// Automated Night Lighting System

int ldrPin = A0; // LDR connected to analog pin A0

int relayPin = 7; // Relay connected to digital pin D7

int threshold = 500; // Light level threshold (adjust based on environment)

void setup() {

pinMode(relayPin, OUTPUT); // Set relay pin as output

digitalWrite(relayPin, LOW); // Initially turn OFF the light

}

void loop() {

int ldrValue = analogRead(ldrPin); // Read LDR value (0 to 1023)

Serial.print("LDR Value: "); // Optional: for testing

Serial.println(ldrValue);

if (ldrValue < threshold) {

digitalWrite(relayPin, HIGH); // It's dark → turn ON the light

} else {

digitalWrite(relayPin, LOW); // It's bright → turn OFF the light

}

delay(1000); // Check every 1 second

}