MediLink

Ishwarya Narayana Subramanian
Version #1

Summary of Project

The Medilink app streamlines medication management for seniors, offering simplified tracking of schedules, easy refill requests, and seamless delivery scheduling. With convenient features like prescription uploads and SMS notifications, it ensures an effortless and efficient experience tailored to the needs of elderly users.

Project Analysis

Value Proposition

Our value proposition is to simplify medication management, addressing the challenges of remembering schedules, refilling prescriptions, and tracking deliveries, particularly for older individuals. By offering a user-friendly platform tailored to the needs of seniors, we aim to streamline routines and improve health outcomes, tackling the widespread issue of medication non-adherence. This is critical, as non-adherence costs the healthcare system approximately $100 billion (about $310 per person in the US) annually in the United States alone.

Primary Purpose

The project's main purpose is to improve medication management for individuals, particularly seniors, by offering a convenient and intuitive platform for scheduling, refilling prescriptions, and tracking deliveries. Through these functionalities, the project aims to boost medication adherence, foster better health outcomes, and enhance the overall quality of life for its users.

Target Audience

This project targets elderly individuals who struggle with medication management. By providing a user-friendly solution with features like medication reminders and caregiver access, it aims to improve adherence and enhance quality of life. Outreach efforts will focus on senior centers, retirement communities, and partnerships with geriatric care providers, prioritizing accessibility and simplicity for users of all technological backgrounds.

Success Criteria

Success will be measured by various metrics, including user satisfaction through feedback and ratings, increased medication adherence rates among elderly users, and the number of active users engaging with the app regularly. Additionally, financial gain and market share growth will be indicators of success, but the primary focus remains on fulfilling the public good of improving healthcare outcomes for the elderly population.

Competitor Analysis

Competitors in the medication management app space may offer robust features but might lack user-friendly interfaces tailored to elderly users. Our app distinguishes itself by prioritizing simplicity and accessibility, ensuring ease of use for elderly individuals who may not be tech-savvy. Additionally, our

focus on personalized medication reminders and seamless communication with healthcare providers sets us apart from competitors who may offer generic solutions.

Monetization Model

A subscription-based model with tiered pricing could be effective, offering basic features for free while charging for premium features such as advanced medication management tools, personalized

Initial Design

The initial design of the Medilink app will focus on creating a user-friendly platform for elderly individuals to manage their medications effectively. The MVP will include features such as medication tracking, scheduling deliveries, and receiving reminders. Limitations may include basic functionality initially, with plans to expand features based on user feedback and development resources.

UI/UX Design

For an MVP, focus on key UI/UX components such as a user-friendly registration/login process, clear medication tracking interfaces, intuitive scheduling features`, and prominent notifications for medication refills or deliveries. Additionally, ensure accessibility features for elderly users, such as larger text sizes and simple navigation menus.

Technical Architecture

The technical architecture of the Medilink app will consist of several key components to support the MVP:

- *Developed using React Native for cross-platform compatibility, allowing for seamless user experience on both iOS and Android devices.*
- *Utilizing Node.js and Express.js to build a RESTful API for handling user authentication, medication data management, and interactions with the database.*
- *Integrating with SecureStore or similar solutions for secure storage of user authentication tokens and sensitive data.*
- *Utilizing AsyncStorage for local storage of user settings and preferences, as well as scheduled medication details.*
- *Leveraging third-party APIs for SMS notifications, such as Twilio, to send reminders and alerts to users about scheduled deliveries and medication refills.*

To measure success, key metrics can include user engagement (active users, session duration), medication adherence rates, customer feedback (ratings, reviews), and the number of successful medication deliveries scheduled through the app. Additionally, monitoring system performance (response times, error rates) and database usage can provide insights into the app's reliability and scalability.

Challenges and Open Questions

Accessing Gallery and Permissions:

When developing mobile apps, it's crucial to navigate the stringent permission systems, especially concerning user data like the gallery. We must ensure our app promptly requests the required permissions, while also gracefully managing scenarios where users deny access. It's imperative to

transparently communicate why our app needs such permissions, assuring users of data privacy and security.

Integrating Twilio Web Service:
Integration with Twilio's API for messaging services necessitates adept handling of authentication, API rate limits, and error management. Leveraging Twilio's official SDKs or libraries can simplify these complexities, providing pre-built methods to tackle challenges. Additionally, implementing robust retry mechanisms for failed requests and diligent API usage monitoring is essential to avoid hitting rate limits.

Using the Messages App:
Interacting with other apps on a mobile device, such as the Messages app, presents unique challenges due to platform restrictions and OS variations. To tackle this, we'll explore platform-specific APIs or deep linking mechanisms provided by operating systems. Our app will gracefully handle scenarios where the Messages app might not be accessible, ensuring uninterrupted user experience.

Accessing Web Services from Another Server:
C*ommunicating with web services hosted elsewhere introduces various challenges like network latency and server-side errors. Implementing robust error handling and retry logic is vital to tackle intermittent connectivity issues effectively. We'll adhere to secure communication practices by utilizing appropriate data formats and ensuring HTTPS usage. Additionally, caching mechanisms can enhance performance and reduce server load, ensuring seamless user experiences.*