Group 2

MediPal
Vision Document

Version 1.0

Revision History

Date	Version	Description	Author
06/02/2025	<1.0>	Initial draft of Vision Document for MediPal	Team members

Table of Contents

Vision (Small Project)

1. Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of the MediPal. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how the MediPal fulfills these needs are detailed in the use-case and supplementary specifications.

2. Positioning

2.1 Problem Statement

The problem of	irregular medication use and missed medical appointments
affects	*students and busy professionals*
the impact of which is	*reduced treatment effectiveness and poor health outcomes*
a successful solution would be	*a system that reminds users of medicine schedules, tracks usage, and alerts them of upcoming appointments.*

2.2 Product Position Statement

For	*individuals who struggle to manage their medication and healthcare routines*
Who	*need a reliable, mobile-based health reminder system*
The (product name)	*is a MediPal application*
That	*helps users build consistent medication habits and stay updated on medical appointments*
Unlike	*generic reminder apps or paper-based tracking*
Our product	*is tailored specifically for healthcare management and offers medication logging, follow-up reminders, and an AI chatbot for drug-related queries*

3. Stakeholder and User Descriptions

3.1 Stakeholder Summary

Course Instructor	Lecturer of the course	- Defines the scope and objectives of the project - Monitors student progress - Provides academic guidance and final evaluation
Teaching Assistant (TA)	Course assistant supporting the instructor	- Reviews submitted documents - Provides formative feedback - Assists in grading and answering student queries

Project Manager (Hào)	Student responsible for managing the project timeline and team coordination	- Plans and tracks progress of sprints - Coordinates team tasks - Ensures timely submission and proper communication
Business Analyst (Toàn)	Student in charge of understanding user needs and defining system requirements	- Collects user data and feedback - Defines functional and non-functional requirements - Communicates requirements to the team
Developer (Tuấn)	Student responsible for implementing app features	- Develops assigned application modules - Fixes bugs and improves code quality - Participates in design and technical discussions
Developer (Khoa)	Student responsible for implementing app features	- Implements and tests app functionality - Collaborates on integrating modules - Supports other team members technically
Tester (Lượng)	Student responsible for software quality assurance	- Designs and runs test cases - Reports bugs and ensures feature correctness - Verifies system against requirements

3.2 User Summary

Student	*A university student who often forgets to take medication due to a busy schedule*	*Enters medication details, receives Enters medication details, receives notifications, tracks dosage history*	*Project Team (BA – Toàn)*
Working Adult	A full-time employee managing both work and personal healthcare	Schedules appointments, responds to reminders, tracks medications	Project Team (BA – Toàn)
Elderly User	An older person who requires daily medication but may have difficulty using digital tools	Receives reminders, tracks usage passively (possibly assisted by family)	Project Team (BA – Toàn)
Healthcare Provider (future)	A doctor or nurse who may monitor patient medication logs	Views medication history (read-only), provides consultation (optional feature)	Project Team (BA – Toàn)

3.3 User Environment

MediPal is designed to be used by individual users, primarily students and working adults, to manage their personal health care routines. Most tasks are completed individually and do not require collaboration with others. A typical task cycle, such as scheduling a new medication or checking reminders, takes less than 1 minute to complete.

Users interact with the application in various environments such as at home, at school, or at work. Therefore, the interface must support **quick, non-distracting interactions** and **reliable push notifications**. Since many users use the app during their daily routines, it must be optimized for mobile devices and work well in both **online and offline** conditions.

The system is expected to run primarily on **Android smartphones**, with potential expansion to **iOS** in the future. The initial version will not require integration with external health systems but may use **cloud services** for data backup and synchronization.

The application is not dependent on other apps but may access basic smartphone features such as:

- Notification system
- Calendar access (optional for future versions)
- Internet access (for chatbot functionality only)

Users expect **low learning effort**, high **responsiveness**, and **discreet operation** (e.g., not interrupting classes or meetings), especially students who are the majority of the target audience.

3.4 Alternatives and Competition

There are several alternatives available for users who wish to manage their medication schedules and healthcare routines. These alternatives include both existing mobile apps and non-digital methods. The table below summarizes the main options and how they compare to MediPal:

Google Calendar / Alarm	Widely available, easy to use, customizable reminders	Not specifically designed for medication or healthcare; lacks history logging or health-focused features
Medisafe	Specialized medication reminder app; supports pill tracking, visual UI	Some features locked behind paywall; requires account; ads may affect experience
Paper tracking / notebook	Simple, does not require technical knowledge	Easily forgotten or misplaced; no automatic notifications; no data storage

While other apps like **Medisafe** offer similar features, **MediPal** is designed specifically for students and young users who often neglect personal healthcare. Unlike general-purpose solutions, MediPal provides a **tailored, simple, and student-friendly experience**, including features like follow-up reminders and optional chatbot assistance for basic health questions.

4. Product Features

No.	*Feature*	*Description*	*Priority*
1	Medication Tracking	Allows users to input and schedule medication reminders with details like dosage, form, and frequency. Includes stock tracking.	High
2	Appointment Management	Lets users log doctor visits with location and provider. Supports follow-up suggestions and possible calendar sync.	High
3	Daily Healthcare Reminders	Customizable reminders for hydration, vitals, exercises, and sleep tracking with preset templates.	High
4	History Log	Provides a timeline of past medication intake and appointments. Allows exporting reports and marking missed doses.	Medium
5	AI Chatbot	Answers simple user queries related to their medications, side effects, and schedules (non-diagnostic).	Low
6	Notification System	Sends push notifications for all reminders and schedules.	High
7	Profile System	Allows multiple user profiles to manage health data individually.	Medium
8	User-Friendly UI	Ensures intuitive navigation and clean interface for better usability across users.	High

5. Non-Functional Requirements

1. **Platform Requirements**
    - The application will be developed for **Android OS (version 9.0 and above)** in the initial release.
    - Future compatibility with a **web-based version** is considered for later phases.
2. **Performance Requirements**
    - The system should respond to user input within **2 seconds** for standard interactions (e.g., setting a reminder, opening history).
    - Background notifications and reminders must be delivered **on time** with less than **5-second delay** tolerance.

3. **Usability**
    - The user interface will be designed to be **simple and intuitive**, ensuring that users with no technical background can navigate without guidance.
    - App onboarding will guide users through initial setup (medication input, profile creation, etc.).
4. **Reliability and Fault Tolerance**
    - The app must operate reliably, with **less than 1% crash rate** during normal usage.
    - In case of failure (e.g., app crash), unsaved user data should be preserved or auto-recovered.
5. **Security**
    - User data (medications, schedules, profiles) must be securely stored using **local encryption** on the device.
    - Multi-user profiles must be **separated and protected** by PIN or biometric authentication (if supported by the device).
6. **Environmental Requirements**
    - Designed for use on smartphones in varying conditions, including **offline** environments (reminders should still function without internet).
    - Internet connection required only for backup/syncing (if implemented) and AI chatbot feature.