

NAME	REGISTRATION NUMBER	DATE
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L.E.D BLINKING

AIM: Blinking LED with Arduino using software delay , LED control with switch.

Apparatus: Breadboard, resistor, LED, wire, Arduino

Procedure:

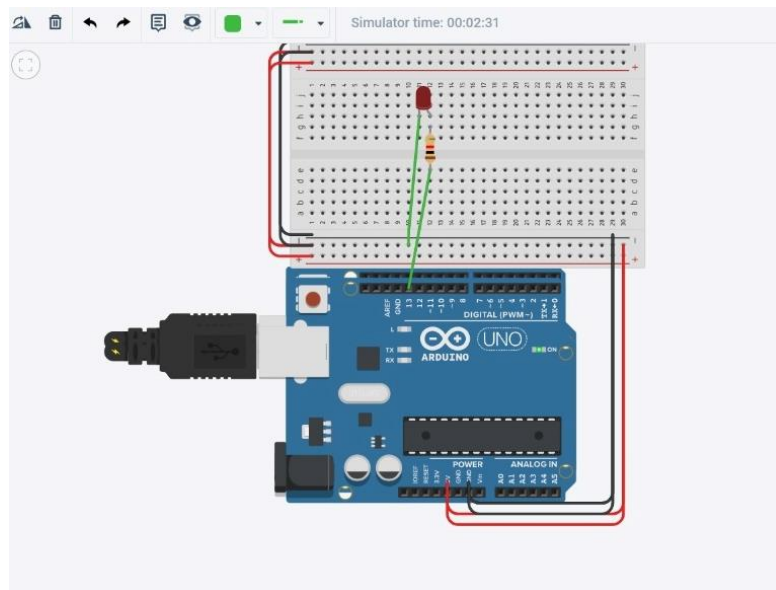
For blinking led project,

Create a new account in www.tinkercard.com or login with existing gmail account

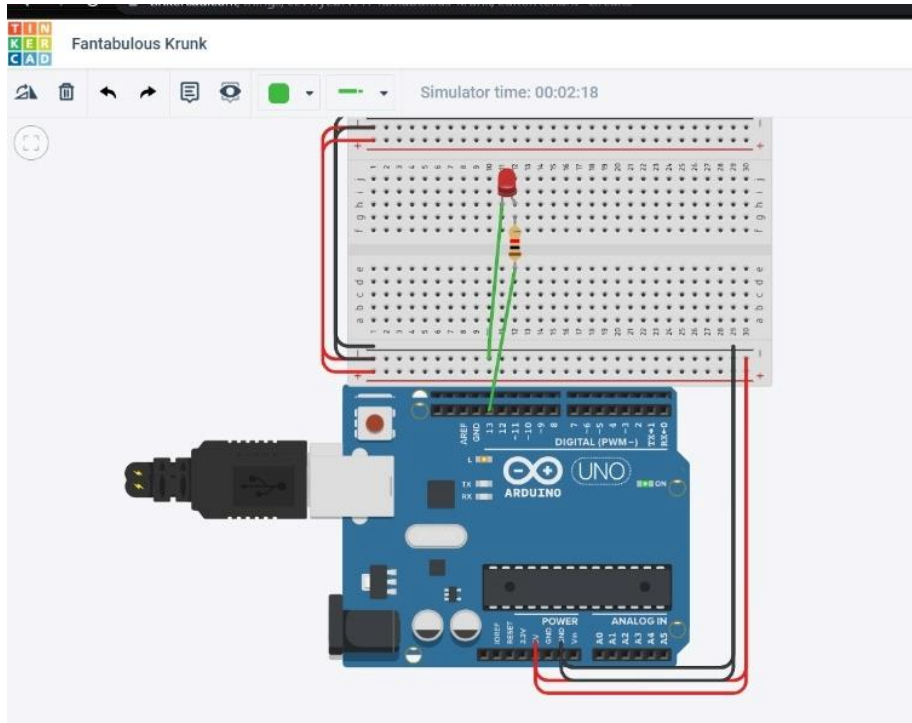
1. First create a circuit and go to the components sections and select arduino in that select bread board.
2. After that again go to the components section and select LED and resistor.
3. Place the LED on the breadboard .
4. And take a wire connect to the ground.
5. After that take resistor and place it on breadboard and connect to 13pin with wire.
6. After the circuit is done go to the coding section and change timings according to you.
7. Start simulation you can see the led blinking .

Circuit using 1 LED:

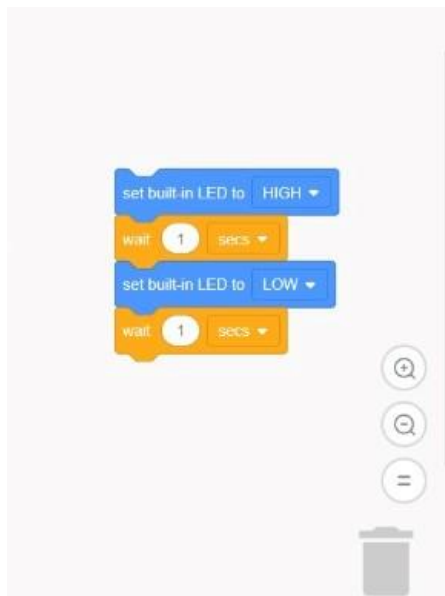
When LED is switched off



When is LED is witched on:



Code:



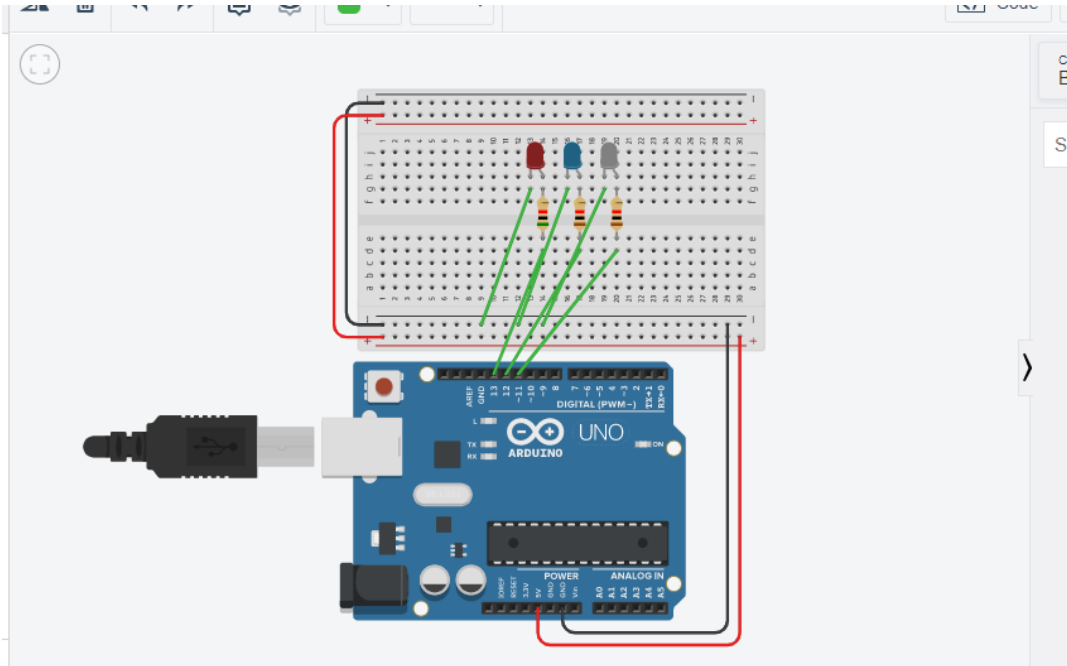
TEXT CODE:

```
// C++ code  
//  
void setup()  
{  
  pinMode(LED_BUILTIN, OUTPUT);  
}  
  
void loop()  
{  
  digitalWrite(LED_BUILTIN, HIGH);  
  delay(1000); // Wait for 1000 millisecond(s)  
  digitalWrite(LED_BUILTIN, LOW);  
  delay(1000); // Wait for 1000 millisecond(s)  
}
```

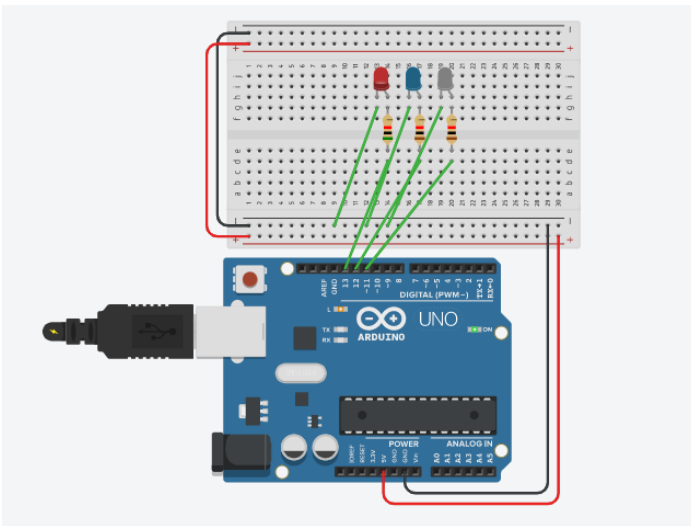
OUTPUT:

LED is blinking. It is switching on for 1 second and switching off for 1 second.

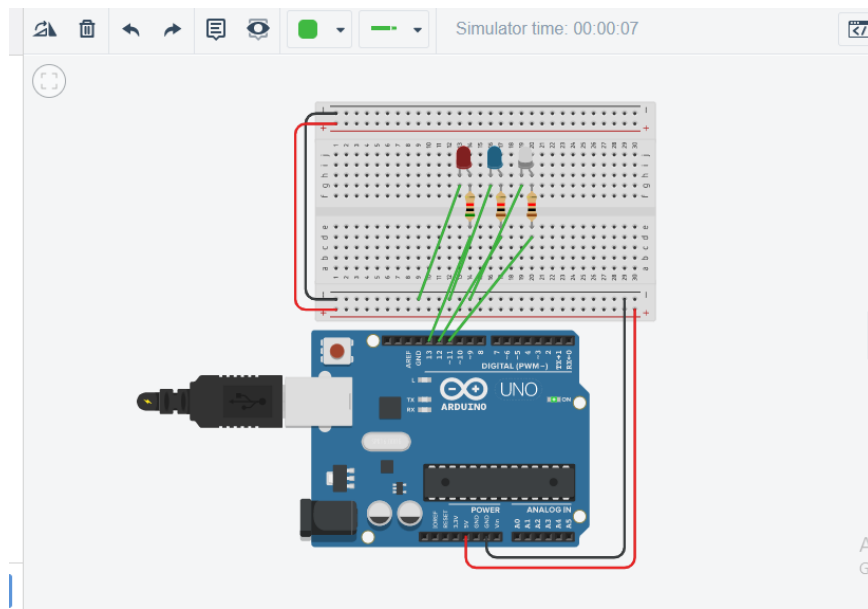
CIRCUIT using 3 LED'S:



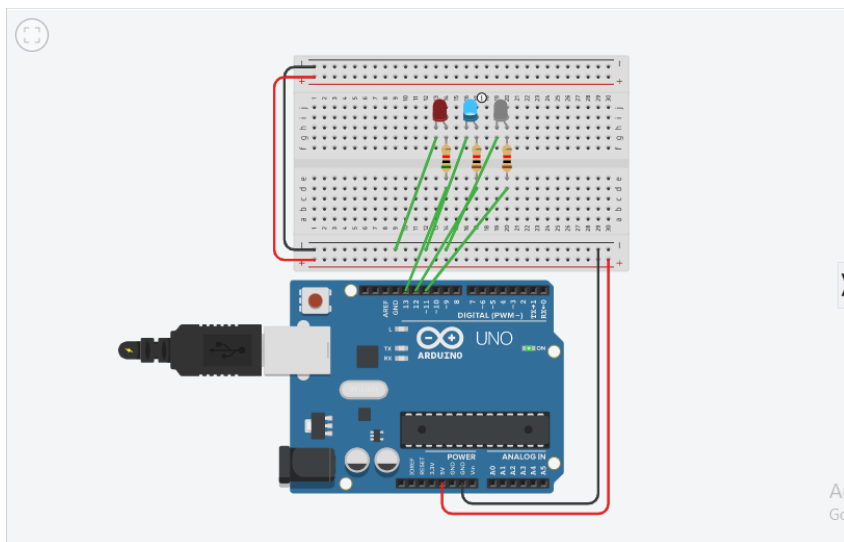
Red light is switched on:



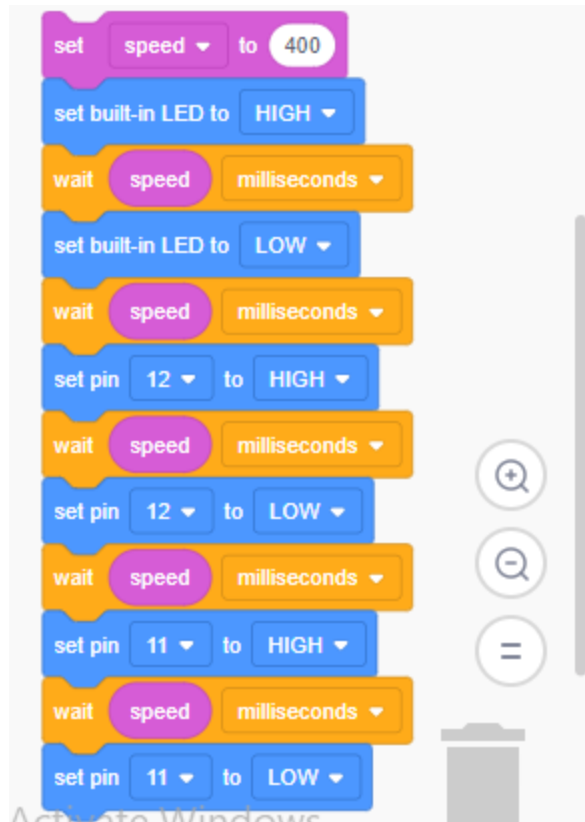
White light is switched on:



Blue light is switched on:



CODE:



TEXT CODE:

```
// C++ code
```

```
//
```

```
int speed = 0;
```

```
void setup()
```

```
{
```

```
  pinMode(LED_BUILTIN, OUTPUT);
```

```
  pinMode(12, OUTPUT);
```

```
  pinMode(11, OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  speed = 400;
```

```
digitalWrite(LED_BUILTIN, HIGH);  
delay(speed); // Wait for speed millisecond(s)  
digitalWrite(LED_BUILTIN, LOW);  
delay(speed); // Wait for speed millisecond(s)  
digitalWrite(12, HIGH);  
delay(speed); // Wait for speed millisecond(s)  
digitalWrite(12, LOW);  
delay(speed); // Wait for speed millisecond(s)  
digitalWrite(11, HIGH);  
delay(speed); // Wait for speed millisecond(s)  
digitalWrite(11, LOW);  
}
```

OUTPUT:

3 LED's are blinking one after the other. First red LED is switching on for 400 milliseconds and after that blue LED is switching on for 400 milliseconds and after white is switching on for 400 milliseconds.

CONCLUSION:

“LED's are blinking according to the given time.”