East West University

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Requirement Analysis: DigiMed

Introduction:

This project is an online healthcare portal designed for patients, doctors, and clinic administrators. The aim is to study, analyze, and design a system that allows patients to find doctors and book appointments through JAD session. On the basis of this analysis, the goal is to develop a requirements specification document that supports all the functional and non-functional requirements for the system.

Purpose:

The purpose of the requirements specification document is to specify all requirements for the healthcare portal. This will help the software designers and developers in building the system in accordance with the requirements given in this specification.

Scope:

The scope of this document is to specify the requirements for the new healthcare portal. In this document, we will cover:

- Functional requirements for the system
- Non-functional requirements
- Constraints of the specification

Overview:

DigiMed is a web platform that provides a reservation management system for stakeholders like patients, staff, and clinic administrators. The system provides customized interfaces for these stakeholders to manage reservations through automation without extensive human involvement.

Product Functions:

The system provides the following functions:

- **Patients can perform the following functions:**
  - Search for doctors by specialty or name.
  - View detailed doctor profiles.
  - Register for a new patient account.
  - Log in and log out of their account.
  - Request an appointment with a doctor.

- ➢ View a dashboard of their upcoming and past appointments.
- ➢ Cancel an upcoming appointment.
- ➢ Make online payments

❖ **Clinical staff can perform the following functions:**

- ➢ Log in to the admin panel.
- ➢ Manage doctor profiles.
- ➢ Set their weekly availability and time slots.
- ➢ View incoming appointment requests.
- ➢ Confirm or deny pending appointment requests.

❖ **Clinic administrators can perform the following functions:**

- ➢ Create, view, edit, and delete doctor accounts and profiles.
- ➢ View all appointments and payments in the system.
- ➢ Configure chatbot responses and logic.

Functional Requirements:

FR01: Search Module

Req. No.	Functional Requirements
FR01-01	The system shall allow any user to search for doctors.
FR01-02	The system shall provide search filters for specialty
FR01-03	The system shall display a list of doctor search results with basic information (name, specialty, photo).

FR02: Patient Authentication Module

Req. No.	Functional Requirements
FR02-01	The system shall allow a new patient to create an account using an email and password.
FR02-02	The system shall allow a registered patient to log in and log out.
FR02-03	The system shall provide a password reset feature for patients who have forgotten their password.

FR03: Appointment Management Module

Req. No.	Functional Requirements
FR03-01	The system shall require a patient to be logged in to request an

	appointment.
FR03-02	The system shall display available time slots for any doctors.
FR03-03	The system shall set the status of a new appointment to "Pending"
FR03-04	The system shall display a personal dashboard to a logged-in patient showing their upcoming and past appointments and their status (Pending, Confirmed, Cancelled).
FR03-05	The system shall allow a patient to cancel an upcoming appointment

FR04: Doctor & Admin Management Module

Req. No.	Functional Requirements
FR04-01	The system shall provide a secure admin interface (Django Admin) for staff and administrators.
FR04-02	The system shall allow the admin to create, view, edit, and delete doctor profiles.
FR04-03	The system shall allow staff to view a dashboard of all appointment requests for a doctor.
FR04-04	The system shall allow staff to change the status of a "Pending" appointment to "Confirmed" or "Denied".
FR04-05	The system shall allow staff and admin to view payment history

FR05: Chatbot Module

Req. No.	Functional Requirements
FR05-01	The system shall provide a chatbot interface to all users.
FR05-02	The chatbot shall guide a user through a rule-based decision tree based on symptoms
FR05-03	The chatbot shall suggest a relevant doctor specialty based on the user's answers.
FR05-04	The chatbot shall, upon user request, trigger a search in the system's database for doctors of the suggested specialty.

Non-functional Requirements:

NFR01: Usability

Req. No.	Non-functional Requirements
NFR01-01	The system shall have a responsive design, rendering correctly on desktop, tablet, and mobile screens.
NFR01-02	The system shall be intuitive, allowing a new patient to find and request an appointment

NFR02: Performance

Req. No.	Non-functional Requirements
NFR02-01	Doctor search results pages and doctor profiles shall be fast

NFR03: Security

Req. No.	Non-functional Requirements
NFR03-01	The system must provide access to authorized users only via a login module.
NFR03-02	Patients shall only be able to view their own appointment data.
NFR03-03	The system shall use HTTPS to encrypt all data in transit.
NFR03-04	Patient passwords shall be hashed in the database

NFR04: Constraints

Req. No.	Non-functional Requirements
NFR04-01	The entire project shall be built with free tools, and it shall not have anything overcomplicated