

Implementation Simple Device for Smart Home to Control Reduced Electricity Waste by Mobile

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Abstract

Electrical energy is essential for modern life, but it is often used wastefully due to human negligence, such as forgetting to turn off the lights or using excessive electrical equipment. This waste increases costs, increases fossil fuel consumption, and increases carbon emissions that damage the environment. One of the main causes is neglecting to turn off the lights, which is influenced by human factors, bad habits, lack of automatic control systems, and minimal education. To overcome this, a tool was created that can turn lights on and off remotely via an internet network. This tool is practical, can control multiple lights at once, and is more efficient than a microcontroller because it does not require circuit design or complex programming. The Bardi Relay is a smart home device that functions to control the flow of electricity in household appliances, different from ordinary relays because it is integrated with IoT and can be controlled through an application or virtual assistant. Its main components include a coil, armature, spring, and switch contacts (NC, NO, and Common). The Bardi Relay functions effectively as a household light controller that can be operated through a smartphone application using a WiFi network. This system allows practical remote control without the need for programming, and is integrated with the Smart Home ecosystem. Apart from one lamp, the Bardi Relay can also be used to control several lamps at once, for example in the living room or garden lights in one installation path.

Keywords: Electricity Waste, Bardi Device, Internet, Remote, Mobile