

CENTRALIZED LIGHTING CONTROL SYSTEM FOR PERSONAL RESIDENCE USING VOICE RECOGNITION AND MOBILE APPLICATION

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ABSTRACT

Lighting system has been assisting humanity in such a long period. However, a cheap, reliable and effective lighting control system has yet to be a mainstream technology in our today's world. Some of the major inconveniences regarding the conventional lighting control system are mobility and flexibility. So, this project is focused on the centralizing personal residence's lighting control system with two features, mobile application and voice recognition which cover the issues of mobility and flexibility. Hence, centralized lighting control system for personal residence using mobile application and voice recognition is developed based on Internet of Things (IoT) concept. The mobile application used is Blynk which connected to the lighting control system over a local wireless connection while the voice recognition system is directly connected to the lighting control system. Both features served the same role to trigger the 4-channel relay module which will act as light switches. The personal resident can trigger the indoor light switches using their smartphone everywhere through internet connection. On the other hand, the voice recognition system will wait for the user's command to trigger the switches. A prototype of working centralized lighting control system has been developed accordingly to the objectives and requirements. The prototype undergoes pilot testing and experimentation to identify the workflow and efficiency of the system. This system will visualize the conceptual understanding of controlling a lighting system for personal residence in more organized manner.

Keywords: Lighting control system, IoT, Mobile application, Voice recognition, Personal residence.