Automation of Smart Home Appliances via Android Smartphones in order to Reduce Buildings Energy Consumption

Abdolmajid Jafarkhadem [1], Afshin Lashkarara [2]

1-M.Sc, Electrical Engineering, Dezful Branch, Islamic Azad University, Dezful, Iran,
2- Dezful Branch, Islamic Azad University, Dezful, Iran, lashkarara@iust.ac.ir

Abstract:

Nowadays due to developing the information technology, buildings are equipped to this technology in order to reduce energy consumption and make more convenient for inhabitants. The popularity of smart home has been increasing greatly in recent years due to much higher affordability and simplicity through Android smartphone connectivity. This paper prepares a review of smart home and home automation techniques, and then presents the overall design of Home Automation System in order to remote control and monitor the home appliances. The main control system utilizes wireless WIFI, Web and Internet technology to provide remote access from all over the world. An Android web application with a user-friendly interface also has designed to connect to device and control and monitor the relays. The main purpose of this research is designing and introducing a simple, secure and economic system to remote control and monitor the home electrical devices through using an Android mobile with a graphical user-friendly interface. Additionally, we studies the effects of home automation systems on energy resources management and reducing of buildings energy consumption.

Keywords: Home Automation, Android Application, WIFI protocol, Reduce Buildings Energy Consumption, Remote Control and Monitor

[DOR: 20.1001.1.23222468.1392.2.1.7.6]
[Downloaded from jeps.dezful.iau.ir on 2026-11-12]
Journal of Novel Researches on Electrical Power - Vol. 2-No. 1- spring 2013