

AI -Based Medicine Reminder Application

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Abstract

Maintaining a consistent medication routine is important for successful medical treatment. However, many patients forget to take medicines at the correct time due to busy lifestyles or complicated prescriptions. Missing medication can lead to serious health problems and reduced treatment effectiveness. The proposed AI-Based Medicine Reminder Application is developed as a mobile solution that assists users in organizing and monitoring their medication schedules. The system allows users to store prescription details, set reminder notifications, and track whether medicines are taken on time. It also includes a caregiver notification feature that informs family members when a dose is missed. By combining reminder alerts with simple medication tracking, the application supports better treatment management and improves patient safety.

Introduction

Proper medication timing plays an important role in maintaining good health and achieving effective treatment results. Despite its importance, many individuals forget to take their medicines because of daily workload, memory issues, or the difficulty of managing several prescriptions simultaneously. Such situations may reduce the effectiveness of treatment and may cause additional health complications. Traditional reminder methods such as alarm clocks or written notes often fail to provide reliable medication management. These methods only remind users but cannot record or monitor whether the medicine has actually been taken.

To overcome these issues, a mobile-based solution is proposed. The AI-Based Medicine Reminder Application helps users manage their medicine schedules in a simple and organized manner. Additionally, caregiver integration enables family members to receive alerts if medicines are not taken at the scheduled time.

Literature Review

1. Medication Reminder Application:

Many researchers have developed mobile applications that help patients remember their medication schedules through reminder notifications. These systems usually alert users when it is time to take medicine. While such applications help reduce missed doses, many of them offer only basic reminder functionality without additional monitoring or reporting features.

2. Smart Healthcare Mobile Application:

Modern healthcare applications aim to support patients through mobile platforms that assist in managing daily health activities. These systems often combine reminder features, activity tracking, and simple data analysis to improve healthcare management. Some applications also provide tools that help users manage prescriptions and medication information more efficiently.

3. Digital Health Monitoring System:

Digital health monitoring systems allow users to track various health-related activities such as medication intake, physical activity, and health indicators. These platforms provide dashboards and reports that help users understand their health patterns. Although these systems improve health awareness, many of them do not include features for caregiver supervision.

4. Caregiver Support and Patient Monitoring Systems:

Some healthcare technologies include caregiver monitoring functions that enable family members or healthcare providers to observe patient activities remotely. These systems can send notifications if important health-related tasks are not completed. Such monitoring tools are particularly useful for elderly patients who require additional supervision.

5. Smart Notification Systems:

Notification systems play an important role in mobile applications by delivering alerts to users at specific times. In healthcare applications, these notifications can remind patients to take their medicines. Advanced notification systems may adjust reminder schedules based on user behavior. However, many applications still lack mechanisms to confirm whether the medication was actually taken.

6. Medication Adherence Support Tools:

Medication adherence tools are designed to encourage patients to follow their treatment instructions consistently. These tools may include reminders, progress tracking, and performance reports. Doctors can use these reports to understand whether patients are following their prescribed treatment schedules properly.

7. Medication Tracking and Reporting Systems:

Medication tracking systems record and store information about medicine intake over time. These systems help patients maintain a history of their medication usage and generate reports for analysis. Such reports can help healthcare professionals evaluate

treatment adherence and make better medical decisions.

System Architecture

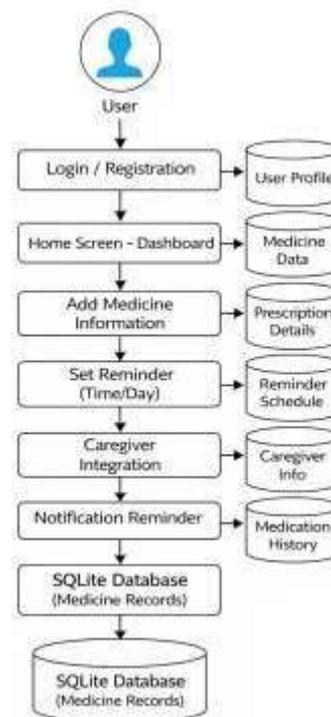


Fig. System Architecture of Med-reminder

The architecture of the proposed system illustrates the flow of the AI-Based Medicine Reminder mobile application developed using Android Studio, Java programming language, and SQLite database. The process begins with the user, who accesses the application and performs login or registration to authenticate and create a user profile.

From the dashboard, the user can add medicine information, enter description, and set reminder timings for medicine intake. The system also allows caregiver integration, so family members can receive alerts if a dose is missed. The application sends notification reminders based on the scheduled time.

All user information, medicine details, reminder schedules, and medication history are stored in the SQLite database for proper management of records.

Conclusion

The AI-Based Medicine Reminder Application offers an effective solution for helping patients manage their medication schedules through a mobile platform. The system combines reminder notifications, prescription management, and caregiver monitoring to support proper medication adherence. The use of Android technologies such as Java and SQLite ensures reliable performance and secure storage of user information. With future improvements and integration with advanced healthcare technologies, the application can become an important tool for improving medication discipline and supporting better patient care.

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