MYCARE PROTOTYPE – README FILE

Course: HCI
Project: myCARE Scheduling System
Phase: Deliverable 4
Group Name: myCARE Project

Functional

- Login
- Book appointments
- Update appointments
- View appointment history
- View medication details
- View assigned appointments
- Update appointment status
- Enter medication details
- Update appointment notes
- Create account
- Update account
- Delete account
- Assign doctors to appointments
- View all appointments

Nonfunctional

- Email, the deployed server does not have a fully configured SMTP service

1. System Overview

myCARE is a web-based appointment scheduling system designed to allow patients to book medical appointments, doctors to manage assigned appointments and prescribe medications, and administrators to oversee the entire system.

This prototype is developed for usability and heuristic evaluation purposes.

2. Development Information

Technologies Used

- **PHP (Laravel Framework)** – Backend logic and routing
- **MySQL** – Database management
- **HTML5** – Structure
- **Tailwind** – Responsive UI design
- **JavaScript** – Client-side interactivity

The system was manually developed using Laravel. AI tools were used only for debugging assistance and clarification.

3. Accessing the Deployed System

Live URL: https://stoic-lalande.38-242-135-212.plesk.page

System Requirements

- Works on PC and Mac
- Compatible with Chrome, Edge, Safari, Firefox
- No installation required
- Stable internet connection recommended

4. User Roles and Permissions (Role-Based Access Control)

The system implements **Role-Based Access Control (RBAC)** using Laravel middleware.

There are three primary roles:

4.1 Patient Role

Patients Can:

- Log into the system
- Book appointments (select date and time)
- Update appointments (only if not overdue)
- View appointment history
- View medication details after appointment completion

Patients Cannot:

- Access other users' data
- Modify doctor or admin accounts
- Access system-wide settings

4.2 Doctor Role

Doctors only access appointments assigned to them.

Doctors Can:

- Log into the system
- View assigned appointments
- Update appointment status (e.g., Completed)
- Enter medication details:
    - Medication name
    - Dosage
    - Time to take medication
    - Special instructions
- Update appointment notes

When a doctor marks an appointment as **Completed**, medication details become visible

to the patient.

Doctors Cannot:

- Access unassigned appointments
- Modify system-wide settings
- Manage user roles

4.3 Admin Role

The Admin has full system-level permissions.

Admin Can:

- Manage all users (patients and doctors)
- Create, update, or delete accounts
- Assign doctors to appointments
- View all appointments
- Modify appointment records
- Manage system data (clinics, schedules, etc.)
- Monitor system activity

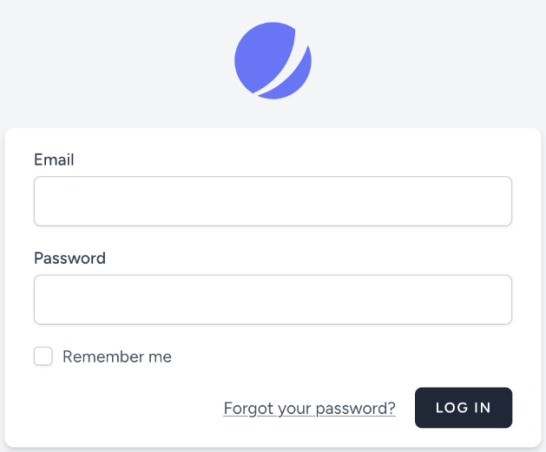
5. Core Functionalities for Heuristic Evaluation

The following tasks are designed specifically for usability and heuristic evaluation.

Task 1: Log In

Steps:

1. Enter username.
2. Enter password.
3. Click the Login button.



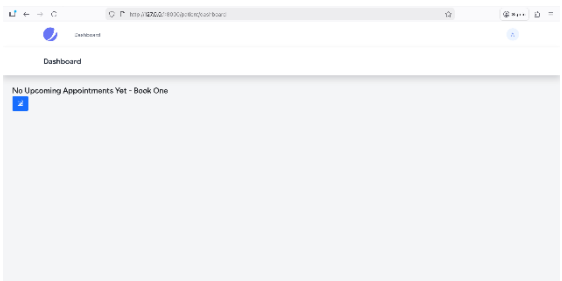
Expected Result:
User dashboard loads successfully.

Test Credentials (if required):
Email: uniquename@umich.edu
Password: uniquename

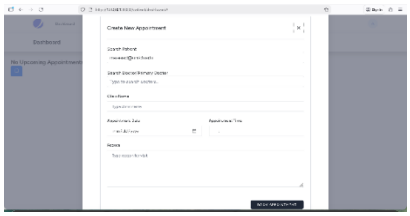
Task 2: Book an Appointment

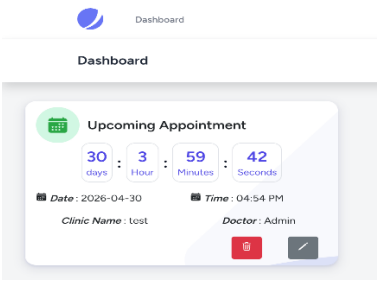
Steps:

1. Click the + Calendar button.
2. Select a month from the dropdown menu.
3. Click on the desired appointment date.
4. Click Next.



5. Select preferred appointment time.
6. Click Next.
7. Review personal details (Name, Email, Phone number).
8. Click Confirm and Book button. Appointment confirmation appears.
9. Dashboard displays appointment overview, countdown timer, Update button, and Cancel button.

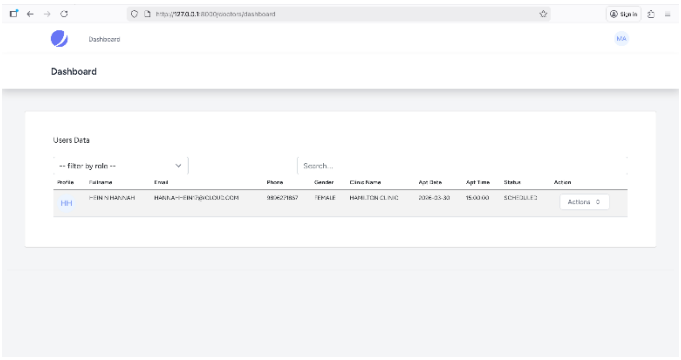




Expected Result:
Appointment appears in dashboard table.

Task 3: Update an Appointment (If Not Overdue)

Steps:

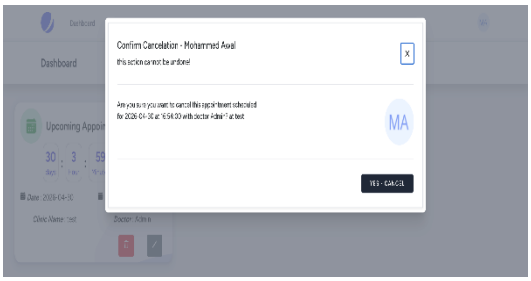


1. Go to Dashboard
2. Select an upcoming appointment
3. Click Edit
4. Modify date or time
5. Save changes

Expected Result:
Appointment updates successfully.

System Validation Rule:
Editing is disabled if the appointment date/time has already passed.

Task 4: Cancel an Appointment (If Not Overdue)

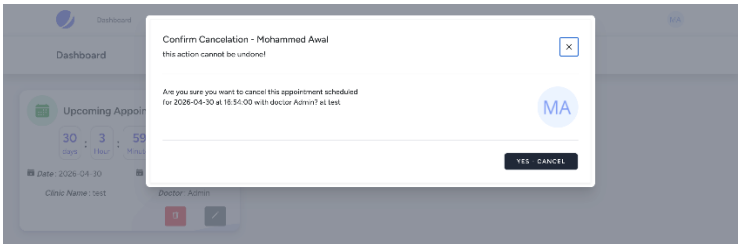


Steps:

1. Click the Cancel button.
2. Confirmation pop-up appears.
3. Click YES to cancel appointment or NO to keep appointment.
4. System updates dashboard accordingly.

Expected Result:
Appointment cancelled successfully. Appointment disappears from dashboard with a note if you want to create a new appointment.

Task 5: Doctor Adds Medication



(Doctor login required)

Steps:

1. Log in as Doctor

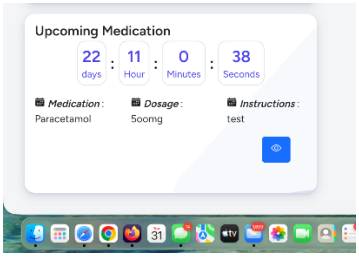
2. Select assigned appointment
3. Mark appointment as “Completed”
4. Enter medication details
5. Save

Expected Result:
Medication details become visible to patient dashboard.

Task 6: Patient Views Medication Details

Steps:

1. Log in as Patient
2. Navigate to Dashboard
3. Locate completed appointment



Expected Result:
The following are displayed:

- Medication name
- Dosage
- Time to take medication
- Additional instructions

7. Role-Based Access Control Implementation

Role-based restrictions are enforced using:

- Laravel middleware
- Route protection
- Controller-level validation
- Database role verification

This ensures:

- Patients only access their own records
- Doctors only access assigned appointments
- Admin has full access

Unauthorized access attempts are restricted automatically.

8. System Limitations

8.1 Email Limitation

The system includes email notification logic.
However, the deployed server does not have a fully configured SMTP service.

As a result:

- Email confirmations may not always be delivered.

This is a server configuration limitation, not a backend implementation issue.

8.2 Prototype Limitations

- No real-time SMS notifications
- Limited production-level security hardening
- Admin analytics/reporting features may be basic
- Designed for usability testing, not full production deployment

9. Notes for Heuristic Evaluators

- This is a deployed Laravel prototype.
- If issues occur:
    - Refresh the page
    - Log out and log back in
    - Ensure stable internet connection

The goal of this evaluation is to assess:

- Usability
- Clarity of navigation
- Error prevention
- System feedback
- Role-based access clarity

10. Logout Process

1. Click the three-line menu (top right corner).
2. Select Logout.
3. User is redirected to login screen.