Cairo University

Faculty of Engineering

Credit Hours System

Requirements Engineering for Digital Health-SBES240-Spring 2025

Project Report

Cardiology Department Web Application

Submitted to:

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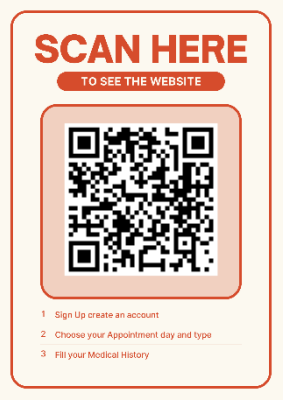

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Introduction

This project presents a web-based solution for managing cardiology-related services. It allows patients to book appointments, view services, and doctors to monitor usage and appointments.

Objectives

- Design a functional and user-friendly cardiology website
- Enable patient scheduling and sign-in/sign-up
- Allow doctors to view and manage bookings
- Track device usage and service demand
- Display contact form with optional fields
- Structure the code for future scalability

Pages Description

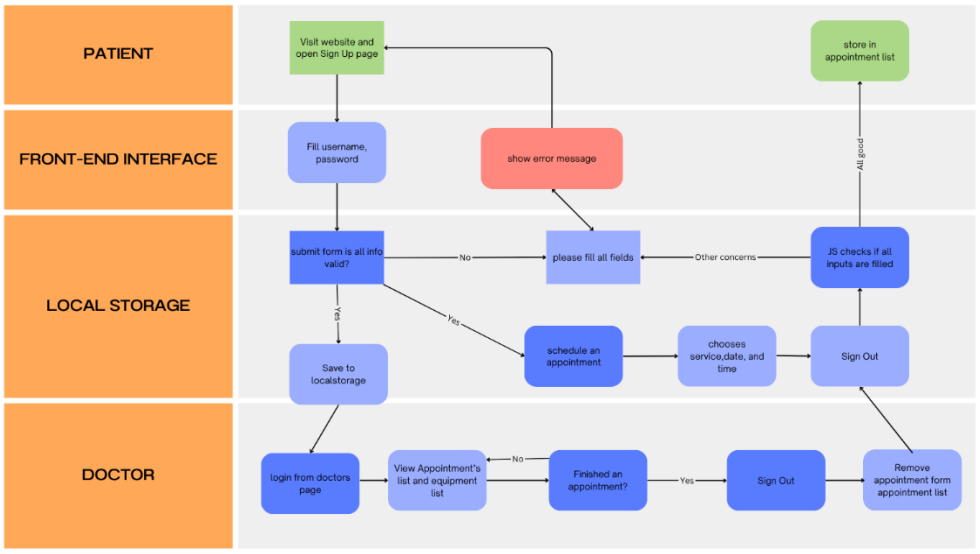
1. About Page:
    - Brief description about the Department
    - Articles on Common Questions about Cardiology
2. Services Page:
    - Brief description about each service in the department
3. Patient Page:
    - Either you sign up and create a new account
    - Or you signed in with your previous account.

- Redirects you to the schedule page.

4. Doctor Page:
    - Sign in using your designated username and password only for doctors to access the equipment list page and the appointments page.
5. Contact Page:
    - Place where you can contact our cardiologist.
6. Schedule Page:
    - After a patient signs up/in they are redirected to the schedule page where they should fill their name gender date of birth national id and place of birth
    - After that they pick the service, they want to schedule and choose the date and time.
    - After that they fill any necessary medical history
    - Then they just simply press book now and their appointment has been booked.
    - Also, they have the option to delete their account which deletes all their appointments.
7. Equipment List Page:
    - A list of all the devices in the department and where they are shared also shows how many patients are currently using that device.

8. Appointments Page:
    - Show the dr a list of all the appointments they have after they finish an appointment, they check the appointment, and it is removed.
9. Sign Out Page:
    - The page where the DR/Patient can successfully log out from their account and are redirected to the about page.

System Architecture



- **Frontend:** HTML, CSS, JavaScript
- **Storage:** Local Storage (for patient accounts, appointments, and counters)

JavaScript Features

- Scroll effect on header
- Doctor/patient sign in + patient sign up
- Appointment booking with validation
- Count how many patients use each service/device
- Deletion of patient accounts and their appointments
- Dynamic counters on Equipment page
- Form-based message confirmation (no alerts)
- Local Storage used for persistence

CSS Styling

- Global: Styles.css
- Header/Footer: header.css, footer.css
- Per-page: contact.css, appointment.css, services.css, schedule.css, etc.
- Responsive layout with consistent font and card structure

Technologies Used

- HTML5, CSS3, JavaScript (vanilla)
- Google Fonts (Nunito)
- Local Storage API
- Basic DOM manipulation
- No backend/database — frontend simulation only

Future Enhancements

- Backend integration (e.g., Firebase or Node.js)
- Admin dashboard with charts
- Email notifications
- Patient medical history
- Multi-role login with authentication

Conclusion

This project successfully simulates a cardiology website with basic booking and data tracking functionality. It provides a solid foundation for integrating real-world backend services in the future.