Experiment No. : 07

Statement :

Blink an LED with two switches. One switch for increasing the blinking rate and another for decreasing the blinking rate.

Date of Exp. : xx/xx/xxxx

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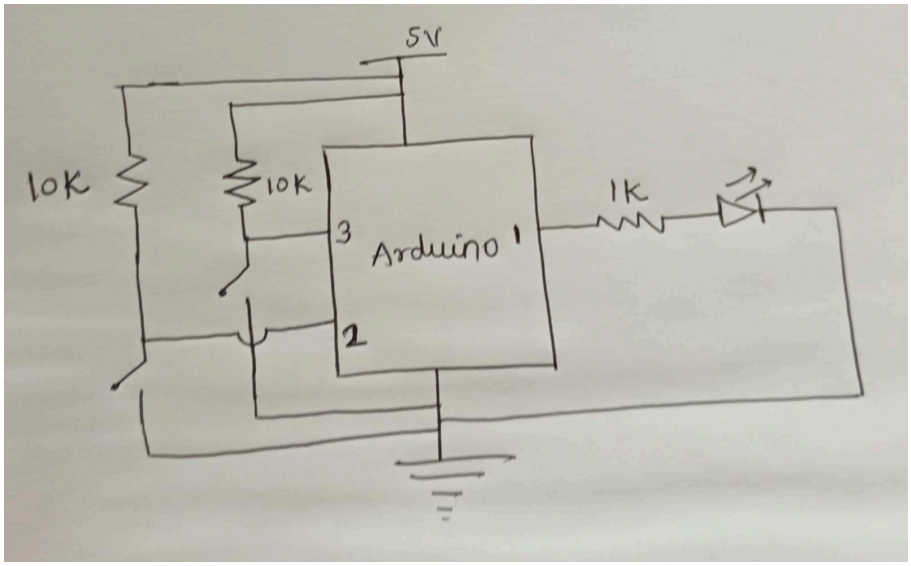
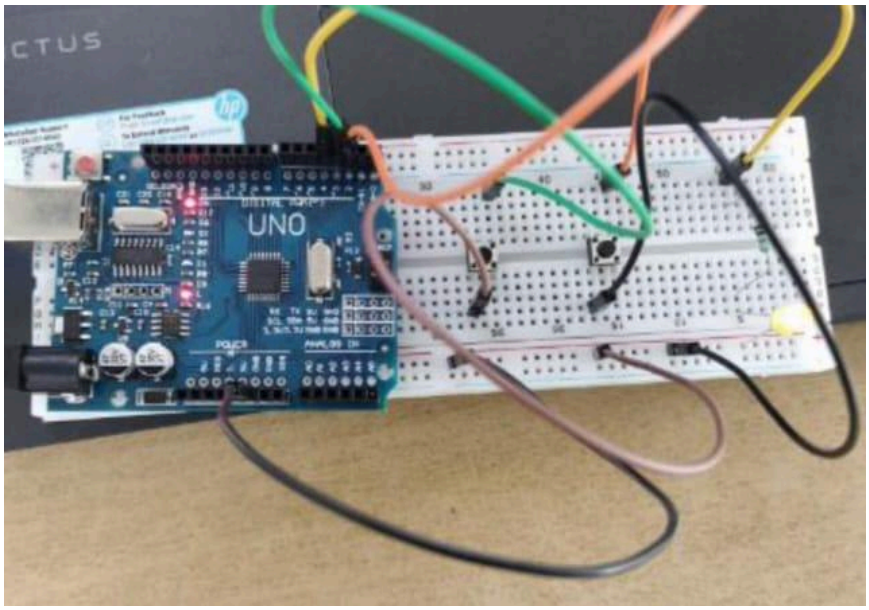
```
const int increaseSwitchPin = 2;  // Digital pin for the switch to increase blinking rate

const int decreaseSwitchPin = 3;  // Digital pin for the switch to decrease blinking rate

const int ledPin = 13;            // Digital pin for the LED


int blinkingFrequency = 500;       // Initial blinking frequency in milliseconds


void setup() {

  pinMode(increaseSwitchPin, INPUT_PULLUP);

  pinMode(decreaseSwitchPin, INPUT_PULLUP);

  pinMode(ledPin, OUTPUT);

}


void loop() {

  // Check the state of the switch to increase blinking rate

  if (digitalRead(increaseSwitchPin) == LOW) {
```

```
      blinkingFrequency -= 50;   // Decrease frequency by 50
milliseconds
    delay(50);  // Debouncing delay
  }

  // Check the state of the switch to decrease blinking rate
  if (digitalRead(decreaseSwitchPin) == LOW) {
      blinkingFrequency += 50;   // Increase frequency by 50
milliseconds
    delay(50);  // Debouncing delay
  }

  // Ensure the frequency stays within a reasonable range
  blinkingFrequency = constrain(blinkingFrequency, 50, 1000);

  // Blink the LED with the calculated frequency
  digitalWrite(ledPin, HIGH);
  delay(blinkingFrequency / 2);  // Half of the period
  digitalWrite(ledPin, LOW);
  delay(blinkingFrequency / 2);  // Half of the period
}
```


5V
10K
10K
3
Arduino
1
2
1K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