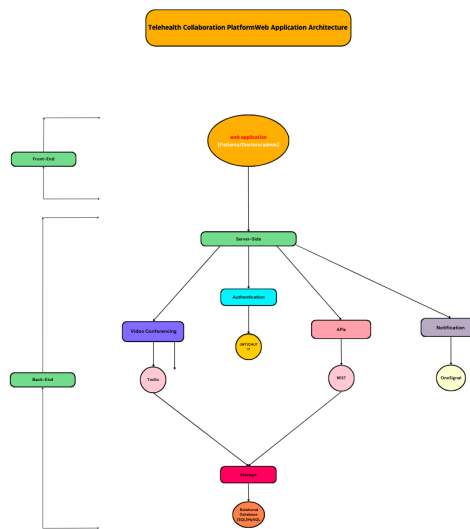


MVP specification

Architecture



APIs and Methods

1. User Management

/api/users

- **GET:** Retrieve a list of all users or details of a specific user.
 - **Request Example:** GET /api/users

- **Description:** Returns a list of all users or details of a specific user if an ID is provided.
- **POST:** Create a new user.
 - **Request Example:** POST /api/users
 - **Description:** Registers a new user (e.g., patient, doctor). Requires user data in the request body.
- **PUT:** Update user details.
 - **Request Example:** PUT /api/users/:id
 - **Description:** Updates details of a specific user. Requires updated data in the request body.
- **DELETE:** Remove a user.
 - **Request Example:** DELETE /api/users/:id
 - **Description:** Deletes the user with the specified ID.

2. Authentication

/api/auth

- **POST:** Authenticate a user.
 - **Request Example:** POST /api/auth/login
 - **Description:** Authenticates a user and returns an authentication token.
- **POST:** Register a new user.
 - **Request Example:** POST /api/auth/register
 - **Description:** Registers a new user and returns authentication details.

3. Appointment Management

/api/appointments

- **GET:** List or retrieve appointments.
 - **Request Example:** GET /api/appointments
 - **Description:** Lists all appointments or filters by criteria. Optionally, include query parameters.
- **POST:** Create a new appointment.
 - **Request Example:** POST /api/appointments
 - **Description:** Creates a new appointment. Requires appointment details in the request body.
- **PUT:** Update an existing appointment.
 - **Request Example:** PUT /api/appointments/:id
 - **Description:** Updates details of an existing appointment. Requires updated data in the request body.
- **DELETE:** Cancel an appointment.
 - **Request Example:** DELETE /api/appointments/:id
 - **Description:** Cancels the appointment with the specified ID.

4. Medical Records

/api/records

- **GET:** Retrieve medical records.
 - **Request Example:** GET /api/records
 - **Description:** Lists or retrieves medical records. Includes filtering options.
- **POST:** Upload or create a new medical record.
 - **Request Example:** POST /api/records
 - **Description:** Submits new medical record data.
- **PUT:** Update an existing medical record.
 - **Request Example:** PUT /api/records/:id
 - **Description:** Updates details of a specific medical record.
- **DELETE:** Delete a medical record.
 - **Request Example:** DELETE /api/records/:id
 - **Description:** Removes a medical record with the specified ID.

5. Video Conferencing

/api/video/meetings

- **POST:** Create a new video consultation.
 - **Request Example:** POST /api/video/meetings
 - **Description:** Initiates a new video meeting. Integration with a service like Twilio.
- **GET:** Retrieve meeting details.
 - **Request Example:** GET /api/video/meetings/:id
 - **Description:** Retrieves details of a specific video meeting.

6. Notifications

/api/notifications

- **GET:** Retrieve notifications for a user.
 - **Request Example:** GET /api/notifications
 - **Description:** Lists notifications for a user.
- **POST:** Create a new notification.
 - **Request Example:** POST /api/notifications
 - **Description:** Sends a new notification.

7. Files and Storage

/api/files

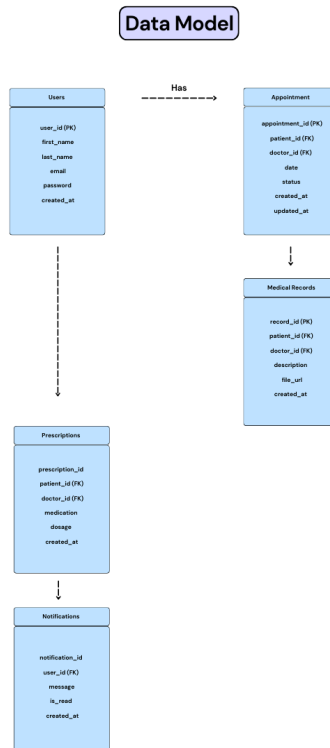
- **POST:** Upload a new file and store its metadata.
 - **Request Example:** POST /api/files

- **Description:** Uploads a file and saves its metadata to the database.
- **GET:** Retrieve file metadata.
 - **Request Example:** GET /api/files/:id
 - **Description:** Retrieves metadata for a specific file.
- **DELETE:** Delete a file and its metadata.
 - **Request Example:** DELETE /api/files/:id
 - **Description:** Removes a file and its associated metadata.

Third-Party APIs

- **Twilio API:** For video conferencing.
 - **POST:** POST /api/twilio/meetings – Create a video meeting using Twilio.
- **Google Drive API:** For storing files.
 - **GET:** GET /api/google-drive/files – List files.
 - **POST:** POST /api/google-drive/upload – Upload a file

----- Data Model -----



Users

- **Description:** The Users table is the central hub where all types of users (patients, doctors, and administrators) are stored. Each user is uniquely identified by their `user_id`, which serves as the primary key (PK) for this table. The role field (`role`) helps differentiate between patients, doctors, and administrators.
- **Key Attributes:**
 - `user_id`: Unique identifier for each user.
 - `first_name`, `last_name`: Basic personal information.
 - `email`: Used for user authentication and communication.
 - `password`: Encrypted password for user login.
 - `role`: Specifies the type of user (e.g., patient, doctor, admin).
 - `created_at`: Timestamp when the user was added.
 - `updated_at`: Timestamp when the user profile was last modified.

Appointments

- **Description:** The Appointments table keeps track of consultations scheduled between patients and doctors. It establishes relationships with the Users table through `patient_id` and `doctor_id` as foreign keys (FK). This allows for a many-to-many relationship between users.
- **Key Attributes:**
 - `appointment_id`: Unique identifier for each appointment.
 - `patient_id` (FK): Links to the `user_id` of a patient.
 - `doctor_id` (FK): Links to the `user_id` of a doctor.
 - `date`: The scheduled date and time of the appointment.
 - `status`: The current status of the appointment (e.g., pending, completed, canceled).
 - `created_at`: Timestamp of when the appointment was created.

Prescriptions

- **Description:** The Prescriptions table stores details about medications prescribed by doctors during appointments. This table is linked to the `patient_id` and `doctor_id` from the Users table to keep track of who issued and received the prescription.
- **Key Attributes:**
 - `prescription_id`: Unique identifier for each prescription.
 - `patient_id` (FK): Links to the `user_id` of the patient receiving the prescription.
 - `doctor_id` (FK): Links to the `user_id` of the doctor issuing the prescription.
 - `medication`: Name of the medication prescribed.
 - `dosage`: Dosage information for the prescribed medication.
 - `created_at`: Timestamp of when the prescription was issued.

Medical Records

- **Description:** The Medical Records table contains detailed medical history for each patient, such as diagnoses, treatment plans, and test results. Records are tied to both the `patient_id` and `doctor_id` to reflect who the record is for and who created it.
- **Key Attributes:**
 - `record_id`: Unique identifier for each medical record.
 - `patient_id` (FK): Links to the `user_id` of the patient.
 - `doctor_id` (FK): Links to the `user_id` of the doctor who created the record.
 - `description`: Detailed description of the medical condition or treatment.
 - `file_url`: URL to any uploaded documents or images related to the record (e.g., X-rays, test results).
 - `created_at`: Timestamp of when the medical record was created.

Notifications

- **Description:** The Notifications table is responsible for sending important updates to users, such as appointment reminders or prescription alerts. Each notification is linked to a specific user through the `user_id`.
- **Key Attributes:**
 - `notification_id`: Unique identifier for each notification.
 - `user_id` (FK): Links to the `user_id` of the user receiving the notification.
 - `message`: The content of the notification.
 - `is_read`: Boolean flag indicating whether the user has read the notification.
 - `created_at`: Timestamp of when the notification was sent.

----- User Stories -----

User Story 1:

- **Title:** Patient Schedule Appointment
- **Description:**
 - *As a patient, I want to be able to schedule a video consultation with a doctor, so that I can receive medical advice without visiting the hospital in person.*
- **Acceptance Criteria:**
 - The patient can select an available time slot from a list of doctors.
 - The patient receives a confirmation after booking.
 - The system notifies the doctor about the appointment.

User Story 2:

- **Title:** Doctor View Appointments

- **Description:**
 - *As a doctor, I want to view a list of upcoming appointments, so that I can prepare for consultations and manage my schedule efficiently.*
- **Acceptance Criteria:**
 - The doctor can see a calendar view of scheduled appointments.
 - Each appointment shows the patient's name, time, and status.
 - The doctor can mark an appointment as completed or canceled.

User Story 3:

- **Title:** Admin Manage Users
- **Description:**
 - *As an admin, I want to be able to manage users (patients and doctors), so that I can ensure that the platform operates smoothly and securely.*
- **Acceptance Criteria:**
 - The admin can create, update, or delete user accounts.
 - The admin can assign roles (e.g., patient, doctor, admin) to users.
 - The system logs all changes made by the admin.

User Story 4:

- **Title:** Patient Receive Notifications
- **Description:**
 - *As a patient, I want to receive reminders and notifications for upcoming appointments, so that I don't miss any consultations.*
- **Acceptance Criteria:**
 - The patient receives an email or push notification reminder 24 hours before the scheduled appointment.
 - The patient is notified when a doctor adds new information to their medical records.
 - Notifications are marked as read after the patient views them.

User Story 5:

- **Title:** Doctor Upload Prescription
- **Description:**
 - *As a doctor, I want to upload and store prescriptions digitally for my patients, so that I can provide easy access to their medication records.*
- **Acceptance Criteria:**
 - The doctor can upload a digital prescription for a patient.
 - The prescription is saved to the patient's profile.
 - The patient receives a notification when the prescription is available.

----- **Mockups** -----

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Services

Service 1

Service 2

Service 3

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About Us

We are actually a platform that help patient from different countries across the world so that we offer really valueable services and help those who are not able to travel from a country to another one

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Contact Us

telehealthcollaboration@contact.health

+212687349029

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User Selection

Doctor, Nurse, Patient



First Name



Last Name



Email



Password



Re-type Password

Login

[if you are new..sign up.](#)

1. Primary Home View (For All Users)

Layout Overview:

- **Navbar:** The navbar at the top of the page includes links to essential sections like "Home", "Services", and "About Us".
- **Main Content:** A central "Get Started" button allows each user type (doctors, patients, nurses) to navigate to their respective login pages.
- **Security Focus:** The page directs users to their respective login pages. For doctors and nurses, added security features will prevent unauthorized access, such as Multi-Factor Authentication (MFA) and email verification.

Explanation:

- **Navbar:** Provides clear navigation, allowing users to explore basic information about the platform.
- **"Get Started" Button:** Each user is guided to their respective secure login page. Role-Based Access Control (RBAC) ensures that only authorized users like doctors and nurses can access their dashboards. MFA and number/email verification add another layer of security to protect against login attacks or phishing.

2. Doctor's Dashboard

Layout Overview:

- **Appointments Section:** Doctors can view upcoming and past appointments.
- **Consultation Section:** This section enables doctors to start video consultations with their patients.
- **Patient Management:** Doctors can manage patients' medical histories, prescriptions, and consultation notes.
- **No Notifications Section** (removed based on your request).

Explanation:

- **Appointments:** Doctors can check details like date, time, and status of appointments.
- **Consultation:** A simple video interface to communicate directly with patients during scheduled consultations.
- **Patient Management:** Access to a list of patients with detailed histories and prescriptions to ensure smooth medical consultations.



Appointments Overview

Patient List

Consultations

Task List

Appointments Overview

Mon	Tue	Wed	Thu
25	26	27	28
lower back pain Mr.Jhon 2h	lower toothache Ms.lora 45min	lower lowerback headache Mr.Jhon 1h	lower cosultation Mr.karen 30min



Appointments Overview

Patient List

Consultations

Task List

Patient List

Name	Age	Gender	Diagnostic	Phone Number	Address
 kyla loden	23	female	biopsy	+1 3224345	47 W 13th St, New York, NY 10011, USA
 sali wetki	34	female	eyes test	+1 6543676	Metrotech Center, Brooklyn, NY 11201, USA
 morgen locas	25	male	x-rays	+1 5435543	33 3rd Ave, New York, NY 10003, USA
					
					




Appointments Overview

Patient List

Consultations

Task List

Consultations

 Video call	Video call
--	------------

[Appointments Overview](#)[Patient List](#)[Consultations](#)[Task List](#)

Task List

Doctors' daily tasks like signing
off
reports or responding to
inquiries

Memory updated

Here's a full explanation of each part of the design based on your updated requirements:

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Layout Overview:

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Explanation:

- **Appointments:** Doctors can check details like date, time, and status of appointments.
 - **Consultation:** A simple video interface to communicate directly with patients during scheduled consultations.
 - **Patient Management:** Access to a list of patients with detailed histories and prescriptions to ensure smooth medical consultations.
-

3. Nurse's Dashboard

Layout Overview:

- **Appointments Support:** Nurses assist doctors by managing appointments.
- **Patient Support Section:** Allows nurses to support patient care and follow-up.
- **Nurse Notifications Section:** A specialized notifications section is included for managing their daily tasks related to patient care and doctor support.

Explanation:

- **Appointments Support:** Nurses can view and manage appointments, preparing for patient consultations and providing administrative support to doctors.
- **Patient Support:** Nurses have access to patient files to manage post-consultation care or assist doctors with ongoing cases.
- **Nurse Notifications:** Specific notifications guide nurses in their daily operations, ensuring they stay updated on new tasks and patient needs.



Patient Records

Name	Age	Gender	Diagnostic	Phone Number	Address
 kyla loden	23	female	biopsy	+1 3224345	47 W 13th St, New York, NY 10011, USA
 sali wetki	34	female	eyes test	+1 6543676	Metrotech Center, Brooklyn, NY 11201, USA
 morgen locas	25	male	x-rays	+1 5435543	33 3rd Ave, New York, NY 10003, USA
					
					



Scheduling

Mon 25	Tue 26	Wed 27	Thu
<div>lower back pain Mr.Jhon 2h</div> <div>Add New Patient Consultation</div> <div>Add New Patient Consultation</div> <div>Add New Patient Consultation</div>	<div>Add New Patient Consultation</div> <div>Add New Patient Consultation</div> <div>lower toothache Ms.lora 45min</div> <div>Add New Patient Consultation</div>	<div>Add New Patient Consultation</div> <div>Add New Patient Consultation</div> <div>lower lowerback headache Mr.Jhon 1h</div> <div>Add New Patient Consultation</div>	<div>Add New Patient Consultation</div> <div>lower cosultation Mr.karen 30min</div> <div>Add New Patient Consultation</div>



Notifications



daysee loren's consultation is Next



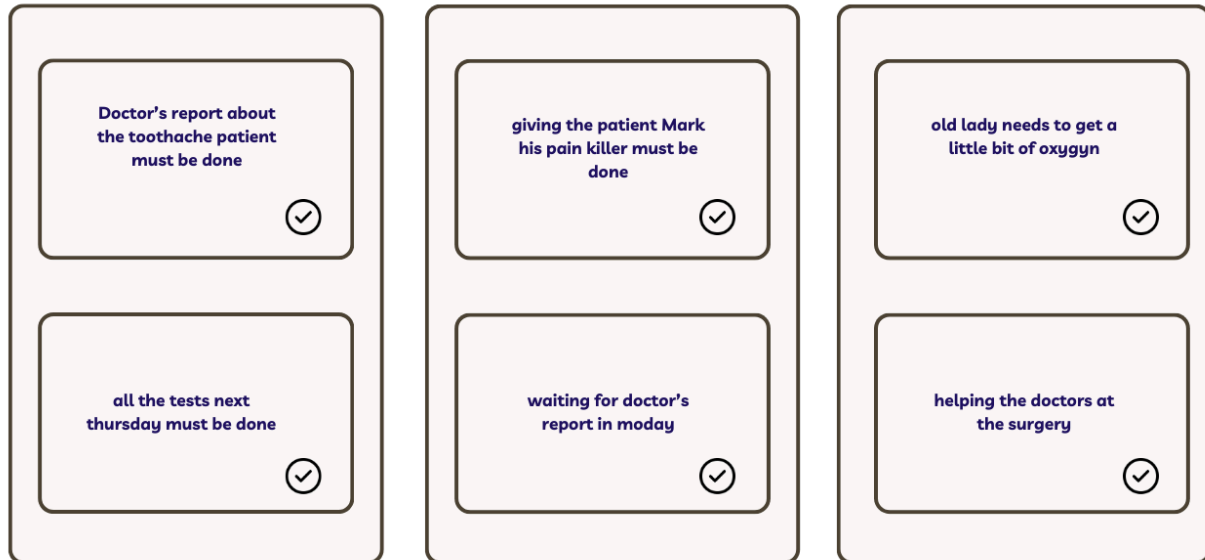
Mark belor's cosultation is Next



consultation request from dan cheldho

[Patient Records](#)[Scheduling](#)[Notifications](#)[Task Management](#)

Task Management



4. Patient's Dashboard

Layout Overview:

- **Upcoming Appointments:** Patients can view their confirmed and pending appointments.
- **Consultation History:** Patients have access to their past consultations, including video recordings and doctor notes.
- **Medical History:** A detailed log of the patient's prescriptions, diagnoses, and treatment plans.

Explanation:

- **Appointments:** Patients can track their scheduled appointments and view details about the attending doctor.
- **Consultation History:** Past consultations are stored for reference, allowing patients to review doctor advice or prescriptions.
- **Medical History:** Patients can check their complete health record on the platform, enabling them to monitor their treatment plans and prescriptions.



Upcoming Appointments

Mon	Tue	Wed	Thu
25	26	27	
scheduled consultations with the doctor	scheduled consultations with the doctor	scheduled consultations with the doctor	scheduled consultations with the doctor



Consultation History

Mon	Tue	Wed	Thu
25	26	27	
you have to rest at least a week, so that the back can be back to his health	don't ever again use wear the cotton cause it's bad to your skin	drink more water at least 5 letter's per day	you can now train easily



[Upcoming Appointments](#) [Consultation History](#) [Medical Records](#)

Medical Records

Access to previous diagnoses, lab reports, and prescriptions.