

Software Requirements Specification

Group 5

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1. Introduction

1.1 Purpose

The purpose of this document is to define the software requirements for the MeDoc Healthcare Management System website. It provides a comprehensive description of the functionality and features that the system should possess.

1.2 Scope

The healthcare sector has witnessed significant digitization in recent years, aimed at improving operations and enhancing the patient experience. The MeDoc Hospital Management System will serve as a comprehensive platform for managing patient and doctor information, appointments, and medical records. It will facilitate user registration, login, and various interactions between patients and doctors.

2. System Overview

2.1 System Description

The MeDoc system is a full-stack website designed to streamline healthcare management processes. It will consist of the following key modules:

Website Task Planning: MeDoc

- User Registration:
 - Sign up
 - Login
 - Forget password
- Patient profile:
 - View profile
 - Edit profile data
 - Find nearby providers
 - List doctors covered by patients' insurance
 - View doctor profile and available dates
 - Register an appointment
- Doctor profile:
 - View calendar
 - View specific patients profile
 - Enter data / Write report for the patient

3. Functional Requirements:

High-Level Requirements of each task and User stories:

3.1: User Registration

User Registration: Sign up

High Level Requirements

The user of the system "MeDoc" -whether a patient or a doctor- should be able to sign up and create an account for them.

User Story

Title	Sign Up
As a	New user
I want to	Create an account on the website
So that	I can access exclusive content and personalize my experience.

Persona

"John Patient," represents a segment of users who want to interact with a healthcare system website to manage their healthcare needs efficiently and securely. By understanding John's goals and preferences, the project team can design the website to provide features like secure access to medical records, appointment scheduling, medication reminders, and responsive customer support. This user-centric approach can enhance the patient experience and contribute to the success of the healthcare system website.

User Registration: Login

High Level Requirements

A user who has an account on the system should be able to login to their account to view their data and exclusive content.

User Story

Title	Login
As a	Registered user
I want to	Be able to login to my profile
So that	I am able to view my profile, book appointments, view reports, etc.

Persona

Dr. Sarah Mitchell, a 40-year-old family physician with 15 years of experience, wants to be able to login to her account easily and smoothly to monitor her work daily. She values simplicity and intuitive design in her tools. Compatibility with both her desktop computer and tablet, along with robust security measures for patient data, are essential. She aims to enhance patient care, minimize scheduling conflicts, and maintain patient privacy in her practice.

User Registration: Forget Password

High Level Requirements

A registered user should be able to reset their password in case they forgot the password.

User Story

Title	Forget Password
As a	Registered user
I want to	Be able to reset my password
So that	In case I forgot my password, I would not be deprived from accessing the portal.

Persona

Emilly Johnson, 68, female, marketing manager who values her personal health a lot. Other than serious presbyopia, she does not have any other medical issue. However, she would like to regularly go to hospital to make sure she is ok.

Needs: Emma needs an easy and straightforward set new password mechanism in case she forgot her password.

3.2: Patient Profile

Patient Profile: View Profile

High Level Requirements

Patients should be able to view their profile data. The patient profile should display relevant medical and personal data, for example, address, contact, medical history, allergies, etc. The webpage should be user friendly and easy-to-read information to improve user experience for patients with reading or understanding difficulties.

User Story

Title	View Profile
As a patient	I have access to my profile
I want to	Check my personal information
So that	I can make sure data is correct

Persona

Emma Smith

Background: Emma is sixty-eight years old, with more than thirty years of experience as a general surgeon who values her personal health a lot. Other than serious presbyopia, she does not have any other medical issue. However, she would like to regularly go to hospital to make sure she is ok.

Needs: Emma needs a website with a clear and easy-to-read page. That way, it will be easier for her to see user profile.

Patient Profile: Edit Profile data

High Level Requirements

Patients should be able to edit their profile data. The edit profile should be updated to the database immediately and shown in the update patient profile page. The editing function should be user friendly and easy-to-read information to improve user experience for patients with reading or understanding difficulties.

User Story

Title	Edit Profile data
As a patient	I have access to my profile
I want to	edit and update my profile data
So that	I can ensure my medical and personal information is accurate and up-to-date

Persona

Mike Zhang

Background: master student in Northeastern University who has been recently diagnosed with diabetes. He needs to frequently visit the hospital for situation updates. That's been said, he would prefer to use an online platform to manage and update his medical history.

Needs: Zhang is highly professional with computers and technology. He needs a powerful and detailed platform to track his health data. He is also concerned about the privacy and security of his medical data online.

Patient Profile: Find nearby providers

High Level Requirements

The system should be able to generate a list of nearby providers based on patient address. Patients should be able to filter the nearby providers based on specialty, service offered, rating, and other criteria.

User Story

Title	Find nearby providers
As a patient	I know several health service locations
I want to	Go to the best/ nearest/ most affordable/ most comfortable medical provider.
So that	Someone is able to take care of me.

Persona

<p>Howard Richard</p> <p>Background: Howard is a twenty-seven years old IT-specialist who just moved to the city due to a job transfer. He doesn't know much about the healthcare providers in his new area, but he is proactive about his health. He occasionally needs to take care of his old sports injury he got a few years back.</p> <p>Needs: He needs to find a general medical provider for annual check-ups and emergency medical needs. He needs the platform to have the ability to see ratings and reviews of health providers to make better decisions. He also needs to find providers that are close to where he lives.</p>
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Patient Profile: Find doctors covered by patient's insurance

High Level Requirements

<p>The system should provide patients with the ability to search and list doctors who are covered by their insurance plan.</p> <p>This information should be up-to-date and relevant to the patient's insurance coverage.</p>

User Story

Title	Find doctors covered by patients' insurance
As a patient	As a patient, I want to be able to enter my insurance details.
I want to	After entering my insurance information, I want to see a list of doctors who accept my insurance plan.
So that	I can sort the list based on factors like location, specialty, and patient reviews.

Persona

<p>1. Patient Persona - Sarah</p> <p>Background: Sarah is a 35-year-old professional who recently moved to a new city. She has health insurance and needs to find a local doctor who accepts her insurance plan.</p> <p>Needs: Sarah needs a convenient way to search for doctors covered by her insurance and view their profiles to</p>

make an informed choice. She also wants to schedule an appointment at her preferred time.

Patient Profile: View doctor profile and available dates

High Level Requirements

Patients should be able to view detailed profiles of doctors, including their qualifications, specializations, and available appointment dates.
This information should assist patients in selecting an appropriate healthcare provider.

User Story

Title	View doctor profile and available dates
As a patient	As a patient, I want to view detailed profiles of doctors listed in the system.
I want to	I want to see information about the doctor's qualifications, specialties, and experience.
So that	So that I can check the doctor's availability for appointments, including available dates and times.

Persona

2. Patient Persona - Sarah

Background: Sarah is a 35-year-old professional who recently moved to a new city. Sarah regularly sees a specialist for a chronic condition. She prefers doctors with specific expertise and experience.

Needs: Sarah wants to access detailed profiles of doctors to evaluate their qualifications and specialties. She needs to check the availability of her preferred specialist and book appointments for ongoing care.

Patient Profile: Register an appointment

High Level Requirements

Patients should have the capability to schedule and register an appointment with their chosen doctor.
The system should provide options for selecting the date and time of the appointment.

User Story

Title	Register an appointment
As a patient	As a patient, I want to schedule an appointment with a doctor of my choice.

I want to	I want to select a preferred date and time for the appointment.
So that	After scheduling the appointment, I can receive confirmation and reminder notifications.

Persona

<p>2. Patient Persona - Sarah</p> <p>Background: Sarah is a 35-year-old professional who recently moved to a new city. She is a busy working mother with two children. She needs to find pediatricians for her kids, taking into account both location and insurance coverage.</p> <p>Needs: Sarah requires a simple and efficient way to search for pediatricians and schedule an appointment. She also wants to schedule appointments for her children at suitable times.</p>

3.3: Doctor Profile

Doctor Profile: View Calendar

High Level Requirements

The doctors should be able to view the calendar to manage their appointments.

User Story

Title	View Calendar
As a doctor,	I can access the calendar module
I want to,	Schedule and manage appointments
So that,	Appointments are clearly marked; Past, present, and future dates are viewable.

Persona

<p>Dr. Sarah Mitchell, a 40-year-old family physician with 15 years of experience, seeks a user-friendly digital calendar module for her busy suburban medical clinic. Driven by the need for efficient appointment management, clear appointment markings, and access to past, present, and future dates, she values simplicity and intuitive design in her tools. Compatibility with both her desktop computer and tablet, along with robust security measures for patient data, are essential. She aims to enhance patient care, minimize scheduling conflicts, and maintain patient privacy in her practice.</p>
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Doctor Profile: View specific patient's profile

High Level Requirements

View a specific patient's profile and access their health records

User Story

Title	View Specific patient profile
As a Doctor	I can access patient health records
I want to,	Input Patient ID and get their health records
So that,	I can view and update their data

Persona

Dr. Michael Rodriguez, a 35-year-old cardiologist with a decade of experience, works in a busy urban hospital. Known for his passion for innovation and personalized patient care, he seeks efficient patient record access via a unique Patient ID input. His primary goals include obtaining comprehensive health data, updating patient records, and ensuring an intuitive interface for swift navigation. Dr. Rodriguez also prioritizes data security, with a strong emphasis on safeguarding patient confidentiality. He aims to enhance patient care and streamline his workflow, making informed decisions and saving valuable time in his demanding clinical setting.
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Doctor Profile: Enter data / Write report for the patient

High Level Requirements

Doctor can keep patient data up to date write a report for a patient to provide detailed observations and recommendations.

User Story

Title	Enter data / Write report for the patient
As a Doctor	I can Access data entry forms and report writing modules
I want to,	Save data up to date correctly and write a report for a patient so that I can provide detailed observations and recommendations
So that,	Data is retrievable whenever required. The report is saved with the patient profile. The report can be edited and deleted.

Persona


Dr. Emily Turner is a tech-savvy 42-year-old pediatrician with extensive experience working in a bustling urban clinic. She prioritizes efficient record-keeping and values user-friendly digital tools that simplify her workflow while enhancing patient care. Dr. Turner requires a system with data entry forms and report writing modules to keep patient records up to date and create detailed reports with observations and recommendations. Quick access to this information is crucial for informed decision-making during patient visits and for future reference. She has faced challenges with complex data entry systems and the lack of integrated report writing features, which hinder her ability to provide efficient care. A comprehensive system that combines both functions would greatly improve her workflow and patient care capabilities.

4. User Interface Design

4.1 Homepage:



4.2 Signup:



[About](#)[Gallery](#)[Contacts](#)

SIGN UP!

Sign up! to Enjoy Health Care services

Name*

This field is required

Last name

Your email*

This field is required

Message*

This field is required

Sign up

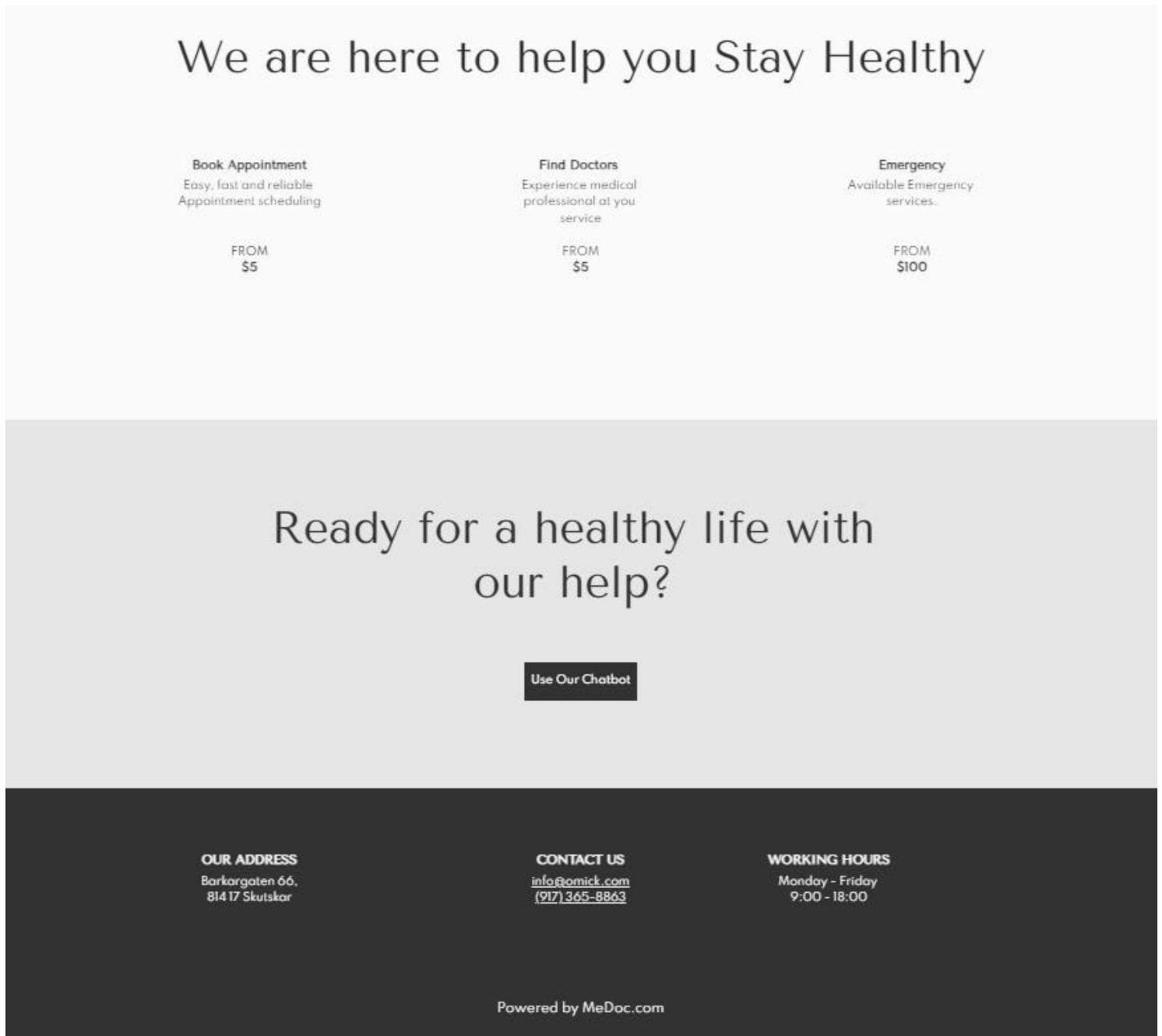
OUR ADDRESS
Barkergaten 66,
814 17 Skutskar

CONTACT US
info@omick.com
[\(917\) 365-8863](tel:91713658863)

WORKING HOURS
Monday - Friday
9:00 - 18:00

Powered by MeDoc.com

4.3 Features:



5. Activities for MeDoc Development

- User Experience: Design a streamlined flow for patients to find doctors, book appointments, and view records.
- Design: Aesthetic appeal combined with functionality and responsive design.
- Development: Use of web technologies like HTML, CSS and JavaScript for the frontend, Django for the backend, and SQL as the database.
- Testing: Functional, security, performance, and usability testing phases.
- Infrastructure: Cloud-based solutions for hosting, ensuring data backup and scalability.