
Software Requirements Specification

for

Medical Organize

Version 1.0 approved

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Specialty: **AI**

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Revision History

Name	Date	Reason For Changes	Version
Blue medical platform	2/5/223	-	1.0.0
Blue medical platform	1/12/2023	Add online checks for patients and edit in features to make the platform more desirable, easier, and more useful	1.0.1

1. Introduction

1.1 Purpose

This project aims to facilitate work for the doctor, medical centers and the patient. The basis of this program depends on creating a platform that contains clinics and medical centers which provide their services. On the other hand, the patient reviews these services and makes reservations electronically without the need to go and take an appointment from the clinic. In addition, to adding the electronic payment feature for all parties.

1.2 Document Conventions

1. Introduction

This document outlines the requirements for an appointment system for a medical facility. The system will allow patients, doctors, managers, and administrators to book and manage appointments.

2. System Requirements

2.1. User Requirements

- **Patients:** Patients should be able to book appointments with doctors, view their upcoming appointments, and cancel appointments.
- **Doctors:** Doctors should be able to view their upcoming appointments, add notes to appointments, and cancel appointments.
- **Managers:** Managers should be able to view all upcoming appointments, add notes to appointments, and cancel appointments.
- **Administrators:** Administrators should be able to view all upcoming appointments, add notes to appointments, and cancel appointments.

2.2. Technical Requirements

- The system should be web-based and accessible from any device with an internet connection.
- The system should be secure and protect user data.
- The system should be able to handle large amounts of data.
- The system should be able to generate reports.

3. System Design

3.1. Database Design

The system will use a relational database to store user data, appointment data, and notes.

3.2. User Interface Design

The system will have a simple, intuitive user interface that allows users to easily book, view, and cancel appointments.

4. Testing

The system will be tested for functionality, security, and performance.

5. Deployment

The system will be deployed on a secure server with regular backups.

6. Maintenance

The system will be maintained regular to ensure that it is secure and up-to-date.

1.3 Intended Audience and Reading Suggestions

The document addresses all its stakeholders for the medical platform as well as the JYZ academy architecture development and testing team.

Users type:

- 1 – center or clinic
- 2 – doctor
- 3 - patient

1.4 Product Scope

- 1 - Attracting all doctors, clinics, and medical centers to register on the platform.
- 2 - Managing each clinic or center for the doctors present in it.
- 3 - Allowing searches for any doctor, clinic, or center and allowing reservations exclusively for the user registered in the platform
- 4 - Adding rules to prevent manipulation by users of registering and canceling appointments.

The business requirement will be represented in the following deliverables:

- 1 – Mobile Application (for patients and doctors).
- 2 – Web portal (for admin boss and secretaire, manager for center)

NOTE: THIS IS A LIVE DOCUMENT, IT WILL KEEP GROWING DURING THE PROJECT'S LIFETIME.

1.5 References

2. Overall Description

2.1 Product Perspective

This product relies on several sub-systems within it, as it brings together several users. First of all, the patient can search for doctors, clinics, or centers had already registered on the platform. The user can also register his own account, where he can register an appointment with the doctor. In addition, having a private medical record and in order to facilitate the work of doctors. Secondly, doctors the traditional quarantine mechanism were dispensed with it, resorting to electronic reservation and organizing appointments automatically and there is an automatic blocking system for users who consume appointments without attending. Thirdly, the person in charge of the center or clinic, where is responsible for the process of adding, deleting, and modifying clinic data. He is also responsible for the annual payment process for the platform so that users remain present and available. Finally, the platform manager, as he is responsible for all the details within the platform, including registering and canceling centers. In addition, filing an electronic complaint against users who tamper with the reservation system, and it is the duty of the administrator to verify the license of the clinic or center.

2.2 Product Functions

1 - Automated appointment scheduling: Allow users to quickly and easily book appointments online, with automated reminders sent to both the user and the service provider.

2 - Contactless check in: Enable users to check-in for their appointments without having to physically interact with anyone.

3 - Real-time updates: Provide users with real-time updates on their appointment status and any changes to their appointment.

4 - Health monitoring: Monitor the health of users and staff in the facility, and alert them if any changes are detected.

5 - Reporting: Generate reports on the number of people in the facility, the number of appointments, and any other relevant data.

6 - Social distancing: Automatically enforce social distancing guidelines by limiting the number of people in the facility at any given time.

7 - View appointments for the doctor, arrange patients, and bring the health report for each patient.

8 - Admin control centers and verify their license through the Ministry of Health and submit an electronic complaint through the electronic court.

2.3 User Classes and Characteristics

The patient is able to search and view the doctor's profile, but the reservation is not made unless the patient is registered with an official account on the platform, the doctor, and his account is linked to the account of the clinic or center, and he is able to see his daily appointments and the number of patients. In addition, the medical reports for each patient. The owner of the center or clinic, and he

is responsible for adding or deleting the doctor who works for him, and he can file a complaint against any patient who violated the system, who is responsible for the system and is the beneficiary and controller of the platform.

2.4 Operating Environment

The patient or the doctor will work on a mobile application so that the use is easy and flexible, and here we will need an online server that displays doctors and available appointments and searches for the patient. As for the doctor, we need a server in order to display the doctor's daily appointments, updates and medical reports for patients, all sections administration (clinics, centers, admin responsible for the platform) will work on a web platform

2.5 Design and Implementation Constraints

Some of the basic restrictions in the application: first, misuse of the platform by the patient and failure to attend the appointment, which exposes him to automatic ban from the platform and the possibility of filing an electronic complaint against him, second, paying the annual subscription to clinics and centers, as in the event of delay in paying the financial fees, it will cause their deletion from the platform and not making the center and clinic available to users.

2.6 User Documentation

The Appointment Quarantine System requires the following:

- A Mobile Application
- An internet connection
- A valid email address

To get started, users must first create an account. To do this, users must visit the Appointment Quarantine System website and click on the "Sign Up" button. Users will then be prompted to enter their email address and create a password. Once the account is created, users can log in to the system.

Once logged in, users can start using the appointment booking system. The main page of the system displays a list of the last doctors booked with them in advance, and if it is the first visit to the program, it displays the doctors closest to it. There is also an option to search, and it is available in the case of registering an account or logging in as a guest, where he can search for a specific doctor, clinic or center, and after reviewing the personal page For the doctor, an appointment can be added via the Add Appointment button, where it shows him the available appointments for each doctor, and after specifying the day, the program provides the possibility of electronic payment, and in order for the system to be flexible, an option has been added to cancel the appointment within a specified period, if it is exceeded, the appointment holder may be subject to an electronic court and ban from the platform.

Also, the user can view his account and modify his personal information, in addition to seeing his medical report.

Also, the patient or doctor can contact the support team or those responsible for the platform to file any complaints.

2.7 Assumptions and Dependencies

Assumptions:

- Need to build CMS to manage app.
- Need to platform for the front side (web and application).
- Suitable database for the app.
- Dealing with the bank or online companies' payment.
- Contac with health minister.

Dependencies:

- Canceling the appointment depends on book appointment.
- Booking an appointment depends on the user had logged in.
- Writing on the patient's medical record depend on the patient had come.
- Registering and logging in for center or clinic depend on they paid the universal payment.
- Report about problem depend on the patient had logged in.

3. External Interface Requirements

- 1 - People will comply with the quarantine system.
- 2 - People will have access to the necessary technology to use the system.
- 3 - People will be able to understand and use the system.

Dependencies:

- 1 - Access to the internet.
- 2 - Access to a compatible device (computer, smartphone, etc.).
- 3 - Access to the necessary software and applications.
- 4 - Access to the necessary resources (time, personnel, etc.).
- 5 - Access to the necessary data (patient information, appointment details, etc.).

3.1 User Interfaces

Patient User Interface:

- Login page for patient to enter their credentials
- Appointment booking page to select the doctor, date and time
- Appointment confirmation page to confirm the appointment
- Appointment reminder page to remind the patient of the upcoming appointment
- Appointment cancellation page to cancel the appointment
- profile page includes medical report, user information and remove account button

Doctor User Interface:

- Login page for doctor to enter their credentials
- Appointment list page to view the list of appointments
- Appointment details page to view the details of the appointment
- Quarantine questionnaire page to view the answers of the patient
- Appointment reminder page to remind the doctor of the upcoming appointment
- Appointment cancellation page to cancel the appointment.

3.2 Hardware Interfaces

Patient Interface:

- Online appointment booking system
- Online payment system
- Online medical records system
- Online symptom checker (for second version)
- Online video consultation system (for second version)

Doctor Interface:

- Online appointment scheduling system
- Online patient records system
- Online medical records system
- Online video consultation system (for second version)
- Online prescription system (for second version)

Admin Interface:

- Online appointment scheduling system
- Online patient records system
- Online medical records system
- Online symptom checker (for second version)
- Online video consultation system (for second version)
- Online prescription system (for second version)
- Online quarantine tracking system (for second version)
- Online reporting system

3.3 Software Interfaces

Patient Interface:

- Appointment scheduling
- Online payment
- View appointment details
- View medical history
- Receive notifications

Doctor Interface:

- View patient appointments
- View patient medical history
- Update patient medical records
- Send notifications to patients
- Manage patient medical records
- Receive notifications from patients

Admin Interface:

- Manage patient appointments
- Manage doctor schedules
- Monitor patient and doctor activity
- Generate reports
- Receive notifications from patients and doctors

3.4 Communications Interfaces

Patient Interface:

- Online appointment booking system
- Online payment system

- Online medical records access
- Online symptom tracking system (for second version)
- Online health education resources (for second version)

Doctor Interface:

- Online appointment scheduling system
- Online medical records access
- Online patient communication system (for second version)
- Online patient monitoring system (for second version)
- Online medical advice system (for second version)

Admin Interface:

- Online appointment scheduling system
- Online patient records access
- Online patient tracking system (for second version)
- Online patient communication system (for second version)
- Online quarantine monitoring system (for second version)
- Online quarantine enforcement system (for second version)

4. System Features

Patient Features:

- Ability to book an appointment with a doctor
- Ability to view appointment details
- Ability to cancel an appointment
- Ability to receive notifications about appointment changes
- Ability to view doctor's profile
- Ability to view doctor's availability
- Ability to view medical history
- Ability to view test results (for second version)

Doctor Features:

- Ability to view patient's profile
- Ability to view patient's medical history
- Ability to view patient's test results (for second version)
- Ability to view patient's appointment details
- Ability to update patient's appointment details
- Ability to receive notifications about appointment changes
- Ability to view appointment calendar
- Ability to manage patient's quarantine status (for second version)

Admin Features:

- Ability to view patient's profile
- Ability to view patient's medical history
- Ability to view patient's test results
- Ability to view patient's appointment details
- Ability to update patient's appointment details
- Ability to manage patient's quarantine status (for second version)
- Ability to view doctor's profile
- Ability to view doctor's availability
- Ability to view appointment calendar
- Ability to receive notifications about appointment changes.

4.1 System Feature 1

<Don't really say "System Feature 1." State the feature name in just a few words.>

4.1.1 Description and Priority

<Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority. You could also include specific priority component ratings, such as benefit, penalty, cost, and risk (each rated on a relative scale from a low of 1 to a high of 9).>

4.1.2 Stimulus/Response Sequences

<List the sequences of user actions and system responses that stimulate the behavior defined for this feature. These will correspond to the dialog elements associated with use cases.>

4.1.3 Functional Requirements

<Itemize the detailed functional requirements associated with this feature. These are the software capabilities that must be present in order for the user to carry out the services provided by the feature, or to execute the use case. Include how the product should respond to anticipated error conditions or invalid inputs. Requirements should be concise, complete, unambiguous, verifiable, and necessary. Use "TBD" as a placeholder to indicate when necessary information is not yet available.>

<Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.>

REQ-1:

REQ-2:

4.2 System Feature 2 (and so on)

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Patient Requirements:

- Ability to book appointments online
- Ability to view appointment details
- Ability to cancel appointments
- Ability to receive notifications about appointment status

Doctor Requirements:

- Ability to view patient appointment details
- Ability to update appointment status
- Ability to receive notifications about appointment status
- Ability to view patient medical history

Admin Requirements:

- Ability to view all appointments

- Ability to update appointment status
- Ability to receive notifications about appointment status
- Ability to manage doctor account
- Ability to generate reports on appointment status and usage

5.2 Safety Requirements

Patient Safety Requirements:

1. Patients should be able to securely log in to the appointment system using a unique username and password.
2. Patients should be able to view their appointment details, including date, time, and location.
3. Patients should be able to cancel or reschedule appointments.
4. Patients should be able to receive appointment reminders via email or notification or text message (in second version).

Doctor Safety Requirements:

1. Doctors should be able to securely log in to the appointment system using a unique username and password.
2. Doctors should be able to view their appointment details, including patient name, date, time, and location.
3. Doctors should be able to add notes to patient records.
4. Doctors should be able to access patient medical history (patient report).

Manager Safety Requirements:

1. Managers should be able to securely log in to the appointment system using a unique username and password.
2. Managers should be able to view appointment details for all patients and doctors.
3. Managers should be able to add and remove doctors from the system.
4. Managers should be able to view reports on appointment usage and patient satisfaction.

Admin Safety Requirements:

1. Admins should be able to securely log in to the appointment system using a unique username and password.
2. Admins should be able to view and edit all user accounts.
3. Admins should be able to add and remove users from the system.
4. Admins should be able to view and edit system settings.

5.3 Security Requirements

Patient Security Requirements:

- Secure login credentials for patient accounts.
- Ability to securely store and access patient health information.
- Ability to securely schedule and cancel appointments.
- Ability to securely pay for appointments.
- Ability to securely receive appointment reminders.

Doctor Security Requirements:

- Secure login credentials for doctor accounts.
- Ability to securely store and access patient health information.
- Ability to securely schedule and cancel appointments.
- Ability to securely receive appointment reminders.

Admin Security Requirements:

- Secure login credentials for admin accounts.
- Ability to securely store and access patient health information.
- Ability to securely manage appointments.
- Ability to securely manage patient payments.
- Ability to securely manage doctor accounts.
- Ability to securely manage appointment reminders.

5.4 Software Quality Attributes

Patient:

- 1 - Easy to use interface
- 2 - Secure authentication
- 3 - Ability to schedule appointments
- 4 - Ability to cancel appointments
- 5 - Ability to reschedule appointments
- 6 - Ability to view appointment history
- 7 - Ability to receive reminders for upcoming appointments

Doctor:

- 1 - Ability to view patient information
- 2 - Ability to view appointment history
- 3 - Ability to add notes to patient records
- 4 - Ability to receive reminders for upcoming appointments
- 5 - Ability to view and manage patient appointments
- 6 - Ability to view and manage patient medical history

Admin (for center or clinic):

- 1 - Ability to view and manage patient information
- 2 - Ability to view and manage doctor information
- 3 - Ability to view and manage appointment history
- 4 - Ability to view and manage patient medical history
- 5 - Ability to view and manage appointment reminders
- 6 - Ability to generate reports on patient and doctor activity

5.5 Business Rules

- 1 - Patients must be able to book appointments with doctors online.
- 2 - Patients must be able to cancel or reschedule appointments online.
- 3 - Doctors must be able to view and manage their appointments.
- 4 - Doctors must be able to add notes to patient appointments.
- 5 - Managers must be able to view all appointments for their doctors.
- 6 - Managers must be able to approve or reject appointment requests.
- 7 - Admins must be able to view all appointments across the system.
- 8 - Admins must be able to add, edit, or delete appointments.
- 9 - Admins must verify licenses for clinics and centers before adding them.
- 10 - it is possible to file an electronic complaint against any patient who violates the rules.
- 11 - Admins must be able to manage user accounts.
- 12 - Admins must be able to set appointment availability for doctors.

6. Other Requirements

The project needs kind of database which has relations and is organized like MySQL or PostgreSQL. In addition, it needs a server that supports Realtime.
The permissions of deal with the healthy minister.
Dealing with the bank.

Appendix A: Glossary

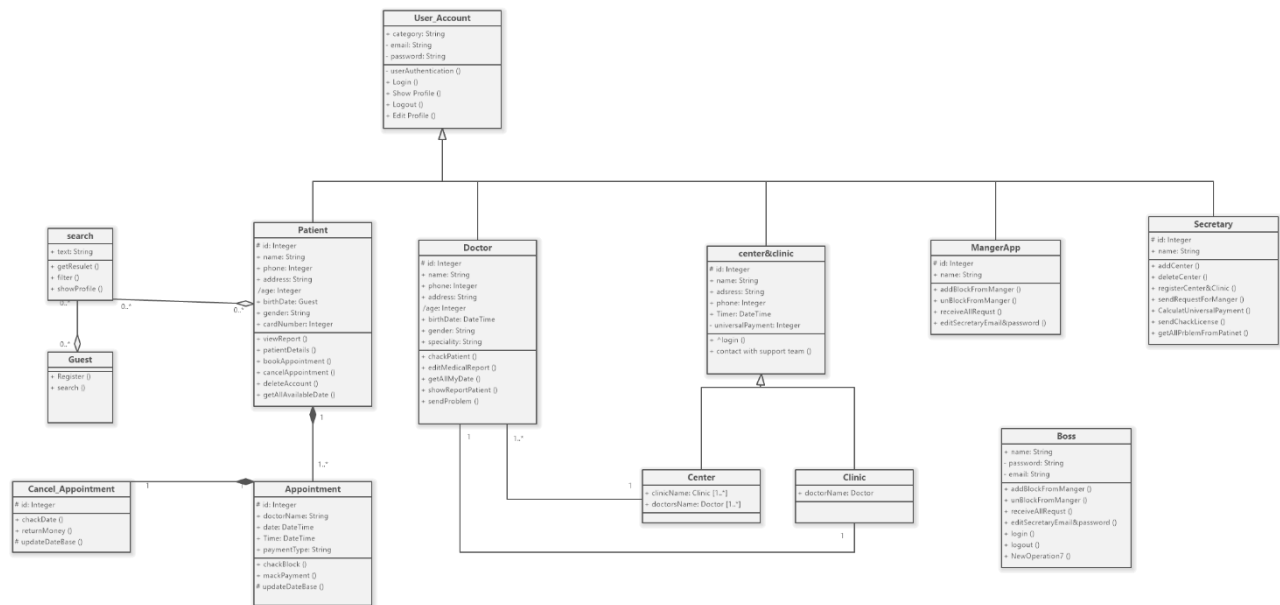
For Patients:

- Ability to view past appointments
- Ability to view upcoming appointments
- Ability to view appointment notes
- Ability to rate and review doctors

For Doctors:

- Ability to view patient's profile
- Ability to view appointment notes
- Ability to add notes to appointments
- Ability to reschedule appointments
- Ability to rate and review patients

Appendix B: Analysis Models



Appendix C: To Be Determined List

The website that refers to the platform's document is used in app.
The website that refers to database.