

Meditrak

User Manual

Florida International University — Senior Design Capstone II — Spring 2026

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System Overview

Meditrak is a web-based clinic management system designed for small general practice offices. It provides four role-based interfaces: Admin, Doctor, Receptionist, and Patient. Each role sees only the features and data relevant to their responsibilities.

Role	Primary Responsibilities
Admin	Full system control — manage patients, doctors, staff, view analytics, archive data
Doctor	View schedule, access patient histories, record visit outcomes
Receptionist	Schedule and manage appointments, search patients, manage daily schedule
Patient	Self-register, book appointments, view visit history and health records

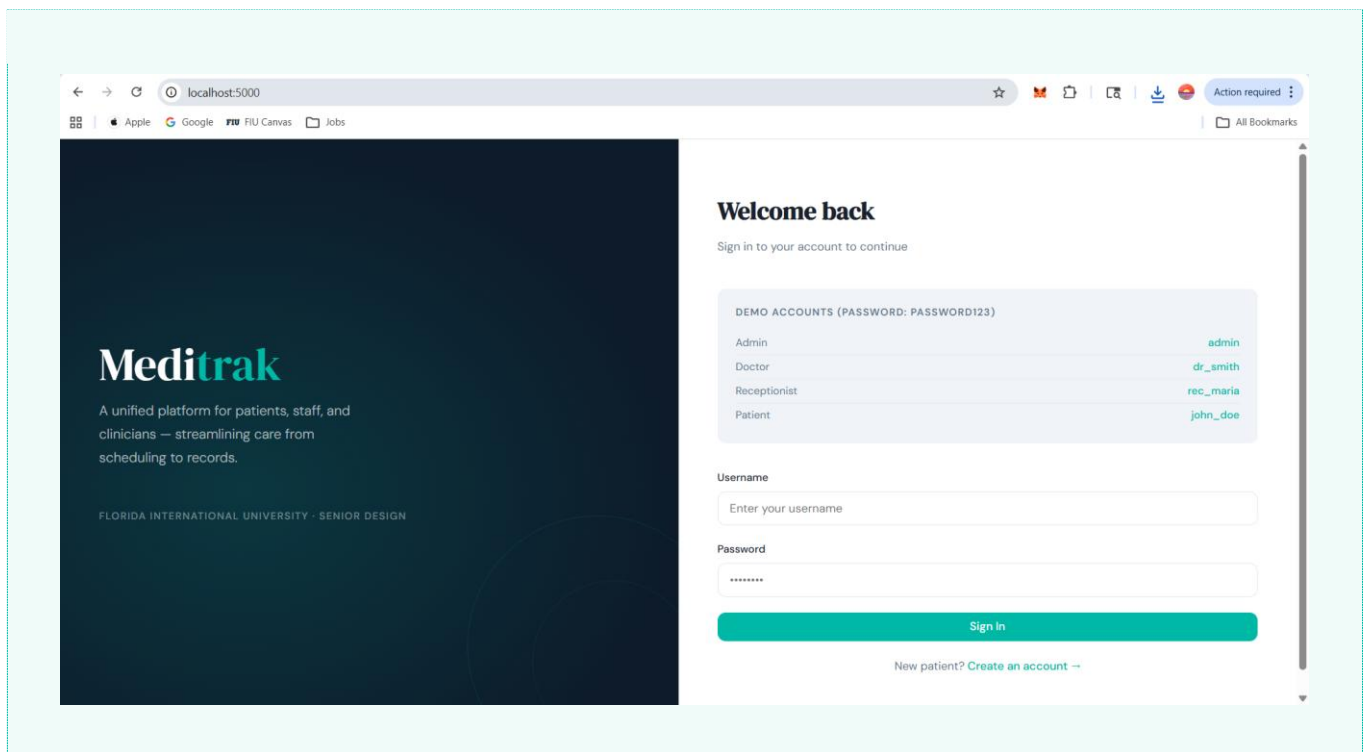
Logging In & Out

Logging In

Navigate to <http://localhost:5000> in your browser. The Meditrak login page will appear.

1. Enter your username in the Username field.
2. Enter your password in the Password field.
3. Click Sign In.

You will be redirected automatically to your role's dashboard.



Creating a New Patient Account

New patients can create their own account without staff assistance.

4. On the login page, click "New patient? Create an account →" below the Sign In button.
5. Fill in the required fields: Full Name, Username, Email Address, Password, and Confirm Password.
6. Optionally fill in Phone, Date of Birth, Gender, and Insurance Provider.
7. Click Create Account.
8. A success message appears. Click "Sign in now" to proceed to the login page.

localhost:5000/register

Apple Google FIU Canvas Jobs

Meditrak

Create your patient account to manage appointments and view your health records.

- 1 Create your account with basic information
- 2 Sign in and book appointments with any doctor
- 3 View your visit history and health records

Create Account

Patient registration — takes less than a minute

Full Name *

John Doe

Username *

john Doe123

Email Address *

john@email.com

Password * (min 6 chars)

Confirm Password *

Optional Details

Phone

555-1234

Date of Birth

mm/dd/yyyy

Gender

Select

Insurance Provider

BlueCross, Aetna...

Create Account

Already have an account? [Sign in](#)

Logging Out

Click Sign Out at the bottom of the left sidebar on any page. You will be returned to the login page.

Admin Role

Admin Dashboard

The Admin Dashboard provides a clinic-wide overview and serves as the main hub for administrative tasks.

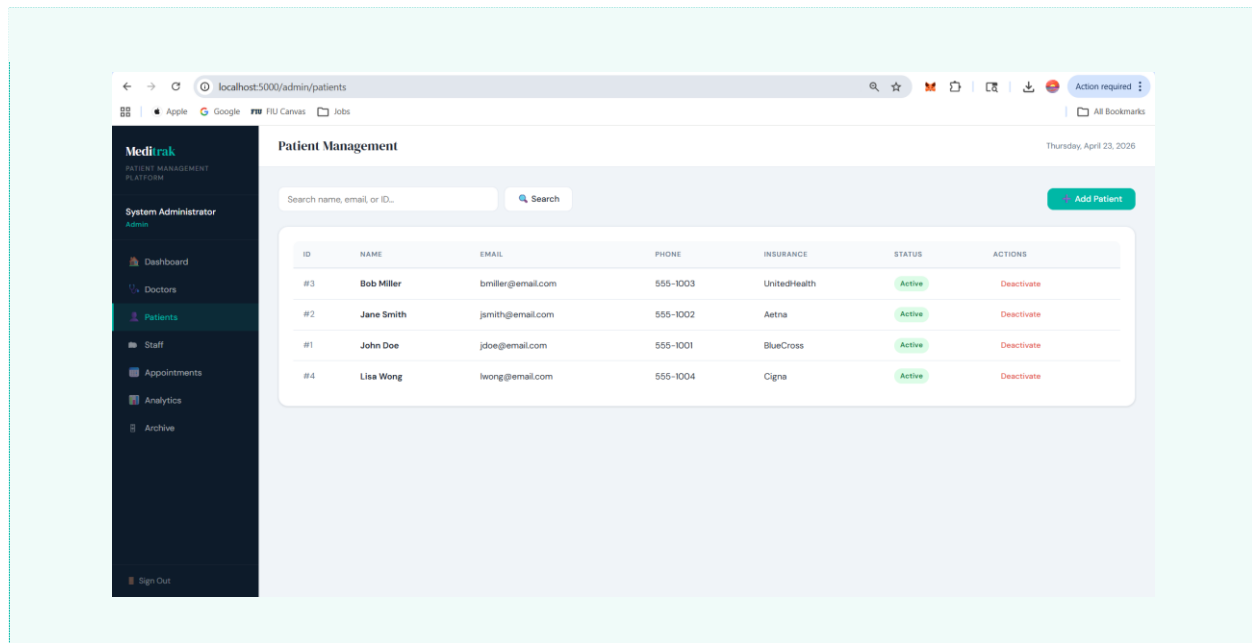
Element	Description
Stat Cards (top)	Total patients, doctors, staff, today's appointments, and all appointments
Today's Schedule	Table showing every appointment today with time, patient, doctor, service, and status
Quick Actions	Shortcut buttons to manage patients, doctors, staff, schedule appointments, and view analytics

Managing Patients

Navigate to Patients in the left sidebar.

Searching for a Patient

9. Type a name, email address, or patient ID into the search bar at the top.
10. Click the Search button or press Enter.
11. Results appear in the table below filtered to your search term.
12. Click Clear to return to the full patient list.



Adding a New Patient

13. Click the Add Patient button in the top right corner.
14. Fill in the required fields: Full Name, Username, Password, and Email.
15. Fill in optional fields as needed: Phone, Date of Birth, Gender, Address, City, State, and Insurance Provider.
16. Click Add Patient to save.

Deactivating or Reactivating a Patient

17. Find the patient in the table.
18. Click Deactivate to disable their account, or Reactivate to restore it.
19. Confirm the action in the dialog that appears.

Managing Doctors

Navigate to Doctors in the left sidebar. The layout and process is the same as Patient Management.

- View all doctors with their specialization, department, email, and join date.
- Click Add Doctor to create a new doctor account with credentials and specialization.

Managing Staff

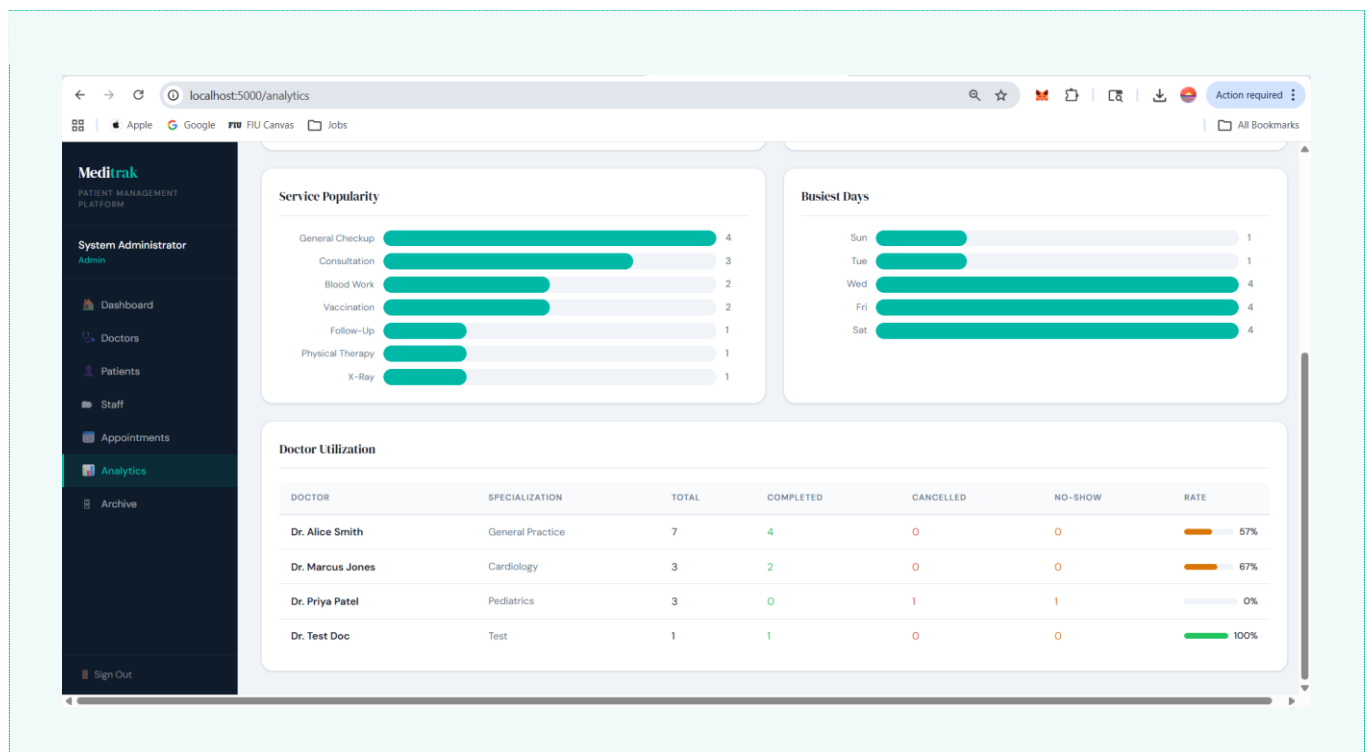
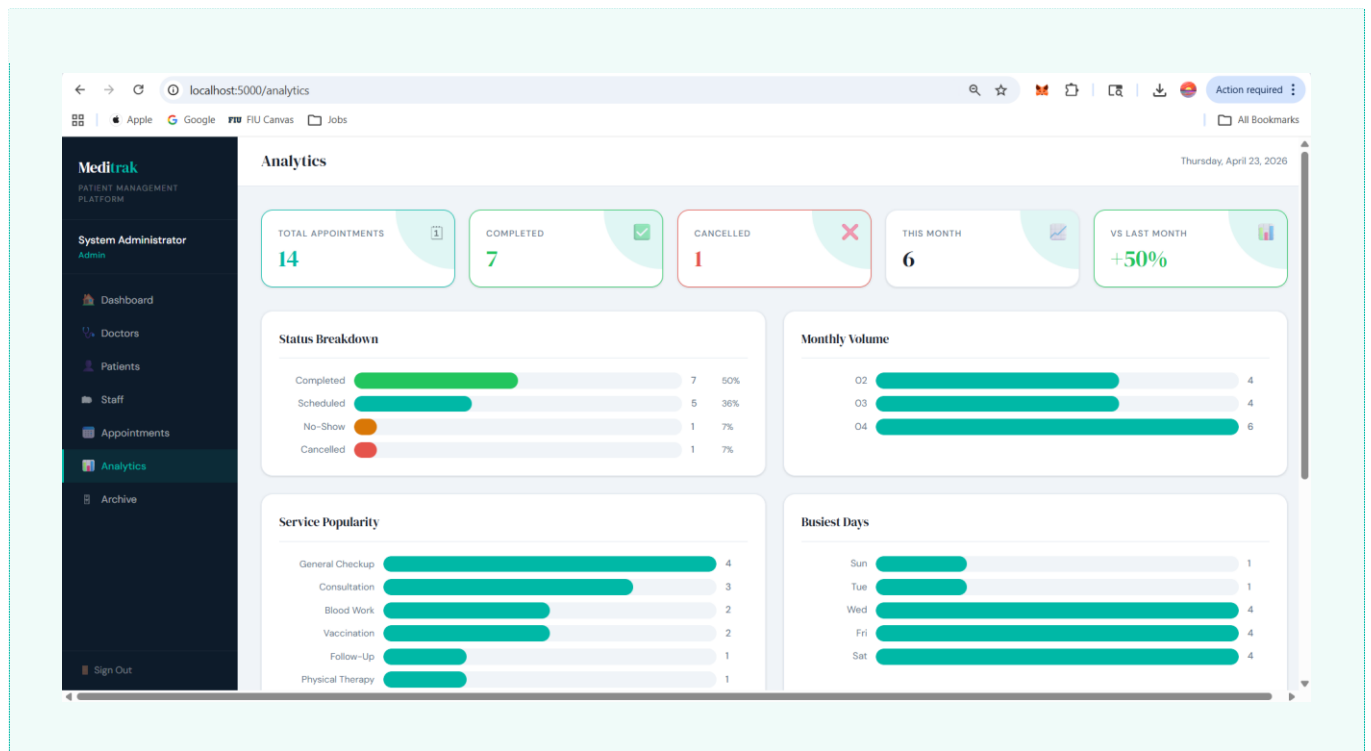
Navigate to Staff in the left sidebar.

- View all receptionists with their username, email, gender, and hire date.
- Click Add Staff to create a new receptionist account.

Analytics Dashboard

Navigate to Analytics in the left sidebar. The analytics dashboard provides five views of clinic performance data.

Chart	Description
Status Breakdown	Bar chart showing counts and percentages for Scheduled, Completed, Cancelled, and No-Show appointments
Monthly Volume	Bar chart showing total appointment counts for each of the last 6 months
Service Popularity	Bar chart ranking services by how often they are booked
Busiest Days	Bar chart showing which days of the week see the most appointments
Doctor Utilization	Table showing each doctor's total, completed, cancelled, and no-show counts with a completion rate bar

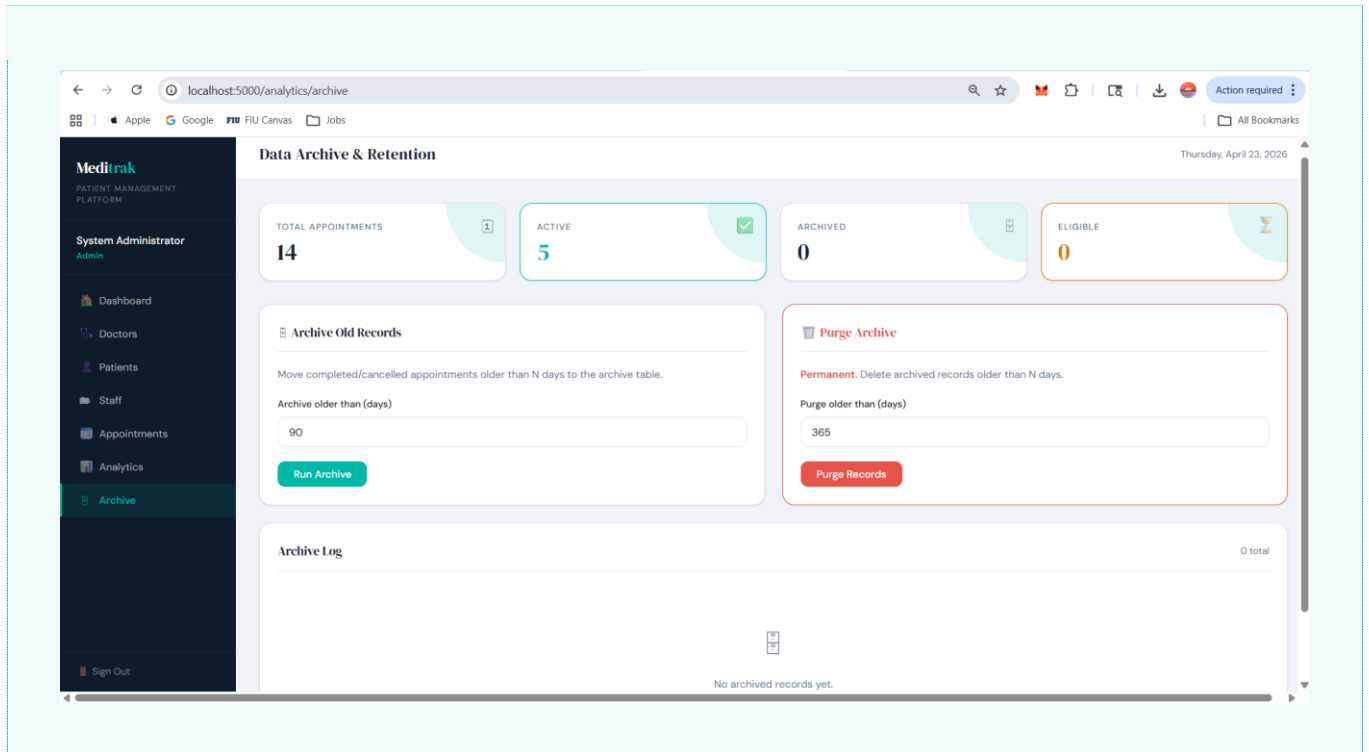


Data Archive

Navigate to Archive in the left sidebar.

Archiving Old Records

20. Review the "Eligible for Archive" stat card to see how many records qualify.
21. Set the number of days in the "Archive older than" field (minimum 30 days).
22. Click Run Archive and confirm the action.
23. Archived records appear in the Archive Log table at the bottom of the page.



Note: Archiving is non-destructive. Records are copied to a separate archive table and are still visible in the Archive Log.

Purging Archive Records

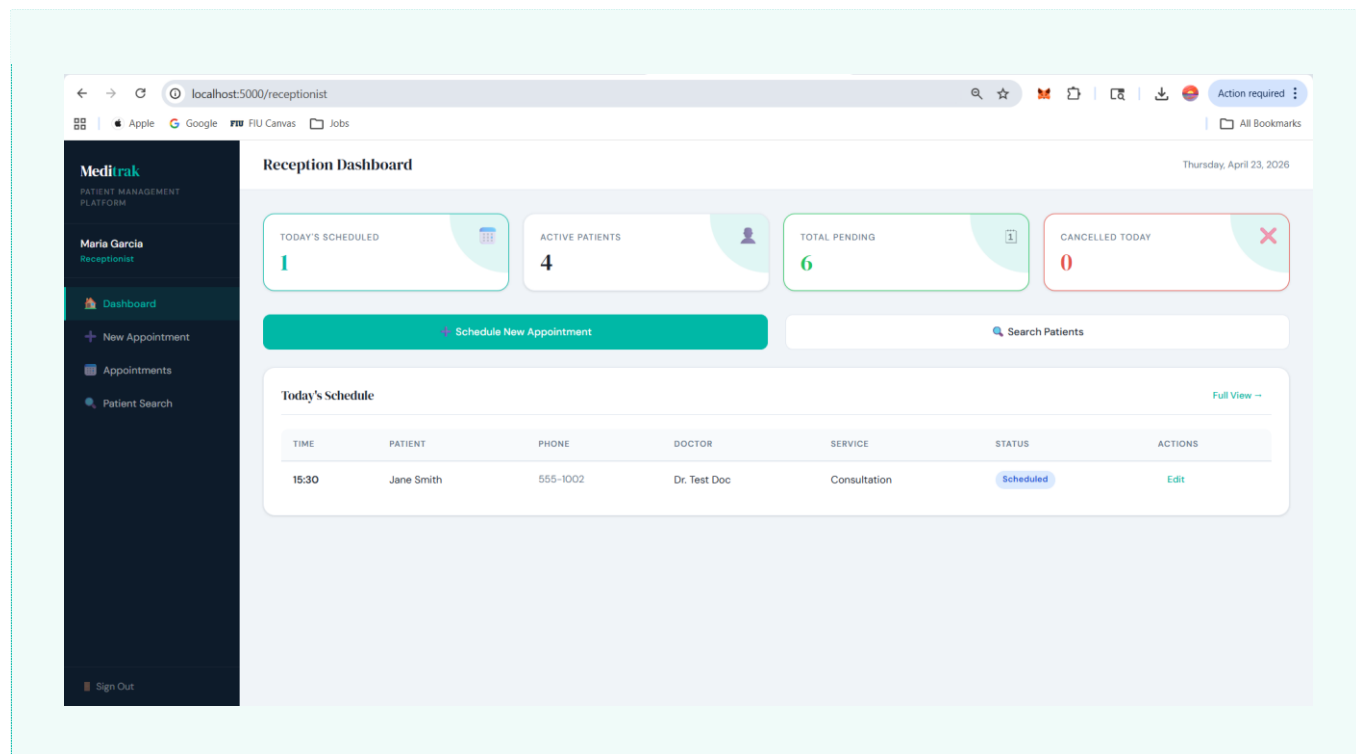
24. Set the number of days in the "Purge older than" field (minimum 180 days).
25. Click Purge Records.
26. Confirm the permanent deletion in the dialog.

Note: Purging is permanent and cannot be undone. Only purge records you are certain are no longer needed.

Receptionist Role

Reception Dashboard

The Reception Dashboard is the daily operations hub. It shows four stat cards and today's full appointment schedule.

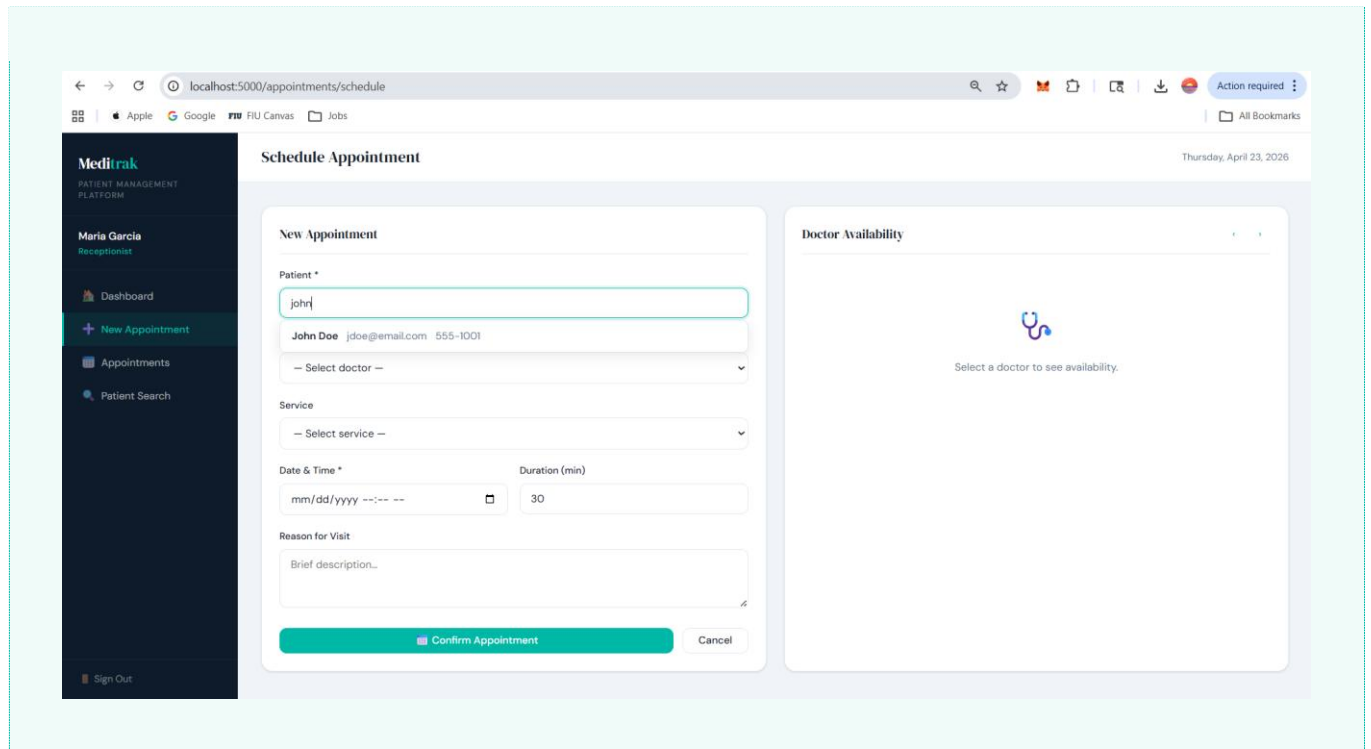


Scheduling an Appointment

Navigate to New Appointment in the left sidebar, or click the Schedule New Appointment button on the dashboard.

Step 1 — Search for the Patient

27. Click into the Patient field at the top of the form.
28. Start typing the patient's name, email address, or phone number.
29. A dropdown list of matching patients appears in real time.
30. Click the correct patient in the dropdown to select them.



Step 2 — Select a Doctor

31. Click the Doctor dropdown and select the appropriate doctor.

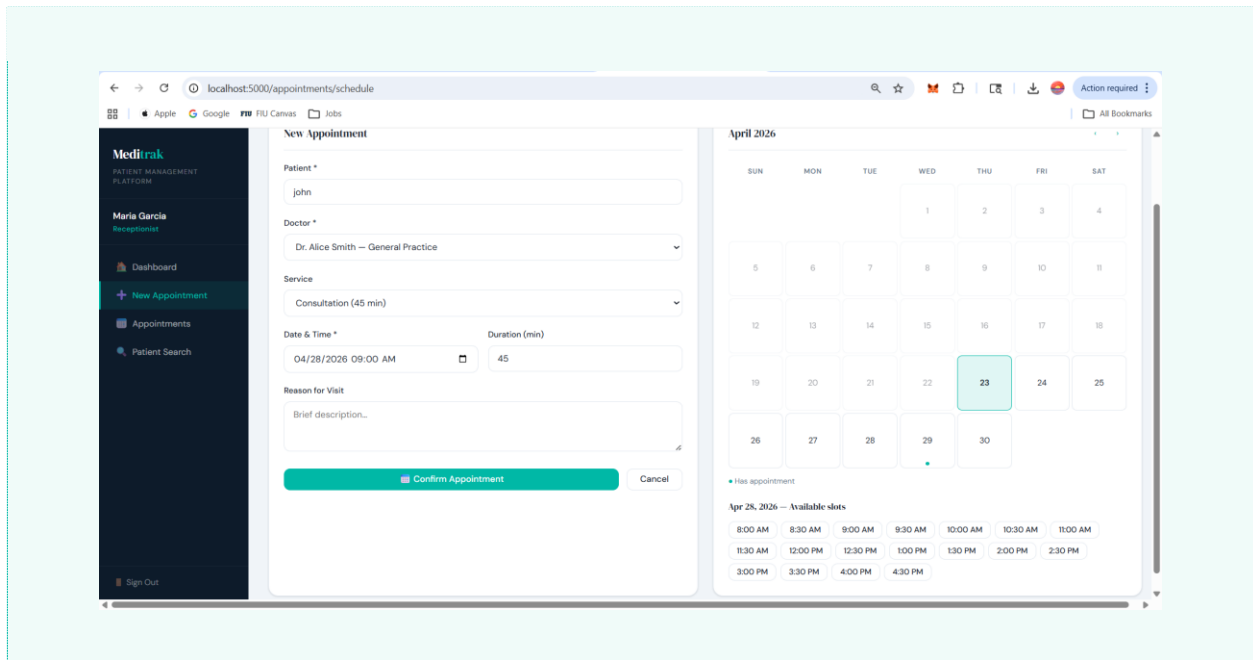
The availability calendar on the right side of the page updates automatically to show that doctor's schedule.

Step 3 — Pick a Date and Time

32. On the calendar, click a date to see available time slots for that day.

33. Available slots appear as grey buttons. Booked slots appear in red and cannot be selected.

34. Click an available slot to auto-fill the date and time field in the form.



Step 4 — Complete and Submit

35. Select a Service from the dropdown (this auto-fills the duration).
36. Optionally adjust the Duration in minutes.
37. Enter a Reason for the visit.
38. Click Confirm Appointment.

A success message confirms the booking. If the time slot conflicts with an existing appointment, a warning appears and the form will not submit.

Managing Appointments

Navigate to Appointments in the left sidebar.

Filtering Appointments

Use the Status dropdown at the top to filter by Scheduled, Completed, Cancelled, or No-Show.

Rescheduling an Appointment

39. Find the appointment in the table.
40. Click the Reschedule button.
41. Enter a new date and time in the modal that appears.
42. Adjust the duration if needed.
43. Click Reschedule. The system checks for conflicts automatically.

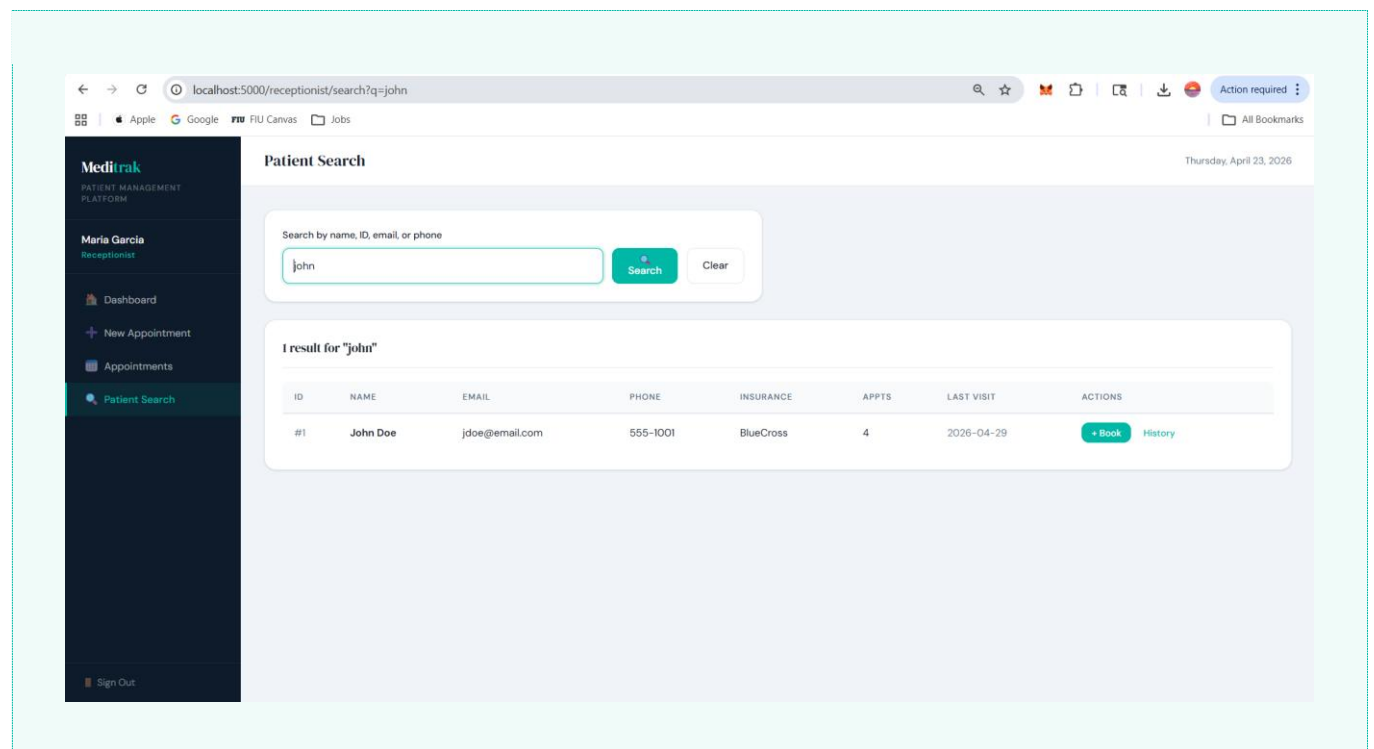
Cancelling an Appointment

44. Find the appointment in the table.
45. Click the Cancel button.
46. Click OK in the confirmation dialog.

Patient Search

Navigate to Patient Search in the left sidebar.

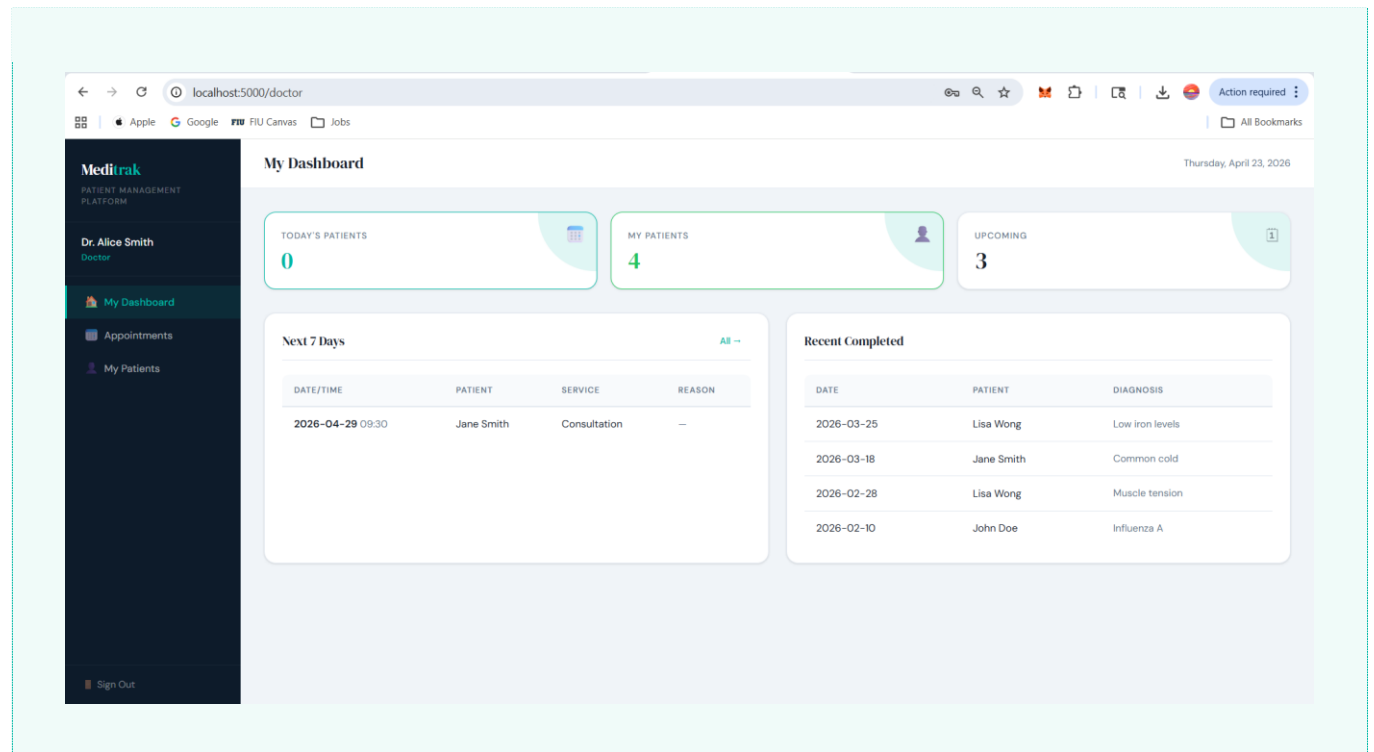
47. Type a name, email, phone number, or patient ID into the search bar.
48. Click Search. Results appear in the table below.
49. Click + Book next to any patient to go directly to the schedule page pre-filled with that patient.
50. Click History to see all past and upcoming appointments for that patient.



Doctor Role

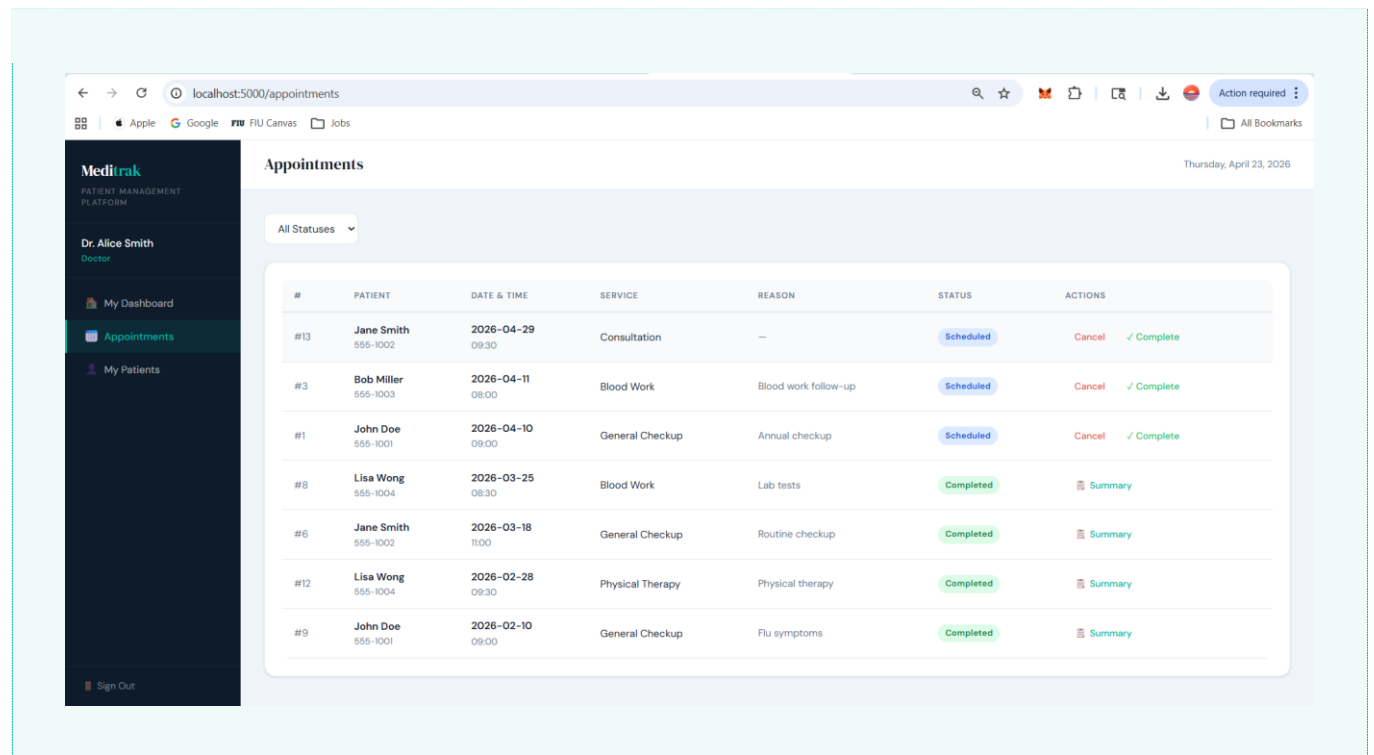
Doctor Dashboard

The Doctor Dashboard shows a summary of today's patients, the upcoming 7-day schedule, and the most recent completed visits.



Viewing Appointments

Navigate to Appointments in the left sidebar to see all assigned appointments. Use the Status filter to narrow results.



Completing a Visit

51. Find the appointment in the table with a status of Scheduled.

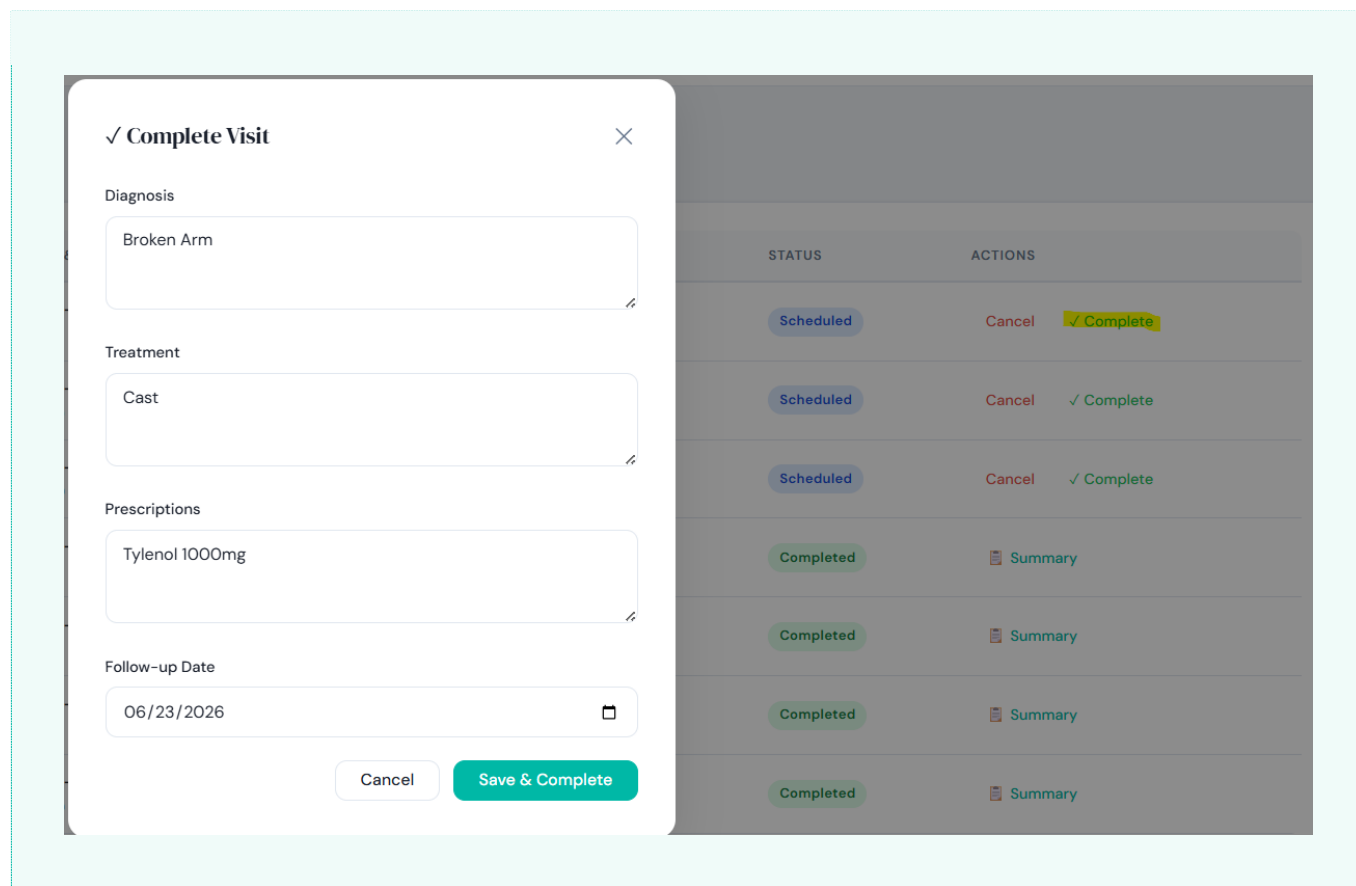
52. Click the ✓ Complete button.

53. In the modal that appears, fill in the following fields:

- Diagnosis — the primary diagnosis for this visit
- Treatment — the recommended treatment plan
- Prescriptions — any medications prescribed
- Follow-up Date — optional date for the next visit

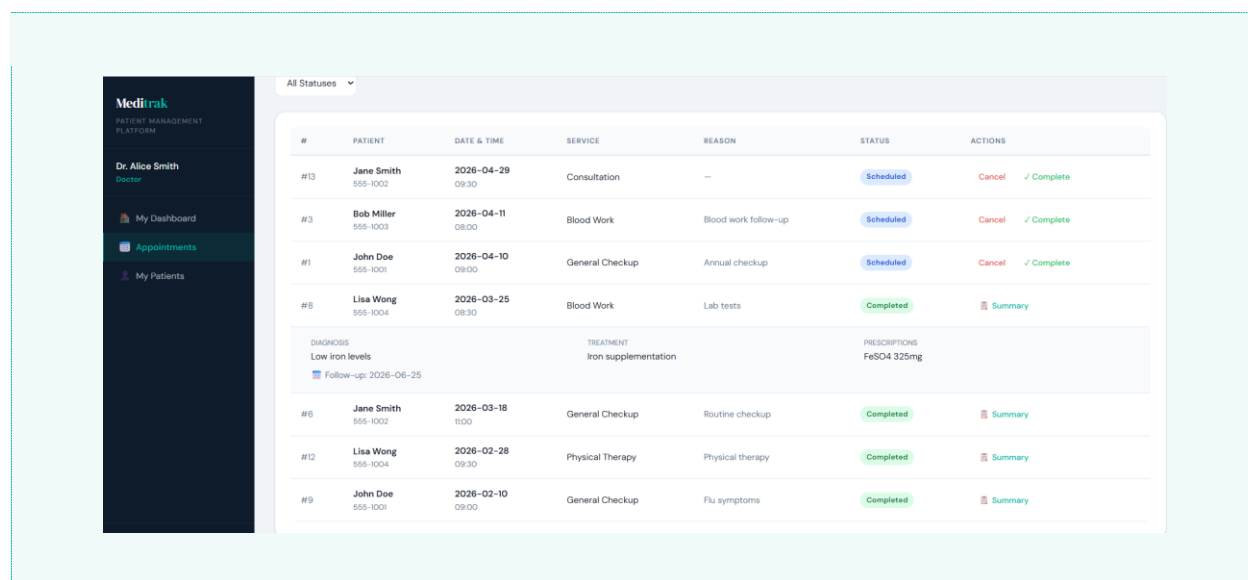
54. Click Save & Complete.

The appointment status changes to Completed and the visit summary is saved to the patient's record.



Viewing Visit Summaries

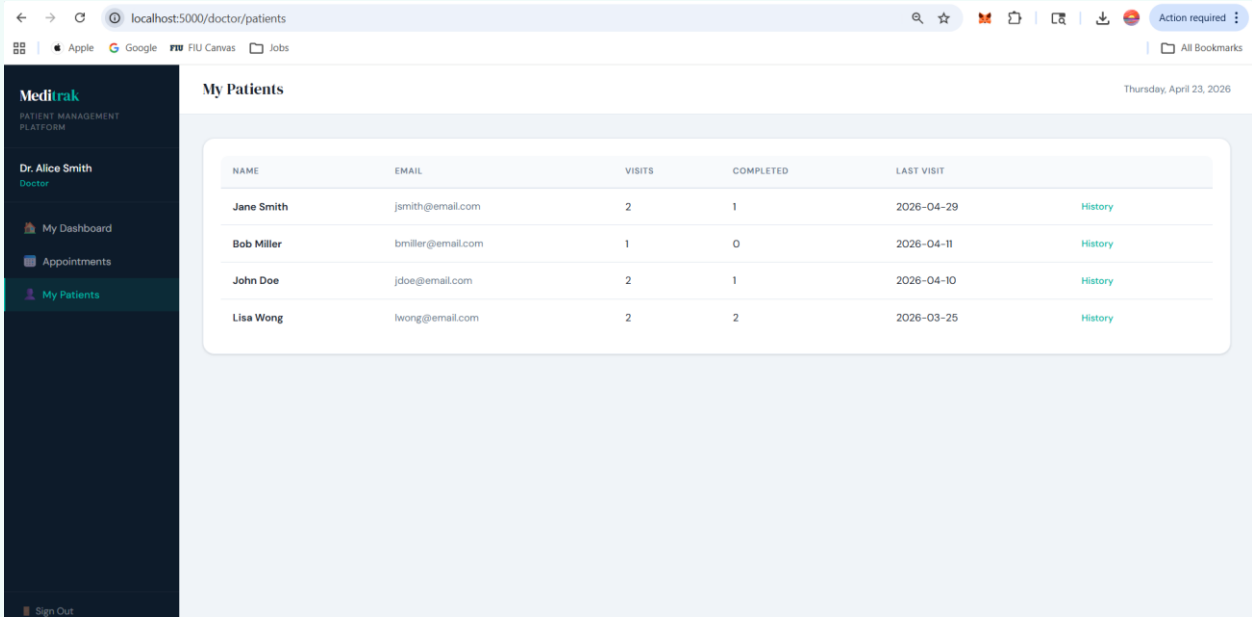
On any Completed appointment in the table, click the Summary button. The visit notes expand inline directly below that row without navigating to a new page.



My Patients

Navigate to My Patients in the left sidebar to see all patients this doctor has ever treated.

- Total visits and last visit date are shown for each patient.
- Click View History to see all appointments for that patient across all doctors.



The screenshot displays the Meditrak Patient Management Platform interface. The left sidebar identifies the user as Dr. Alice Smith, a Doctor, and lists navigation options: My Dashboard, Appointments, My Patients (selected), and Sign Out. The main content area, titled 'My Patients', shows a table of patients treated by Dr. Smith. The table includes columns for Name, Email, Visits, Completed, Last Visit, and a History link. The data is as follows:

NAME	EMAIL	VISITS	COMPLETED	LAST VISIT	
Jane Smith	jsmith@email.com	2	1	2026-04-29	History
Bob Miller	bmiller@email.com	1	0	2026-04-11	History
John Doe	jdoe@email.com	2	1	2026-04-10	History
Lisa Wong	lwong@email.com	2	2	2026-03-25	History

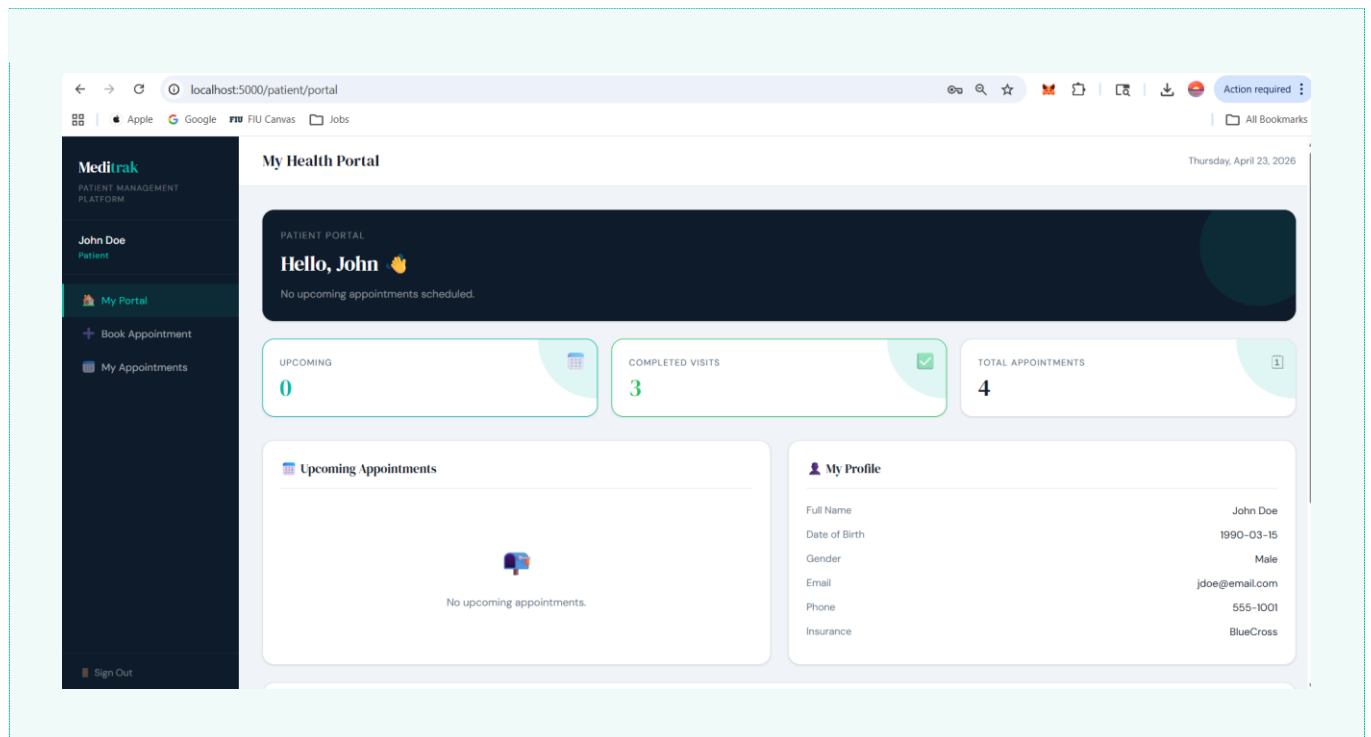
The interface also shows a browser address bar at localhost:5000/doctor/patients, a date indicator for Thursday, April 23, 2026, and a notification for 'Action required'.

Patient Role

Patient Portal

After logging in, patients are taken to their personal health portal.

Element	Description
Welcome Banner	Displays next upcoming appointment with date, time, and doctor name
Stat Cards	Upcoming appointments count, completed visits count, and total appointments
Upcoming Appointments	List of scheduled future appointments with a Cancel button on each
My Profile	Personal information: name, DOB, gender, email, phone, and insurance
Visit History	Table of all past visits with status, diagnosis, prescriptions, and follow-up date



Booking an Appointment

Navigate to Book Appointment in the left sidebar.

55. Select a Doctor from the dropdown.
56. Optionally select a Service.
57. Use the calendar on the right to find an available date. Click the date to see time slots.
58. Click an available time slot to auto-fill the date and time.
59. Add a reason for the visit in the text box.

60. Click Request Appointment.

A success message confirms your booking. The appointment will appear immediately in your Upcoming Appointments on the portal.

Cancelling an Appointment

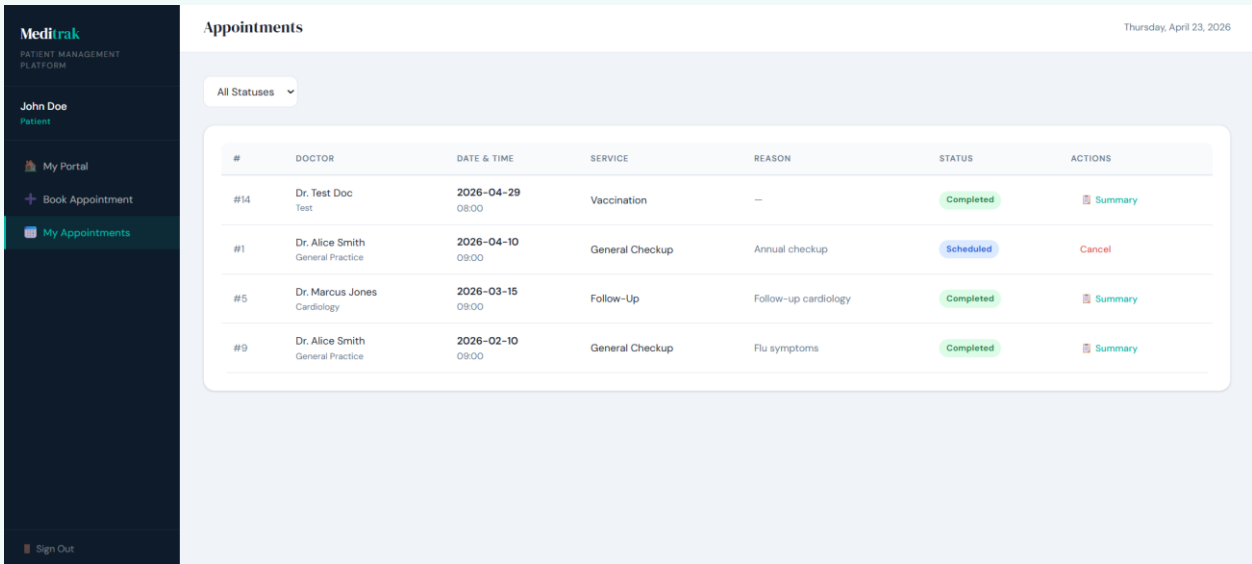
From the Patient Portal or the My Appointments page:

61. Find the upcoming appointment you want to cancel.

62. Click the Cancel button next to it.

63. Click OK in the confirmation dialog.

The appointment status changes to Cancelled and it moves to the Visit History section.



The screenshot shows the Meditrak Patient Management Platform interface. On the left is a dark sidebar with the Meditrak logo and navigation links: 'My Portal', 'Book Appointment', 'My Appointments' (highlighted), and 'Sign Out'. The main content area is titled 'Appointments' and shows a table of appointments for 'John Doe'. The table has columns for ID, Doctor, Date & Time, Service, Reason, Status, and Actions. The appointments listed are:

#	DOCTOR	DATE & TIME	SERVICE	REASON	STATUS	ACTIONS
#14	Dr. Test Doc Test	2026-04-29 08:00	Vaccination	—	Completed	Summary
#1	Dr. Alice Smith General Practice	2026-04-10 09:00	General Checkup	Annual checkup	Scheduled	Cancel
#5	Dr. Marcus Jones Cardiology	2026-03-15 09:00	Follow-Up	Follow-up cardiology	Completed	Summary
#9	Dr. Alice Smith General Practice	2026-02-10 09:00	General Checkup	Flu symptoms	Completed	Summary

Key Features Summary

Feature	Description
Role-Based Access	Four roles with separate dashboards and server-enforced permissions on every page
Patient Self-Registration	New patients create accounts from the public login page without staff involvement
Patient Self-Scheduling	Patients book their own appointments using the same calendar interface as staff
Live Patient Search	Receptionists search patients by typing — results appear instantly without a dropdown
Double-Booking Prevention	System detects and blocks scheduling conflicts at submission time
Calendar Availability View	Doctors' availability shown on an interactive calendar with time slot selection
Visit Summaries	Doctors record diagnosis, treatment, prescriptions, and follow-up after each visit
Appointment Analytics	Charts for status trends, monthly volume, service popularity, and doctor utilization
Data Archive	Configurable archival and purge of old appointment records
Application Logging	All system events logged to logs/meditrak.log with timestamps and IP addresses
Automated Test Suite	62 pytest tests covering authentication, role access, and all core features