

Helper Hand Android Application

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Abstract— Nowadays, there are many inventions of technology, websites and mobile applications that can solve real-life problems people were once facing. The scope for this development of mobile application is focusing on the medical field in which the purpose is to help people looking for medicine in the nearest pharmacy from their current location. The process of finding a pharmacy is not as easy as finding any other shops, especially to locate the pharmacy that is selling the exact medical product that users are looking for. The consequences will be a time consuming and waste of money if they had to drive all away to the wrong pharmacy. That is where the idea of this Helper Hand: Mobile Application for Finding, Managing and Commercialize Pharmacy is generated from. This application also provides pharmacies with a platform to commercialize their store and promote their products. The application also allows users to search for blood donors nearby. Nowadays, it is very difficult to find a blood donor in case of an emergency. By using this application, people can register themselves as blood donors and those in need will get the information of the registered donors and thereby contact them.

Keywords— Helper Hand Mobile Application; Finding and Commercialize Pharmacy; Blood Donor

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I. INTRODUCTION

Have you ever thought about the fastest way to look for medicine? Sometimes there are pharmacies which don't sell the medical drugs that people are looking for or perhaps, it is currently out of stock. So, if this situation happens, it would be wastage their time, money and also vehicle fuel because they had to drive all away to that pharmacy hoping to buy the medicine. Of course human beings always want to find a solution to make their life easier. Also nowadays it is difficult to find blood donors even through large publicity. It is very difficult to find people willing to donate blood.

The main objective of this project is to develop a mobile application to solve this. The application has two main purposes: (1) to find medicines in a nearby pharmacy, and (2) to become and find blood donors nearby. The medical stores would update the medicines available in their store along with stock, disease and symptoms. This will enable the users to check whether the medicine he or she is searching for is available in the nearby medical stores and can choose takeaway or delivery is preferred.

II. LITERATURE REVIEW

The pharmaceutical industry is an industry that develops, manufactures, and sells medicines for use as medicines [1]. People in this industry play an important role not only in selling medicines but also in providing medical services such as prescribing and explaining advice for medicines.

By 2014, there were approximately 2319 pharmacies throughout Malaysia registered under the 1951 Drug Registration Act and the 1952 Toxic Act. [2] Each medical device sold registered with the drug control authority receives a specific registration number in the form of a "Meditating" hologram sticker [3]. To avoid abuse in the sale of medicines by those who claim to own a pharmacy, this application does not offer online sales transactions. This proposed application provides only the information and location to find the drug.

The analysis of current manual systems shifts to a focus on the common manual processes most people use in connection with trading goods between customers and pharmacies. When some people are looking for a particular medicine, they usually drive to the pharmacy on their own. Most of them may not be aware that the pharmacy they go to is closest to or far from their location. This problem can waste time, money and energy. In addition, it can also be detrimental to people in urgent need of medicine. It's also possible that the pharmacy isn't selling the particular drug you're looking for, or it's currently out of stock. The result is a disadvantage to the customer and to the pharmacy itself, the customer appears to be dissatisfied, and in the worst case, never comes. Therefore, it is important to find a solution to this problem. It is also important for customers to know the details of the prescription and the side effects of the medicine, as some people can be allergic to chemical reactions. Due to a lack of knowledge in the medical field, users may not know which medicine to look for. In this situation, they may only know the category of drug they are looking

for. The proposed system allows users to make choices based on disease category. B. Skin infections, respiratory problems, etc. to find a specific drug.

III. SYSTEM DEVELOPMENT METHODOLOGY

Referring to this mobile application, the best methodology that can be used based on the requirements and complexity of the project is the Rational Unified Process (RUP) model. This RUP model is known as an iterative and incremental software model. The iterative development approach in the Software Engineering field means the whole life cycle consists of several iterations which will pass in each phase in a specific order. This model provides systematic ways to develop a successful software or in this case a mobile application. Thus, it will help to prevent resources from being wasted and also reduces unexpected development cost. Referring to this mobile application, the best methodology that can be used based on the requirements and complexity of the project is the Rational Unified Process (RUP) model. This RUP model is known as an iterative and incremental software model. The iterative development approach in the Software Engineering field means the whole life cycle consists of several iterations which will pass in each phase in a specific order. This model provides systematic ways to develop a successful software or in this case a mobile application. Thus, it will help to prevent resources from being wasted and also reduces unexpected development cost. This improvement should have already resolved most of the problems and limitations of previous models. Therefore, this RUP should be more stable for this project, which consists of integration with many features and location-based technologies. The Gantt chart was created to plan development based on this RUP model.

A. Design Modeling

The Unified Modeling Language (UML) is selected for modeling the application. This design outlines the system and supports the building phase of the application. Enterprise Architect tools supported the application design process.

B. Technology or tools used in the development of the project

TOOL	PURPOSE
Android Studio	The environment platform to code the application in Java
Xampp	It is used to create and test the application on the local server
Apache	Server used
MySQL	The database of the application
Android Phone	To test and run the application preferably Android Pie or above
PC/Laptop	For implementing the software preferably an i5 core processor with a minimum of 8 GB RAM and 500 GB ROM.

IV. REQUIREMENT ANALYSIS AND DESIGN

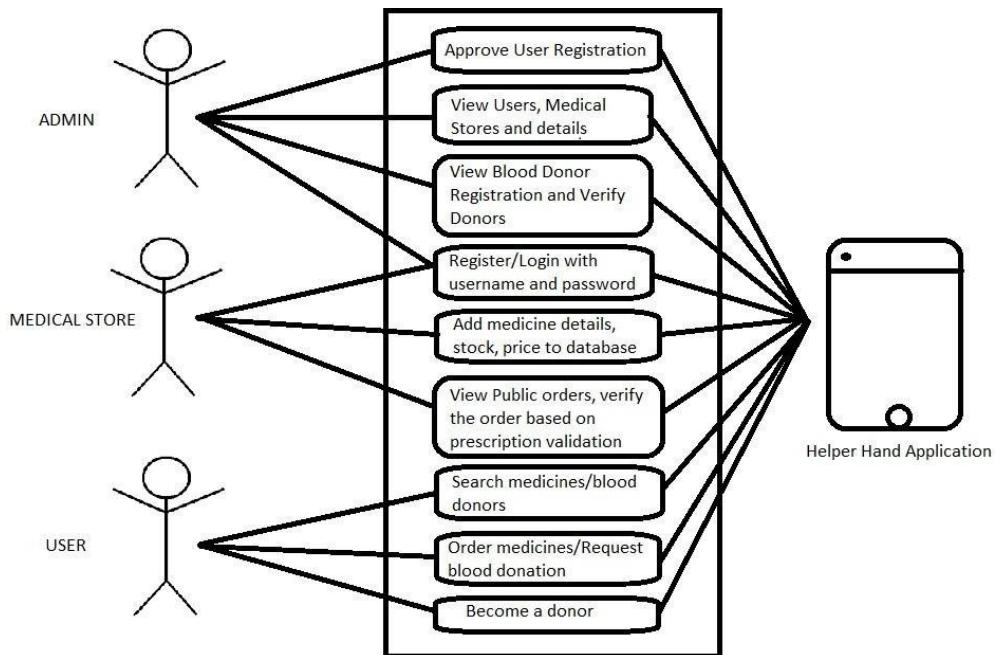
A. Functional Requirements

The requirement analysis and design modelling are the crucial phases as these are needed to ensure the quality of the end product is met.

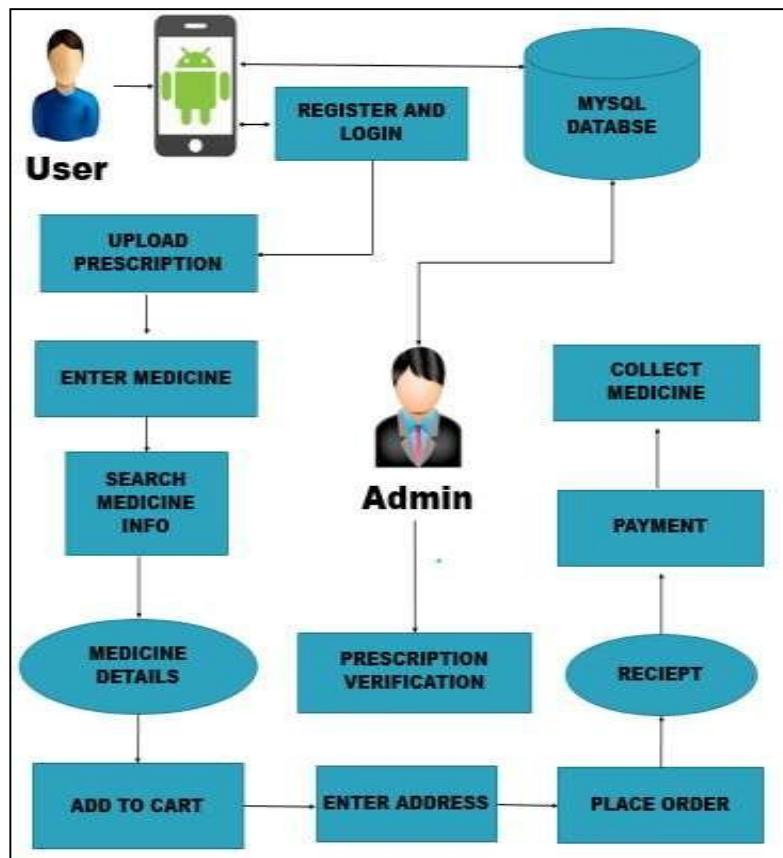
Sl No	Functional Requirements
1	The system must be able to allow Pharmacy to manage their medical products.
2	The system must be able to allow the Pharmacy to add prescription and description details of the selling medicines.
3	The system must be able to allow the Pharmacies to update the stock availability of the medicines.
4	The system must allow Pharmacy to manage information of pharmacy store
5	The system must allow Pharmacy to view the review made by the public users.
6	The system must allow Public Users to find the nearest pharmacy from their location.
7	The system must allow Public users to search for medicine by entering the product name or by choosing the category of illness.
8	The system must allow Public User to manage their login information.
9	The system must allow users to register as blood donors
10	The system must allow users to see the list of blood donors nearby

B. Application Overview (Use Case Model)

This application consists of two main end users: (1) public users, general users that are using the application for personal purposes, and (2) pharmacies, which use the application to advertise and commercialize the store.

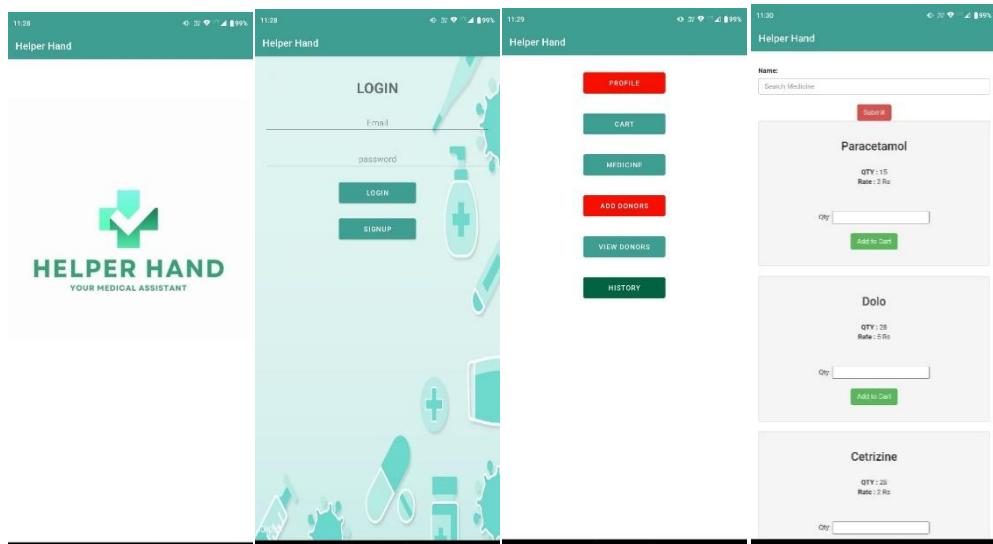


C. Design

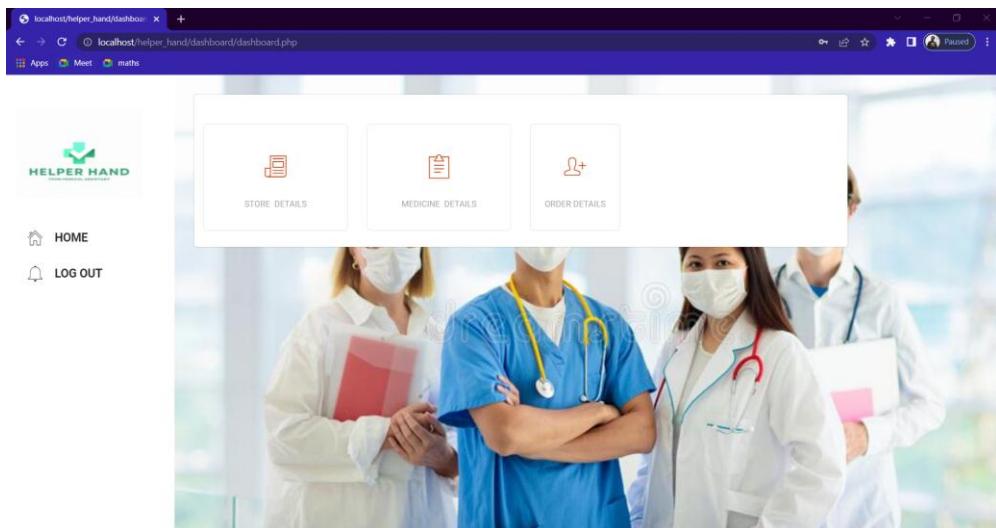


V. HELPER HAND MOBILE APPLICATION

A. User interface of Application



B. Medical Store Interface



The image contains two screenshots of a web-based application interface for the "Helper Hand" Android Application.

Screenshot 1: Medicine Module

The URL is `localhost/helper_hand/medicine_tb/select.php`. The page shows a table of medicine entries:

ID	STORE	NAME	QUANTITY	PRICE	DISEASE	SYMPOM	STOCK	UPDATE	DEL
3	Pharm B	Cetirizine	28	2	Sneeze	headache	Available	Update	Del

Below the table is a placeholder image of medical professionals.

Screenshot 2: Order Module

The URL is `localhost/helper_hand/order_tb/select.php`. The page shows a table of order entries:

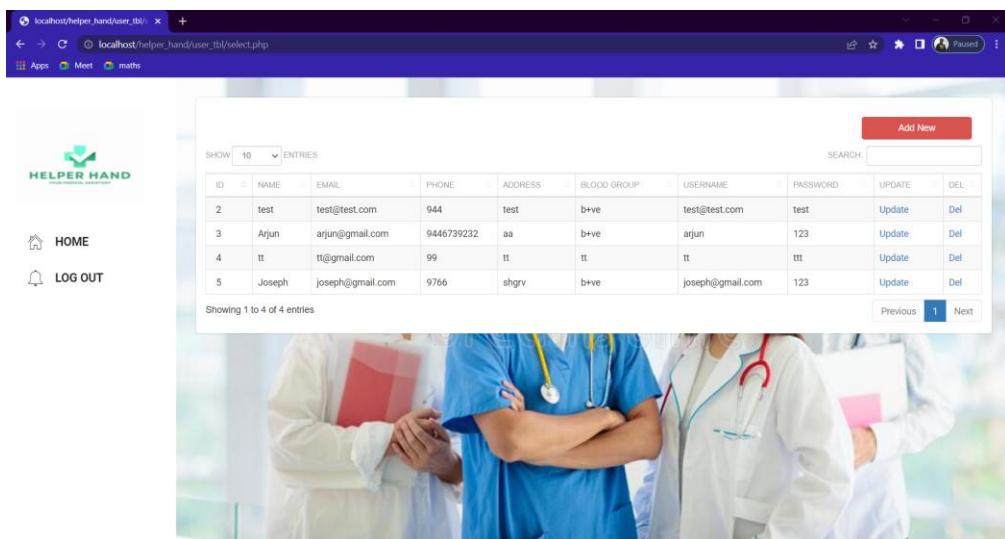
ID	ITEM ID	STORE	QUANTITY	PRICE	ORDER DATE	USER ID	STATUS	DELIVERY STATUS	BILL NO	PREScription	UPDATE	DEL
24	Cetirizine	Pharm B	2	2	2022-05-29	Arjun	PAYED	DELIVERD	11	Prescription	Deliver	Del

Below the table is a placeholder image of medical professionals.

C. Admin Interface

The image shows the Admin Dashboard interface with the following details:

- URL:** `localhost/helper_hand/dashboard/dashboard.php`
- Header:** Includes the "Helper Hand" logo, "HOME", and "LOG OUT" links.
- Content:** A central area featuring five rounded rectangular buttons with icons and labels:
 - USER DETAILS** (User icon)
 - MEDICINE DETAILS** (Medicine icon)
 - DONOR DETAILS** (Blood drop icon)
 - STORE DETAILS** (Clipboard icon)
 - ORDER DETAILS** (Order icon)
- Background:** A placeholder image of medical professionals.



VI. CONCLUSION

This Helper Hand mobile Android application is believed to serve the goals of pharmacy search, management, and monetization. The importance of this application is to help users search for medicines to find the nearest pharmacy. It also provides many additional features. B. Become a blood donor and find a blood donor nearby. Meanwhile, the application also provides a platform for pharmacies to promote their products and sell their facilities to the public. That said, there aren't many pharmacy-focused applications. That's how the Helper Hand was invented.

FUTURE WORK

As the first version has been developed, there is still a plan for future improvements. The future suggestion is as listed: (1) to automatically insert all pharmacy products based on the scanning of inventory files, (2) to allow users to communicate with pharmacy directly from apps, and (3) to provide the application with an IOS platform, (4) to automatically update stock availability of the product in the application based on the scanning of stock check form.

REFERENCE

- [1]. Pharmaceutical Industry. (2016, March 31). Retrieved from Wikipedia: https://en.wikipedia.org/wiki/Pharmaceutical_industry.
- [2]. PSM. (2014, October 24). Retrieved from Bilangan Farmasi di Malaysia: <http://partisosialis.org/node/3060>.
- [3]. Hologram Meditag Baru. (2013, November 18). Retrieved from Bahagian Perkhidmatan Farmasi Kementerian Kesihatan Malaysia: <http://www.pharmacy.gov.my/v2/ms/entri/hologram-meditag-baru.html>.