Team Name: End-to-End Engineers

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Project Name: Medical Appointment System

Problem Statement:

Patients usually face problems when trying to book medical appointments because they have to wait on the phone or stand in long lines at the clinic. Clinics also suffer from issues like manual scheduling, booking conflicts, and finding patient records. Our system aims to make booking easier and keep all medical information stored in one organized place for both patients and doctors.

Challenges or inefficiencies we are trying to solve:

• Allow patients to book appointments online easily.

• Keep all patient records and prescriptions organized.

• Prevent double bookings by organizing doctor schedules properly.

• Give different permissions for patients, doctors, and admins.

Objectives:

Goals we aim to achieve with this project:

•Create a simple system for booking appointments.

•Provide doctor schedules and availability.

•Enable doctors to view and modify their daily schedule.

•Allow admins to manage users, doctors, and schedules.

Desired outcomes:

Make booking faster and easier, stop double bookings, and keep all patient information in one place for the users.

Project Features:

Key functionalities of the project:
- User registration (Patients, Doctors, Admins).
- Search and filter doctors by specialty and rating.
- Appointment creation, rescheduling, cancellation.
- Doctors schedule management.
- Patient appointments history.
- Admin dashboard for doctors and schedules management.

Features and capabilities needed to achieve the objectives
- Database with users, patients, doctors and appointments.
- Role-based access.
- Frontend forms for booking appointments and viewing schedules.
- Backend system for creating, reading, updating, and deleting data, and sending email verifications.

GitHub Link:
- Folder: https://github.com/asserfouad20/medical-appointment-system
- Website: https://asserfouad20.github.io/medical-appointment-system/

Pseudo Code
Start the system
Connect PHP to the database
Start session

Open the login page
User chooses account type (patient, doctor, admin)
User enters email and password
Send data to PHP

PHP receives data
Check if email exists in database
Check password

If correct
Save user id and role in session
Open the correct dashboard
Else
Show login error
End if

User clicks forgot password
Open forgot password page
User enters email
Send email to PHP

PHP checks if email exists
If exists
Generate 6 digit code
Save code in database
Send code to email
Show code input page
Else
Show error
End if

User enters the 6 digit code
Send code to PHP
PHP compares code

If code matches
Show new password page
Else
Show error
End if

User enters new password
Confirm password
Send to PHP

PHP hashes password

Update password in database
Remove reset code
Redirect to login

User opens registration page
User fills data
Send data to PHP

PHP validates data
Hash password
Insert user into database
Redirect to login

Patient logs in
Load patient dashboard
Fetch doctors and available slots
Display data

Patient books appointment
Send appointment to PHP
Save appointment in database

Doctor logs in
Load doctor dashboard
Fetch appointments
Display schedule

Doctor edits availability
Send update to PHP
Update database

Admin logs in
Load admin dashboard
Fetch users and appointments
Admin manages data
Update database

User clicks logout

Destroy session
Return to login

End system

Test Case ID	Test Scenario	Test Case	Pre-Condition	Test Steps	Test Data	Expected Result	Post-Condition	Actual Result	Status	Tested by
TC_VD_001	View doctor availability & profile	Patient views doctor profile and available appointment slots	Patient logged in, doctor exists in system	1-Go to Find Doctors page 2-Select view availability on a doctor 3-View available dates	No Input	Doctor's info & available slots are displayed	Profile remains open until patient leaves the page	Doctor's profile & availability are shown successfully	Pass	Noor
TC_EN_002	Edit notification settings	Disable /Enable appointment notifications via SMS/email	User(Patient, Doctor, Admin) logged in	1-Click Settings 2-Turn Email/SMS notifications and/or appointment reminders off/on 3-Click Save Settings	SMS reminders: Off/On Email reminders: Off/On Appointment reminders: Off/On	Settings are saved correctly and reflect the user's choice	Notification settings updated for the user	Settings updated successfully	Pass	Noor

TC_DS_003	Admin views doctors schedules	Display doctors appointments	Admin logged in, at least a doctor exists	1-Click on all appointments 2-Optionally, filter by doctor or status	Doctors, status	All doctors appointments displayed and filtered results are shown correctly when made	Appointments list remains displayed until another filter is applied or the page is left	All appointments displayed And filters worked correctly	Pass	Noor
TC_SD_004	Search doctors by specialty	Filter using specialty dropdown	Patient logged, Multiple doctors exist	1-Go to find doctors page 2-Select specialty from dropdown 3-Check displayed doctors specialties and names	<Specialty: Cardiology>	Doctors from selected specialty displayed	Filtered list remains until a new filter is applied	Doctors from Cardiology displayed successfully	Pass	Asser
TC_CA_005	Patient cancel upcoming appointment	Cancel an upcoming appointment	Patient logged, at least one upcoming appointment	1-Navigate to "My Appointments" 2-Click Cancel Appointment 3-Click Remove on the confirmation popup	No Input	Selected appointment is canceled and removed from upcoming appointments list	Appointment no longer appears in the upcoming appointments list	Selected appointment canceled and removed from upcoming appointments list	Pass	Asser
TC_UP_006	Updating patient profile information	Modify patient personal details	Patient logged in	1-Go to Profile 2-Change information 3-Click Update Profile	Patient Information	Profile information updated successfully with confirmation message	Updated data persists in database and displays on profile page	Profile updated successfully with confirmation message displayed	Pass	Asser
TC_CP_007	Creating patient account	Create patient account with valid data	Need a valid email	1-Click create patient account 2-Enter data 3-Click Register	Valid patient information	Patient account created	Patient data shown in system	Account created successfully	Pass	Mohanad

TC_AT_008	Doctor manage time availability	Add available time slot	Doctor logged in, schedule available	1-Click on Manage Availability 2-Choose date and time 3-Click on Add Slot	Available time	Time slot added	Schedule updated and appears with the new slot	Time slot added successfully	Pass	Mohanad
TC_RD_009	Admin registers a doctor	Add a new doctor	Admin logged in	1-Click on Manage Doctors 2-Click on Add New Doctor 3-Enter valid credentials 4-Click Add Doctor	Doctor's name, email, password, specialty, number, bio (optional)	New doctor added and appears in the doctors list	Doctor remains in the list until deleted	Doctor added successfully and appears in the list	Pass	Mohanad
TC_VA_010	Patient views available time slots	View Doctor Availability	Patient logged in, at least 1 doctor exists	1-Go to Find Doctors 2-Click View Availability for a doctor 3- View available dates & time slots	No Input	Display doctor's available time slots	Slots remain visible	Time slots displayed successfully	Pass	Mohamed
TC_DD_011	Admin deletes a doctor	Remove a doctor from the system	Admin logged in, At least one doctor exists in the system	1-Go to Manage Doctors 2- Find the doctor you want to delete and click Delete 3-Click Remove	No Input	Doctor account is deleted and no longer appears in the doctors list	Doctor's information is removed from Admin and Patient views	Doctor deleted successfully	Pass	Mohamed
TC_ED_012	Admin edits doctor information	Update doctor's details	Admin logged in, At least one doctor exists	1-Go to Manage Doctors 2- Find the doctor you want to edit and click edit 3-Change credentials 3-Click Save Changes	Doctor Credentials	Doctor's information is updated	Updated information is saved in the system and is visible to Admin and Patient	Doctor information updated successfully	Pass	Mohamed