

Software Requirements Specification

Document Version 1

Medlink
Doctor Finder
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1. Project General Description

Medlink is a web app that will allow users to effortlessly find healthcare professionals. Users can search for healthcare professionals by browsing their profiles, checking availability, and booking appointments. After the users visit, they can leave reviews based on their experience. Healthcare professionals can create profiles, post their availability, and view their reviews.

2. Product Features

Medlink is a web application designed to simplify the process of connecting patients with healthcare providers. The app includes a wide array of features aimed at enhancing user experience.

User Profile Management: Both patients and healthcare providers can create and modify their profiles. Patients must verify their accounts through email verification, while providers need to present proof of medical license.

Search and Filtering Options: Patients can browse and filter a list of healthcare providers based on their specialty, location, and availability. They can view detailed profiles of the providers that include services offered, qualifications, and real-time availability.

Appointment Booking: Users can book appointments through the app. They can also manage their appointments by rescheduling or cancelling appointments.

Patient Reviews: After their appointments, patients can provide feedback by leaving a review about their experience with the healthcare provider. This feature informs patients about their healthcare provider and also encourages providers to maintain a high standard of care.

Notifications and Reminders: The app allows users to manage notifications and set reminders for upcoming appointments.

Data Privacy and Security: Medlink prioritizes user data privacy and is in compliance with HIPAA requirements, ensuring that all sensitive information is securely stored and accessed only by those authorized.

User (Patient): Yajaira Alonso-Camarillo

Functional Requirements

- **FR0:** The app will allow all users to create a profile.
- **FR1:** The app will allow users to verify their account information through email verification.
- **FR2:** The app will display an error message for issues while creating an account.
- **FR3:** The app will store user information including name, DOB, address, and SSN.
- **FR4:** The app shall allow all users to modify their profiles.
- **FR5:** The app will allow users to log into their accounts by entering their email and password.
- **FR6:** The app will allow users to reset their password if they have forgotten.
- **FR7:** The app shall display an error message for incorrect logins.
- **FR8:** The app will allow users to view a list of available healthcare providers based on their preferences, including specialty, location, and availability.
- **FR9:** The app will allow users to view detailed profiles of healthcare professionals, including services offered and qualifications.
- **FR10:** The app will allow users to view reviews on the healthcare providers.
- **FR11:** The app will allow users to view the real-time availability of healthcare providers.
- **FR12:** The app will allow the user to book an appointment with their chosen healthcare provider.
- **FR13:** The app will display a confirmation message when an appointment is booked.
- **FR14:** The app will send booked appointments to the user's list of services.
- **FR15:** The app will allow users to view their current and past appointments with each provider.
- **FR16:** The app will allow users to reschedule or cancel appointments.
- **FR17:** The app will allow users to manage notifications and reminders for upcoming appointments.
- **FR18:** The app will allow users to write reviews for healthcare providers with whom they have had appointments.
- **FR19:** The app will allow users to edit or delete their reviews.

Non-Functional Requirements

- **NFR0:** The system will ensure data privacy and compliance with HIPPA (Health Insurance Portability and Accountability Act) for user data.
- **NFR1:** The user interface will be user-friendly and easy to navigate. The interface will feature intuitive layout designs and clear labels for navigation.
- **NFR2:** The app will have a response time of no more than 5 seconds for loading pages and retrieving search results, which will improve user experience and overall satisfaction.

Scenario 1: Create/Modify User Profile

Actors	User
Use Case Name	Create/modify user profile
Description	For users to create and modify customer profile
Precondition	The user has to open the app.
Postcondition	The user has created a profile or has modified the profile.
Main Flow	<ol style="list-style-type: none">1. The system displays a menu.2. The user selects “Create Profile”.3. The user enters profile information.4. The user selects “Submit” to create a profile.5. The user has to verify the account through an email address.6. Once verified, the user gains access to the system.7. The system displays a menu based on the user.8. The user selects “Profile” to view and modify their profile.
Alternative Path	<p>1b. If the user selects “Login” to modify their profile</p> <ul style="list-style-type: none">- Use case resumes at step 6 <p>4b. User enters invalid information or incomplete profile</p> <ul style="list-style-type: none">- An error message is shown to the user.- Use case resumes at step 3
Exceptions	At any point of the main flow, if the user wishes to cancel the creation or modification of their profile, the user can select cancel and the use case resumes at step 1.

Scenario 2: View Available Services

Actors	User
Use Case Name	View available services
Description	For users to view a list of available healthcare providers
Precondition	The user has opened the app.
Postcondition	The user has viewed healthcare provider's profiles.
Main Flow	<ol style="list-style-type: none">1. The system displays the home page2. The user has selected the "Services" page.3. The system displays the Services page.4. The user browses the list of healthcare providers.5. The user selects a specific healthcare provider.6. The system displays the provider's profile.7. The user has viewed the healthcare provider's profile.
Alternative Path	<p>4b. The user filters the list of healthcare providers with their preferences</p> <ul style="list-style-type: none">- The user selects their filter criteria- The system updates the list of healthcare providers based on selected filters.- The user views a new list of filtered healthcare providers.- Use case resumes at step 5.
Exceptions	At any point of the main flow, if the user wishes to not view the available services, the user can select "Home" and resume at step 1.

Scenario 3: Make an Appointment

Actors	User
Use Case Name	Make an appointment
Description	The user can make an appointment with their chosen healthcare provider.
Precondition	The user must be logged into the system and have chosen their healthcare provider.
Postcondition	The system has added booked appointments to the user's list of appointments.
Main Flow	<ol style="list-style-type: none">1. The system displays the chosen healthcare provider.2. The user selects "Make an Appointment"3. The system shows the available slots for the selected provider.4. The user selects the preferred appointment date and time.5. The user confirms the selected date and time.6. The system prompts the user to provide any required details.7. The user fills in the required information.8. The user selects "Submit".9. The system displays a confirmation message.10. The user has booked and confirmed the appointment.11. The system adds the appointment to the user's list of appointments.
Alternative Path	<p>7b. The user submits the appointment request with incomplete or invalid information.</p> <ul style="list-style-type: none">- The system displays an error message.- Use case resumes at step 7.
Exceptions	At any point in the main flow, if the user chooses to cancel the appointment process, the user can select cancel to return to the main page.

Scenario 4: Write a Review

Actors	User
Use Case Name	Write a review
Description	The user can write a review to a healthcare provider with whom they have had an appointment with.
Precondition	The user is logged in.
Postcondition	The user has written a review on a healthcare provider.
Main Flow	<ol style="list-style-type: none">1. Once logged in, the system displays the user's dashboard.2. The user selects "Past Appointments".3. The system shows a list of past appointments.4. The user selects a healthcare provider.5. The system displays the appointment details page.6. The user selects "Write a Review".7. The system displays a review submission form.8. The user rates and writes their review.9. The user selects "Submit".10. The system confirms the review submission.
Alternative Path	<p>3b. The user has no record of "Past Appointments"</p> <ul style="list-style-type: none">- The system displays a message that there are no past appointments available for review. <p>9b. The user submits a review with inappropriate content</p> <ul style="list-style-type: none">- The system displays an error message and prompts the user to change the review before resubmitting.
Exceptions	At any point in the main flow, the user can choose to cancel writing the review, the user can select cancel and resume at step 1.

Functional Requirements

- **FR0:** the app will allow all users to create a profile.
- **FR1:** The app will allow all users to modify their profile.
- **FR2:** The app will allow the provider to access patient medical history and records.
- **FR3:** The app will allow the provider to view and update any patient interactions and/or notes they might have.
- **FR4:** The app will allow the provider to manage patient feedback and reviews along with being able to sort the reviews by lowest rating – highest rating, highest rating - lowest rating, alphabetically, alphabetically backwards, most recent post - oldest, oldest post – most recent.
- **FR5:** The app will allow the provider to set their availability and manage a calendar.
- **FR6:** The app will allow the provider to view, accept, reschedule, or cancel appointments.
- **FR7:** The app will allow the provider to upload and manage patient documents, and allow them to generate reports on patient visits, and upload treatment outcomes.
- **FR8:** Providers will need to be verified by showing proof of a valid medical license, before their accounts can be successfully created.
- **FR9:** The app will allow the provider to manage billing information and payment processing, along with handling insurance claims and integration with insurance providers.
- **FR10:** The app will allow the provider to generate and send invoices to their patients and track their payment history and status.

Non-Functional Requirements

- **NFR0:** Protecting sensitive patient data and maintaining patient confidentiality requires ensuring data encryption, regulatory compliance with HIPAA, and secure handling of patient records and communications.
- **NFR1:** Appointment scheduling in real time, notifications, and effective availability management would enable providers to effectively manage their calendars and provide patients with timely services.
- **NFR2:** High responsiveness, rapid load times, and a user-friendly interface will ensure that both clinicians and patients have a seamless and efficient user experience, which will improve overall satisfaction and engagement.

Scenario 1: Manage Provider Profile

Actors	Doctor
Use case name	Manage Provider Profile
Description	For doctors to create, modify, or remove their provider profile.
Precondition	Doctor must be logged into the system.
Postcondition	Doctors profile is created, modified, or removed.
Main flow	<ol style="list-style-type: none">1. System displays a menu.2. Doctor selects “Manage Profile”.3. The doctor is required to enter profile details.4. System verifies if the entered details are valid.5. If valid, the profile is created/modified/removed.6. Confirmation message is shown to the doctor.
Alternative path	<p>4a. Entered details are not valid.</p> <ul style="list-style-type: none">• An error message is shown to the doctor.• Use case resumes at step 3.
Exceptions	The procedure can be canceled at any time by the doctor, and the use case starts over from step 1.

Scenario 2: Create Services

Actors	Doctor
Use case name	Create Services
Description	For doctors to create and publish appointments for patients.
Precondition	Doctor must be logged into the system.
Postcondition	Appointments are created and published.
Main flow	<ol style="list-style-type: none">1. System displays a menu.2. Doctor selects “Create Appointment”.3. System checks if the entered details are valid.4. If valid, the appointment is created.5. Appointment is published, and a confirmation message is shown to the Doctor
Alternative path	<p>4a. Entered details are not valid.</p> <ul style="list-style-type: none">• An error message is shown to the doctor.• Use case resumes at step 3.
Exceptions	The procedure can be canceled at any time by the doctor, and the use case starts over from step 1.

Scenario 3: View Customer Statistics

Actors	Doctor
Use case name	View Customer Statistics
Description	For doctors to view individual and overall ratings.
Precondition	Doctor must be logged into the system.
Postcondition	Customer statistics are displayed.
Main flow	<ol style="list-style-type: none">1. System displays a menu.2. The doctor selects “View Customer Statistics”.3. System retrieves individual and overall ratings.4. Ratings are displayed to the doctor.
Alternative path	<p>3a. System fails to retrieve ratings.</p> <ul style="list-style-type: none">• An error message is shown to the doctor.• Use case resumes at step 1.
Exceptions	The procedure can be canceled at any time by the doctor, and the use case starts over from step 1.

Scenario 4: Reply to Reviews

Actors	Doctor
Use case name	Reply to Reviews
Description	For doctors to reply to patient reviews.
Precondition	Doctor must be logged into the system.
Postcondition	Review reply is posted.
Main flow	<ol style="list-style-type: none">1. System displays a menu.2. Doctor selects “Reply to Reviews”.3. The doctor is required to enter a reply text.4. System checks if the entered text is valid.5. If valid, the reply is posted.6. Confirmation message is shown to the doctor.
Alternative path	<p>4a. Entered text is not valid.</p> <ul style="list-style-type: none">• An error message is shown to the doctor.• Use case resumes at step 3.
Exceptions	The procedure can be canceled at any time by the doctor, and the use case starts over from step 1.

Seth (SysAdmin)

Functional Requirements

- **FR0:** The app will allow the sysadmin to manage user accounts including customers and providers
- **FR1:** The sysadmin will have the ability to suspend or ban accounts based on system policies and or reported violations
- **FR2:** Sysadmin will be able to review and moderate all service listings posted by providers
- **FR3:** Sysadmin will be able to remove any service listings that are fraudulent or violate policies
- **FR4:** Sysadmin will be able to monitor and review all customer and provider reviews
- **FR5:** Sysadmin will be able to remove inappropriate reviews and issues warnings and or bans if necessary
- **FR6:** Sysadmins will have the access to usage statistics, including the number of active users, service listings, appointment bookings, and reviews that were submitted
- **FR7:** Sysadmin will be able to generate reports on platform activity, including flagged content, users' engagement, and system performance

Non-Functional Requirements

- **NFR1:** Moderation system must be able to process and review all flagged content within 24 hours to maintain platforms integrity
- **NFR2:** Admin panel must provide a clear and intuitive interface, allowing Sysadmins to navigate between user accounts, service listings, and reviews efficiently, with no more than 3 clicks to reach moderations tools.
- **NFR3:** System will maintain an uptime of 99.9% for continuous access for sysadmins to monitor and manage platform activities

Scenario 1: Manage User Access

Actors	Sysadmin
Use Case Name	View Usage Statistics
Description	Allows Sysadmin to access platform analytics
Preconditioning	Sysadmin is logged in and accessing an admin portal
Postconditioning	Sysadmin successfully retrieves and views platform analytics
Main Flow	<ol style="list-style-type: none">1. SysAdmin accesses the Analytics Dashboard section2. SysAdmin selects a report type (user activity, appointment trends, flagged content)3. The system retrieves the relevant data4. SysAdmin views the report5. SysAdmin exports the report if needed
Alternative Path	3a. If data retrieval fails, an error message is to be displayed
Exception	If Sysadmin cancels the process, they are redirected to the analytics dashboard section

Scenario 2: Moderate services

Actors	Sysadmin
Use Case Name	Moderate Services
Description	Allows sysadmin to remove and review service listings for potential violations of platform policies
Preconditioning	Sysadmin is logged in and access to admin portal
Postconditioning	Flagged service listing is removed if deemed inappropriate
Main Flow	<ol style="list-style-type: none">1. SysAdmin accesses the Service Listings section2. SysAdmin selects a flagged service3. SysAdmin reviews the service details and flags4. SysAdmin chooses to remove or approve the listing5. System updates the service listing status accordingly6. A confirmation message is displayed
Alternative Path	4a. If sysadmin takes no action, the listing remains in a pending review state
Exception	If sysadmin cancels process, they are redirected to the service listing section

Scenario 3: Moderate Reviews

Actors	Sysadmin
Use Case Name	Moderate reviews
Description	Allows sysadmin to review and remove inappropriate or flagged reviews
Preconditioning	Sysadmin is logged in and accesses admin portal
Postconditioning	Flagged review is either removed or retained on platform by moderation guidelines
Main Flow	<ol style="list-style-type: none">1. SysAdmin accesses the Review Management section2. SysAdmin selects a flagged review3. SysAdmin reads the review and its associated flags4. SysAdmin chooses to keep, edit, or delete the review5. system updates the review status accordingly6. A confirmation message is displayed
Alternative Path	4a. If review is deemed appropriate, then no action is taken
Exception	If sysadmin cancels process, they are directed to the review management section

Scenario 4: View Usage Statistics

Actors	Sysadmin
Use Case Name	View usage Statistics
Description	Allow sysadmin to access platform analytics
Preconditioning	Sysadmin is logged into and accessing the admin portal
Postconditioning	Sysadmin successfully retrieves and views platform analytics
Main Flow	<ol style="list-style-type: none">1. SysAdmin accesses the "Analytics Dashboard" section.2. SysAdmin selects a report type (user activity, appointment trends, flagged content)3. System retrieves the relevant data4. SysAdmin views the report5. SysAdmin exports the report if needed
Alternative Path	3a. If data retrieval fails, then an error message is displayed
Exception	If a sysadmin cancels process, then they are redirected to the analytics dashboard page