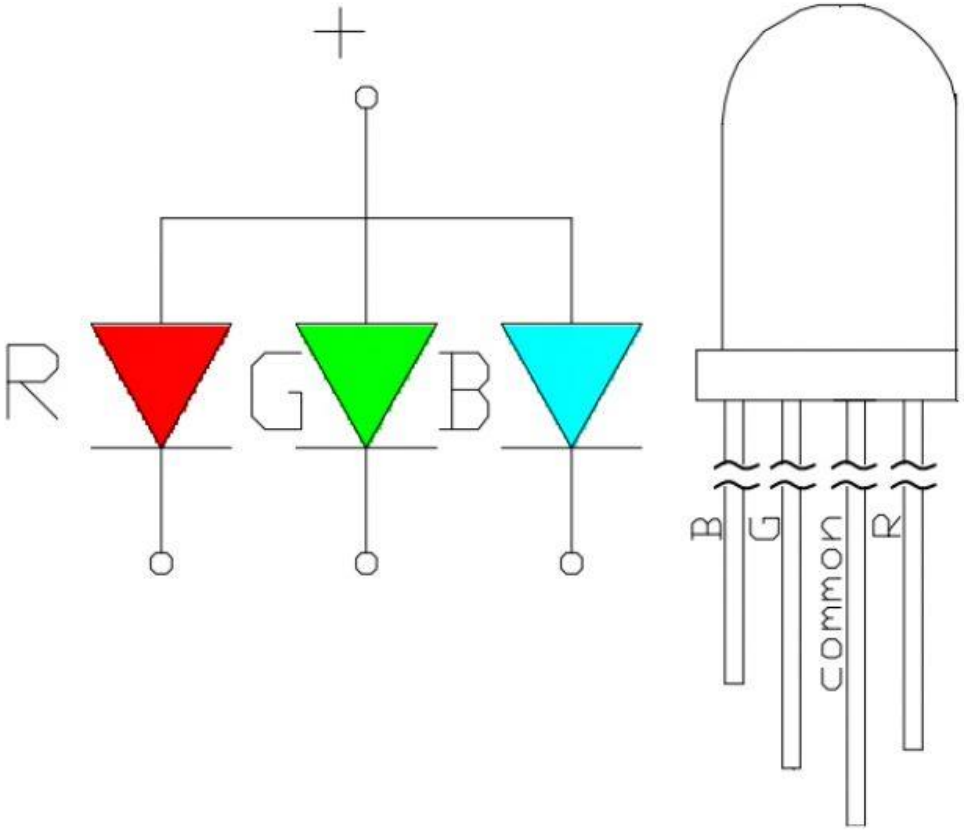
Program 4

- Statement : Write a program for Color Generation.

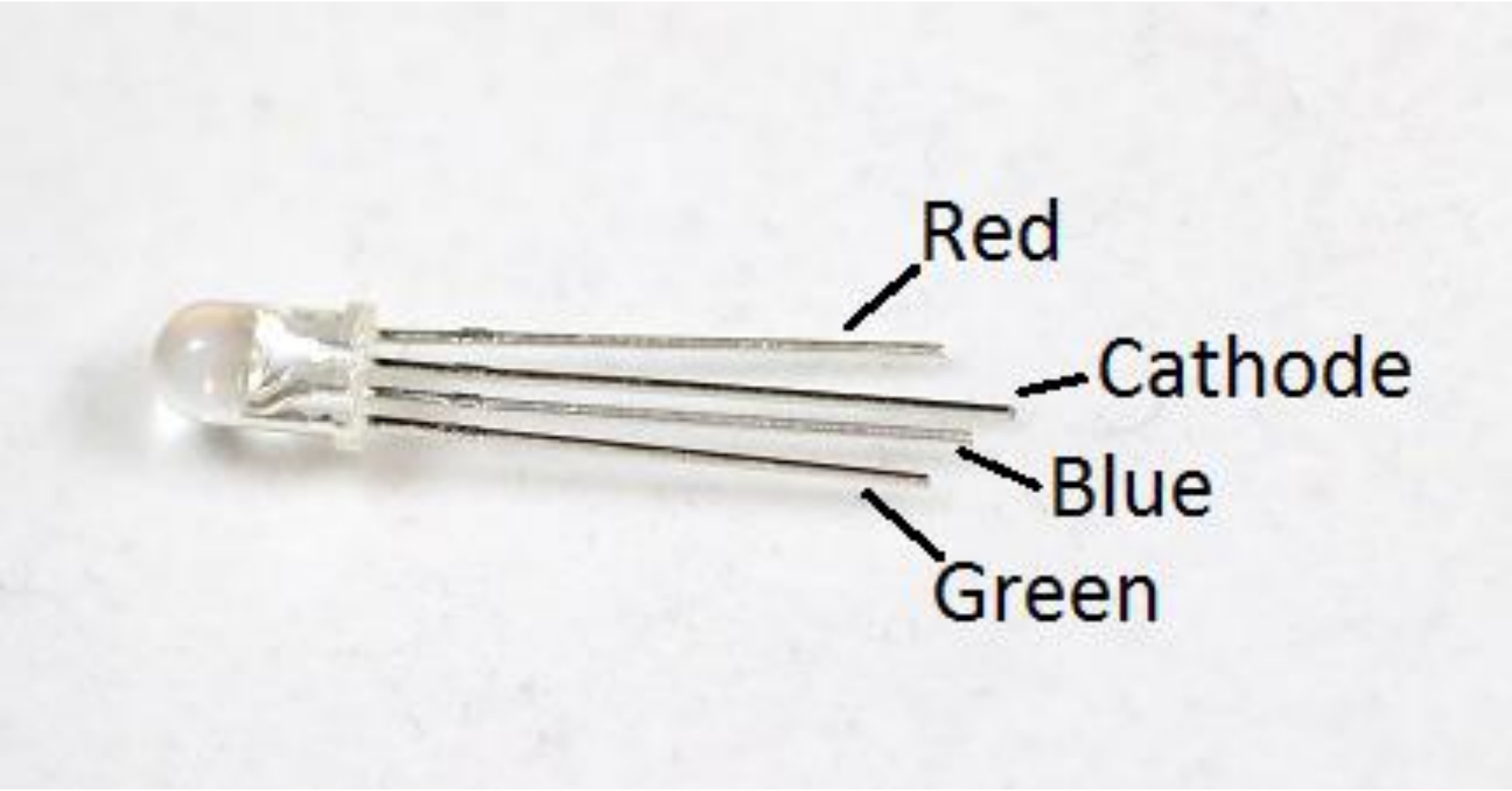
- **Components Required:**

1. Arduino Board
2. 1 X Tricolor Led
3. 3 X resistors
4. Wires
5. Program Downloading Cable

Tri-color Led



Common Cathode Tri Color LED



RED	GREEN	BLUE	COLOR
LOW	LOW	LOW	
LOW	LOW	HIGH	
LOW	HIGH	LOW	
LOW	HIGH	HIGH	
HIGH	LOW	LOW	
HIGH	LOW	HIGH	
HIGH	HIGH	LOW	
HIGH	HIGH	HIGH	

Circuit will be….