AUTOMATED LIGHTING SYSTEM BASED ON ILLUMINATION LEVEL FOR CLASSROOM USING PULSE WIDTH MODULATION

A Project Study
Presented to the Faculty of
College of Engineering, Architecture and Technology
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In Partial Fulfillment
of the Requirements for the Degree of Bachelor of Science
in Electronics and Communications Engineering

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ABSTRACT

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The goal of this research study is to design a microcontroller based prototype of an automated lighting system model in order to control the light level necessary in a classroom.

The researchers used the concept of Pulse Width Modulation to vary the Illuminance level produced by the LED incandescent bulb. The sensor used is a Light Dependent Resistor which gives the circuit the equivalent analog input of the incident light. The Automated Lighting System Based on Illuminance Level for Classroom using Pulse Width Modulation is capable of adjusting the luminous

emittance of the LED incandescent bulb with respect to the sensed voltage sent to the microcontroller.

To support the study, the researchers also conducted consultations with the faculty of CEAT and investigate with previous studies related to the subject at hand.

The output prototype system model design of an automated lighting system can be the basis of the implementation of the system in an actual classroom setting provided that some parameters are adjusted accordingly.

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