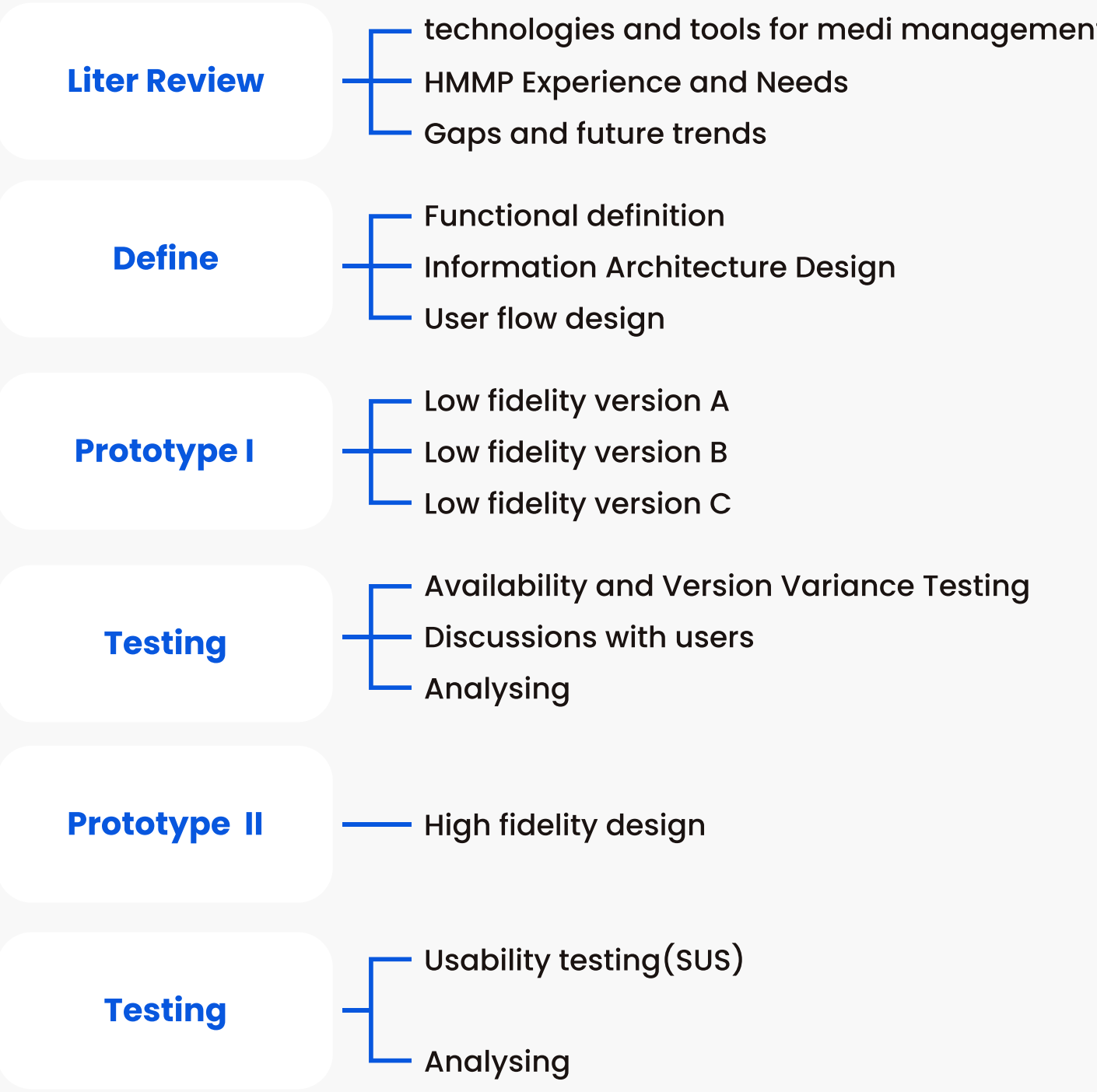


Digital solutions for home medicine management

Abstract

In modern families, **managing medicines has emerged as a crucial concern** due to health implications and the potential wastage of pharmaceutical resources. This research delves into leveraging digital tools for **efficient household medicine management**, encompassing aspects like storage, classification, and timely reminders. Employing a user-centred design approach, i developed and iteratively optimized a software that addresses key functionalities, such as inventory management and expiry reminders. The outcome demonstrates **enhanced medication management efficiency**, minimized wastage, and heightened safety in home medication usage. Through this study, we aim to present a pragmatic and **user-friendly solution** for home medicine administration.

Methodology



Conclusions & Future Work

This study reveals the widespread wastage of household medicine resources, highlights its economic and environmental impacts, and works towards designing a user-centred household medicine management software that meets the core needs and incorporates innovative features by combining technological and community-based strategies, which emphasise iterative development of user feedback and facilitates the sharing of knowledge on medication management and mutual aid in recycling through a community-based platform.

- Future work**
- Optimise information architecture by combining structured methods
 - Use of advanced tools such as eye-trackers to guide interface interactions
 - Expanding the research sample and deepening software functionality

providing households with management and reuse strategies for unused medicines

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Intro & Background

Background

Globally, **households waste a large amount of medicines every year**, resulting in a huge loss of resources and the economy. According to studies, nearly 60 per cent of household medicines go unused. In many communities, there are people in dire need of these medicines. The current way of managing medicines no longer meets the needs of modern society. **Based on this, this project aims to develop a home medicine management software** that enables families to manage and share their medicine resources in an efficient and environmentally friendly manner.

Problem

- forgetfulness or indifference
- Perception issues
- Inconvenient collection

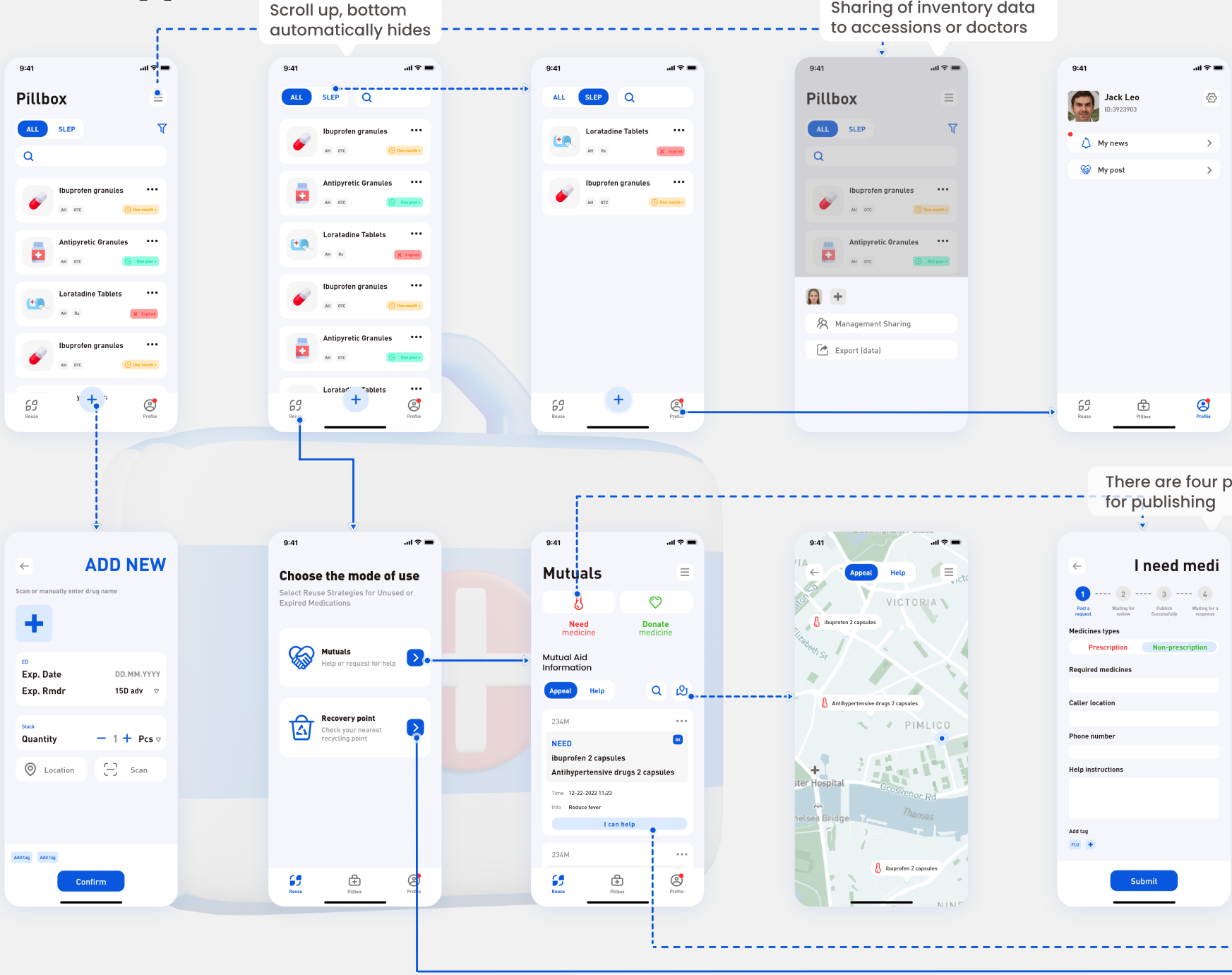
Solution

To design and develop a household medicine management software that incorporates **medicine management, recall point enquiry and community support functions**. The software aims to help households reduce medicine waste and manage medicines more intelligently.

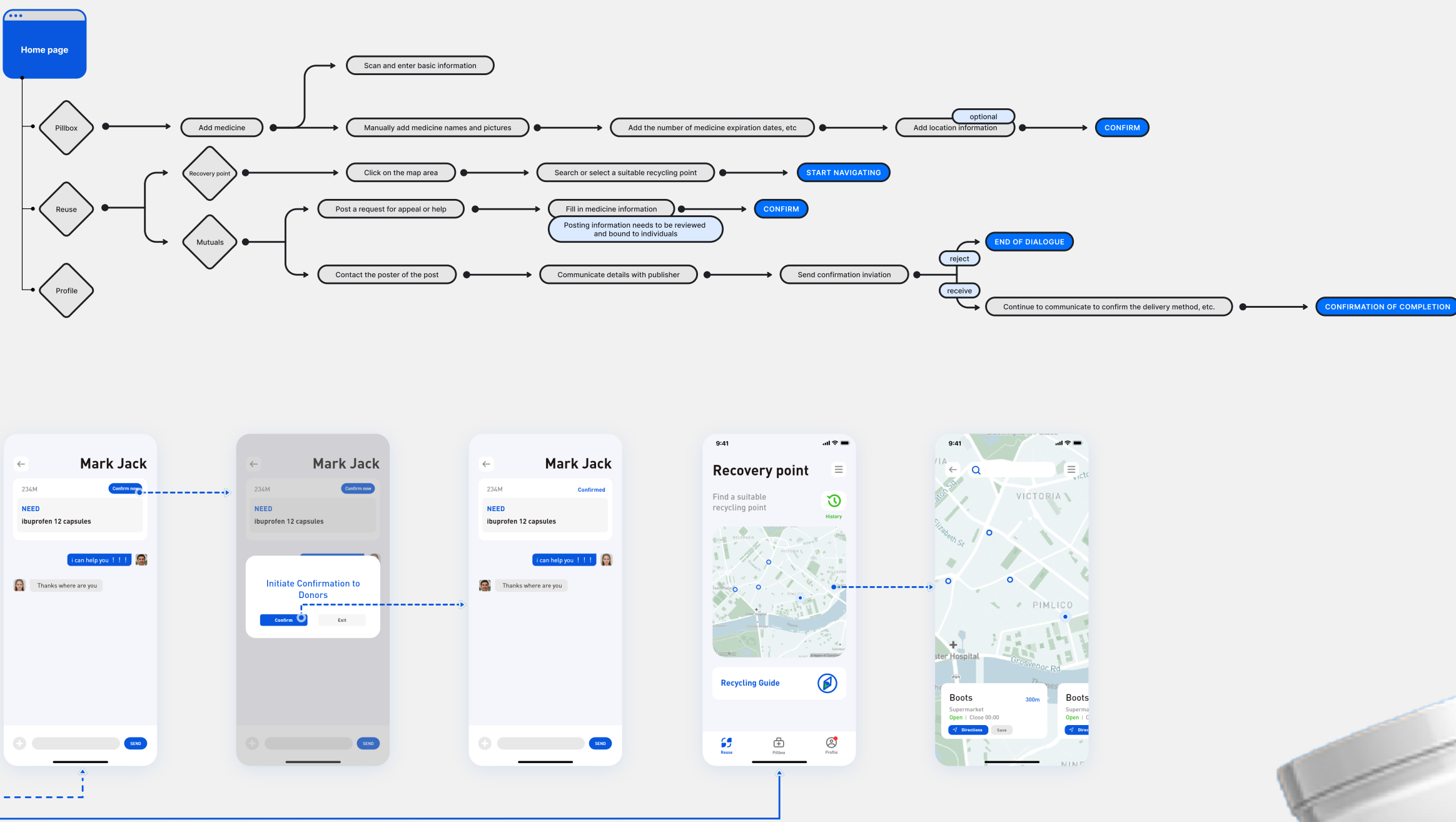


Design

Prototype



User flow



Testing & Evaluation

Participants

6+5

User testing tasks

LOWFI: 8 HIFI:8

Discussions

5 Questions

Availability and Version Variance Testing

- Medicine Management Module**
- Version C shows excellent performance.
 - The layout of the drug information card is praised.
- Medicine Mutual Aid Module**
- Version B is too information dense and increases cognitive load.
 - Versions A and C are close in performance, with version C slightly superior in details.
- Medicine Recovery Point Module**
- Three version performs consistently with little variation.
 - Version C has a clean design but a slight increase in error.

Research Results

Final Test and Feedback

- 5 participants indicated that they **would use the storage, sorting, and reminder features generally**, but had relatively low usage of the recycling guide and community interaction.
- 5 participants felt that **the software met their core needs**.
- Combined with the observational data and SUS test results, the software has been **recognised by users for its basic functionality**, but there is still room for improvement in specific features and interface design.