MedBook

Vision Document

Version 1.0

Revision History

| **Date** | **Version** | **Description** | **Author** |
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| 29/10/21 | 1.0 | Complete section | NPVy, NNDu, NKTTNga |
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Vision (Small Project)

# Introduction

This introduction provides an overview of the entire vision document. The purpose of this document is to collect, analyze, and define needs and features of the **MedBook**. It focuses on the capabilities needed by the stakeholders and the target users, and **why** these needs exist. The details of how the **MedBook** fulfills these needs are detailed in the use-case and supplementary specifications.

# Positioning

## Problem Statement

| The problem of | patients have to line up in hospitals and wait for a long time to get an appointment with the doctor |
| --- | --- |
| affects | patient and people who are in need of contacting their doctor |
| the impact of which is | people who want to book an appointment with their doctor but do not have time or ability to make a contact |
| a successful solution would be | help people connect with their doctor anytime they want without traveling too far and waiting for too long |

## Product Position Statement

| For | Patients, doctors, health facilities |
| --- | --- |
| Who | Need to make an appointment with doctors |
| The (product name) | MedBook |
| That | Allows people to contact doctors and medical facilities for instruction |
| Unlike | Booking Care or YouMed |
| Our product | Provides a legitimacy and better way for people to contact doctors |

# Stakeholder and User Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Supplier: Hospitals | Hospitals supply medical services or treatments for patients' health insurance and hospitals' operating costs. | - Ensure hospitals' professional ethics and credibilities.  - Ensure hospitals' information sufficiency and credibility.  - Provide accurate medical services.  - Ensure services’ quality:  + Ensure patients’ health and safety.  + Ensure treatments’ accuracy.  + Resolve patients’ complaints efficiently.  - Ensure employees' health and safety.  - Ensure employees' and patients' information security.  - Ensure employees' performance quality.  - Manage incomes from different sources.  - Supervise employees' working progress.  - Promote application for wider use. |
| Government | Collect corporate income, payroll and sales taxes. | - Provides regulatory insights.  - Ensures the project team's management of accounting procedures, ethical practices and legal concerns. |
| Financial Institution | A company engaged in the business dealing with financial and monetary transactions. | - Ensures their professional ethics and credibilities.  - Provides payment methods for their customers (which are the project team, hospitals and patients).  - Ensures their customers' information security.  - Resolves their customers' financial complaints. |
| Project Team | This system's developers and managers. | - Ensures our professional ethics and credibilities.  - Provides application services for our customers (which are hospitals and users).  - Ensure customers' information security.  - Ensures application's built quality and efficiency (which are consistency, accuracy, cost-effectiveness and punctuation)  - Resolves users' problems (which are data losses, |

## User Summary

| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| --- | --- | --- | --- |
| Hospitals' employees | Doctors, nurses or hospitals' receptionists who use this system to provide their patients with information. | - Ensure their professional ethics and credibilities.  - Fulfill hospitals' requirements and standards on specific degrees and certificates.  - Ensure personal information's sufficiency and validity.  - Doctors and nurses provide medical information and treatments for their patients.  - Receptionists provide booking information and treatments for their patients.  - Ensure medical and booking information accuracy when providing them to patients. | Hospitals |
| Patients | People who use this system for consulting medical problems and booking medical appointments. | - Ensure personal information's accuracy.  - Provide sufficient information on their medical problems (which are age, symptoms and medications).  - Guarantee service charges' payments. | Financial Institution |

## User Environment

**Environment constraints:** internet unavailability areas

**System platform in use:** remotely on android devices (for both users and hospitals)

**Future system platforms:** ios devices

## Alternatives and Competition

**Alternatives:**

|  | **Strengths** | **Weaknesses** |
| --- | --- | --- |
| Book appointments directly at hospitals' receptions | **Hospitals:**  **-** high credibility.  **User:**  **-** direct assistance from doctors, nurses or consultants.  - limit data theft. | **Users**:  - discount unavailability.  - time-consuming.  - inconvenient booking.  - easily encounter invalid costs (which are bribes and embezzlements).  - limited hospital option.  - easily forget medical re-examination.  **Hospitals:**  - cannot ensure patients' data and information.  - time-controlling and service cost-supervision difficulties.  - data losses  - heterogeneous platforms.  **Government:**  - hard to control hospitals' financial status. |
| Book appointments indirectly on hospitals' websites | **Users:**  - remote booking.  - remote assistance from consultants.  **Hospitals:**  - high credibility.  - easily advertise medical services.  - limit data losses. | **Users**:  - discount unavailability.  - advertisement overloaded.  - complicated usage.  - limited hospital option.  - easily forget medical re-examination. |

**Competitors:**

|  | **Strengths** | **Weaknesses** |
| --- | --- | --- |
| **Booking Care** | **Users:**  - available on both android and ios.  - remote booking at various hospitals.  - remote assistance from doctors, nurses or consultants. | **Users:** |
| **YouMed** | **Users:**  - available on both android and ios.  - remote booking at various hospitals.  - remote assistance from doctors, nurses or consultants.  - application's tutorial video | **Users:**  - limited hospitals' information  - limited hospital campus  - unavailable price range reference  - unable to select optimal services |

# Product Features

| **No.** | **Feature** | **Description** | **Priority** |
| --- | --- | --- | --- |
| 1 | Creating Administrator account | Administrators of specific hospitals can create accounts for their employees, manage other account types and create donation campaigns. | High |
| 2 | Creating user account | Allow users to Sign in and Sign up for using this application. | High |
| 3 | Setting up appointment schedule | Receptionists can check, add or remove appointments which belong to their hospital.  Doctors can create and modify schedules for their appointments.  Patients are allowed to make appointments based on doctors' schedules. | High |
| 4 | Saving appointment history | System records meeting time together with doctors and patients information which is related to the appointments. Doctors or patients can also manage and review this history list. | High |
| 5 | Record patient’s medical information | Provide doctor and patient the ability to store and adjust background diseases of each patient. | High |
| 6 | Searching information | Information including hospitals' addresses or doctors' specialty is available for users to look for and contact. | High |
| 7 | Chatting | Private chat for both doctor and patient. | Medium |
| 8 | Notification | Notification will be sent through email or application when login, reset password, payment, or reminding appointment time. | Medium |
| 9 | Checking medical news | Users can update medical news everyday, especially COVID-19 news. | Medium |
| 10 | Human Resource Management | Receptionists can remove unemployed doctors. | Medium |
| 11 | Feedback | Users can give reviews on services or facilities on a specific hospital's page. | Medium |
| 12 | Discount | Patients can receive and apply discounts on payment, which are given by receptionists. | Low |
| 13 | Donation | Allow users to participate in charitable contributions. | Low |
| 14 | Paying | Link to bank accounts or e-wallets for convenient payment of medical treatment. | Low |

# Non-Functional Requirements

1. **Security**

All user's sensitive data such as password, bank account, ID card, phone number must be encrypted.

Users can only receive a link to reset password through the registered email address.

Whenever making a payment transaction, the system will automatically send a code to the registered email or phone number. Users must apply this code to complete the payment.

1. **Performance**

Environments requirement: Smartphones / Tablets running Android.

Opening this application may take around 1 minute to set up everything ready.

Every input and output screen must be ready for use within 3 seconds, provided the connection between client and server is normal.

Response time for a payment transaction needs to be within 1 or 2 minutes in a normal connection.

A normal connection can be understood in the following aspects: *(may be considered later)*

Client/Server Connection : 500KB/s

For input screens: up to 30 data fields, no complex data calculations, can store data directly to the DB, and no large content files such as: images, videos, files over 10MB.

For the output screen: data is queried directly from the DB, limiting complex queries, queries from external systems.

Displays up to 100 rows of data, up to 10 columns each, and each data is less than 100 characters in length.

1. **Usability**

The visual of the app is consistent. It means that typefaces, fonts, buttons, and labels are designed to have only one uniform. Additionally, the application's theme is clear and simple to understand which is suitable for old users.

Appointments of each doctor will be displayed in a calendar with information about having vacancies or not.

Every button is designed to have a label which is appropriate in its usage circumstance like [Create account], [Verify], etc.

Go-up button is available on the bottom edge of every tab.

Menu displays categories which are considered as important and frequently used for users.

The system always checks the data in each fill-in field and warns immediately if there is an error, avoiding forcing users to re-enter from the beginning.

1. **User Interface**

The system must ask for confirmation (Yes or No) for Sign out, payment transaction and data adjustment such as add or remove.

Data grids displayed on the application screen must have filter or sort function.

Every error message should be accompanied by troubleshooting instructions to users.