Experiment No. : 10

Statement : Blink an LED in accordance with the brightness. Blinking frequency increases with increase in brightness.

Date of Exp. : xx/xx/xxxx

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// Define the pins for LEDs and LED brightness

const int LED\_PIN = 9;

int brightness = 0;

void setup() {

// Initialize serial communication

Serial.begin(9600);

// Set LED pin as output

pinMode(LED\_PIN, OUTPUT);

}

void loop() {

if (Serial.available() > 0) {

brightness = Serial.parseInt();

// Make sure brightness is within the valid range (0-100)

if (brightness >= 0 && brightness <= 100) {

// Map the brightness value to PWM range (0-255)

int pwmValue = map(brightness, 0, 100, 0, 255);

analogWrite(LED\_PIN, pwmValue);

// Calculate blinking interval based on brightness

int blinkInterval = map(brightness, 0, 100, 1000, 100); // Increase blinking frequency with brightness

// Blink LED with calculated interval

blinkLED(blinkInterval);

}

}

}

void blinkLED(int interval) {

digitalWrite(LED\_PIN, HIGH);

delay(interval / 2);

digitalWrite(LED\_PIN, LOW);

delay(interval / 2);

}



