Final Project: University Health Center App

Done by:

Yassine Blali

Khaoula Jellal

Ikram Benfellah

Supervised By:

Pr. Mahmoud El Hamlaoui

Requirements document

Table of Contents

Problem Introduction

University students and staff face numerous challenges when it comes to managing their health amidst their busy schedules. A lack of accessible, real-time healthcare tools creates inefficiencies and impacts overall well-being, highlighting the need for a more integrated solution. The following are some of the key problems that this project seeks to address.

Inconvenient Access to Health Services: *Students often find it challenging to physically check whether a doctor is available at the health center, especially when they are too sick to move or have tight schedules. This leads to missed appointments and unnecessary delays in receiving care.*

Difficulty in Managing Medications: *Keeping track of medications, dosages, and schedules can be overwhelming for students, especially during exam periods or when they're juggling multiple responsibilities. Errors in taking prescribed medications can negatively impact their recovery and overall health.*

Limited Real-Time Updates: *Students and staff struggle to stay updated on real-time changes such as rescheduled appointments or new health advisories. These delays can cause confusion and result in missed opportunities for timely care or necessary consultations.*

Mental Health Management Challenges: *With increasing academic pressures, students often find it difficult to track their mental health progress. Regular mood logging and therapy tracking are essential but neglected due to lack of accessible tools, leading to unaddressed mental health concerns.*

Error-Prone Manual Processes: *Without digital solutions, tasks such as scheduling appointments, managing therapy sessions, or updating health records rely on manual effort, increasing the risk of errors and delays in accessing critical services.*

Purpose

The purpose of this document is to outline the software requirements for the University Health application. This application is intended to provide university students with easy access to healthcare services, including booking appointments, managing prescriptions, and tracking their health information. The document details the functional and non-functional requirements necessary for the development and implementation of the application.

Intended Audience

This application is intended for two key user groups:

- ***Students**: The primary users who will schedule appointments, scan prescriptions, and monitor health-related data, including mental health.*
- ***Health Center Staff:** Doctors, nurses, and administrative personnel who will manage appointments, update availability, and access students' medical records.*

Intended Use

The application will serve the following purposes:

For Students:

- *Book and manage appointments with doctors and nurses.*
- *Upload prescriptions and automatically extract medication details.*
- *Manually add and track prescriptions, including dosage reminders and medication schedules.*

For Health Center Staff:

- *Manage availability and appointments for students.*
- *View and update students' medical histories.*

As a team, we thoughtfully designed each feature to address the specific health challenges faced by students and staff, ensuring seamless access to essential services.

- ***Appointment Scheduling****: We implemented real-time booking and rescheduling so students can easily access healthcare professionals without having to check availability in person.*
- ***Prescription Management:*** *We integrated the ability to track prescription details, with dosage and schedule tracking to help users manage medications efficiently.*
- ***Health Dashboard:*** *We created a centralized space for students to manage their health-related information, offering a personalized view of medical records and immunizations.*
- ***Notifications:*** *We added automated reminders to ensure users never miss appointments or medications, reducing the risk of missed care.*

Overall Description

Students:

- *Ability to book, cancel, or reschedule appointments easily.*
- *Digital management of prescriptions, with reminders for medication.*
- *Access to their medical history and the ability to track their health data over time.*

Health Center Staff:

- *Manage appointment schedules and patient lists efficiently.*
- *Access medical histories to provide informed healthcare.*

System Features and Requirements

This section defines the key functionalities the system must provide to meet user needs and ensure efficient operation. Each feature is essential for achieving the app's overall objectives.

Functional Requirements

User Authentication:

- *The system shall allow students to register and log in using valid university credentials (e.g., email and password).*
- *The system shall provide password recovery options for users who forget their credentials.*

Appointment Scheduling:

- *The system shall display a list of available health professionals and their appointment slots.*
- *The system shall allow students to select an available time slot and confirm an appointment.*
- *The system shall send a confirmation notification (via email) after booking an appointment.*

Prescription Management:

- *Allow students to manually add medication details (e.g., name, dosage) for tracking.*
- *Enable students to upload prescriptions in PDF format and extract medication details using OCR.*
- *Provide reminders based on prescription schedules.*
-

Dashboard for Health Data:

- *The system shall provide a personalized dashboard where users can view their upcoming appointments, medical history, and prescription details.*
- *The system shall remind users of their medication schedule based on the prescription data stored in the dashboard.*
-

Health Staff Interface:

- *The system shall provide health center staff with a dashboard to view and manage appointments.*
- *The system shall allow health staff to add notes to patient records after each appointment.*

Nonfunctional Requirements

Security: *Ensure all student health data is encrypted and protected according to privacy laws.*

Performance: *Maintain real-time response for booking appointments and updating prescriptions.*

Usability: *Provide an intuitive interface for students and health staff to easily navigate.*

Reliability: *Guarantee 99.9% system uptime to ensure continuous access to healthcare services.*

Maintainability: *Ensure the app is easy to update and maintain with clear documentation.*

Conclusion

Our healthcare university management application provides students and staff with a more accessible, efficient way to manage their healthcare needs. By introducing functionalities such as real-time appointment scheduling, prescription upload and management, and a personalized health dashboard, the application addresses the critical challenges faced by university communities. With added features like OCR for prescription uploads, we ensure both automation and user convenience. By simplifying processes and offering timely updates, the system enhances convenience and ensures better care management. With security, usability, and performance as core priorities, we believe this application will significantly improve the health service experience within the university.