

# IoT Based Smart Medicine Reminder

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**Abstract:** *The IoT-Based Smart Medicine Reminder with Authentication is a healthcare solution designed to ensure that patients take their medications on time and prevent unauthorized access to medicines. This system is particularly useful for elderly individuals, chronic disease patients, or individuals with memory impairments, where regular medication intake is crucial for effective health management. Traditional methods, such as pill boxes and alarm reminders, lack the capability to authenticate the person taking the medication or track real-time adherence remotely. This project integrates Internet of Things (IoT) technology with Radio Frequency Identification to provide a smart, secure, and user-friendly medicine reminder system.*

*The proposed system is composed of several key components: a microcontroller (NodeMCU or ESP32), reader, medicine storage compartments, LCD display, buzzer alarm, and Wi-Fi connectivity. Each medication compartment is assigned a time schedule, and the system triggers an alarm and displays instructions when it is time to take a particular dose. The system leverages authentication to ensure that only authorized users can access specific medicines, preventing misuse or unauthorized access, which is crucial in multi-patient environments or homes with children. The IoT integration allows the system to send real-time notifications to a caregiver or family member via a mobile application (such as Blynk or a custom app). It also logs the medication intake in the cloud for tracking adherence and generates alerts for missed doses..*

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