IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 14, May 2023

Research Paper on Bluetooth Based Home Automation System

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Abstract: *A "smart home" is a home that use information technology to keep an eye on its surroundings, manage its electric appliances, and interact with the outside world. Technology for the "smart home" is sophisticated and ever evolving. This paper discusses a sample smart home branch that monitors and controls the atmosphere of a house. The embedded system-based solution can serve as a home's security guard. The device can keep an eye on the house's temperature, humidity, gas density, and water immersion.*

The entire system is less expensive, but it offers a complete function for monitoring and controlling home appliances. We can have a safe, convenient home thanks to the embedded system approach because it is simple to use and can be easily installed in existing homes. The system's limitations include its inability to perform wireless functions and its limited ability to turn on and off electric appliances. The development of smart electric appliances will require significant system advancement.

This project is used to operate household appliances in accordance with the user's preferences and it also displays the current temperature. The temperature will be provided to the system by the temperature sensor and microcontroller. The development of technology never stops. It is a significant contribution to society to be able to create a product with current technology that will improve the lives of others. The design and execution of a low-cost, adaptable, and secure mobile phone-based home automation system are presented in this work. The design is built on a standalone Arduino BT board, and the input/output ports of this board are connected to the home appliances through relays. Wireless communication exists between the Arduino BT board and the cell phone. This system's low cost and scalability allow a range of devices to be controlled with only minor changes to its fundamental structure. The appliances at home are password-protected so that only authorised individuals can access them.

Keywords: Home Automation, Wireless, Android, Bluetooth, Relays, Smart Home, Security etc

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