

Al Haramain Medical Complex web application redesign

The project was an end-to-end UX/UI redesign and front-end development of the Al Haramain Medical Complex web application to solve major usability and trust issues.

Role: End-to-end UX/UI Designer & Front-end Developer

Timeline: December 2022 - January 2023



Executive Summary: Al Haramain Medical Complex App Redesign

From Complexity to Efficiency and Trust

This case study details the comprehensive UX/UI redesign and Front-End Development of the Al Haramain Medical Complex web application. The goal was to transform a frustrating, complex user experience into a seamless, intuitive, and reliable workflow, directly impacting operational efficiency and user confidence.

The Core Challenge

The original application suffered from several critical issues that hindered smooth operations for key users, such as medical receptionists (e.g., the User Persona "Sami"). These problems included:

- **A Messy, Cluttered Look:** The design lacked visual hierarchy, making it hard for users to find essential functions and causing frustration.
- **Inconsistent Design:** Disjointed colors and icons led to a lack of professionalism and undermined user trust in the system's reliability.
- **Lack of Responsiveness:** The inability to adapt to different screen sizes resulted in a broken and inconsistent experience across various devices.

The Solution and Strategy

The project utilized an end-to-end approach, where I managed the complete lifecycle from UX/UI design (Research, Wireframes, Usability Testing) through to Front-End Development. The strategy involved:

1. **Clarity and Consistency:** Establishing a strong visual identity using a professional blue and white color palette to instill a sense of trust and calmness.
2. **Workflow Simplification:** Transforming key screens, such as the Dashboard and Login page, from visually overwhelming layouts into clean, organized, and focused command centers.
3. **Full Technical Implementation:** Beyond design, I was responsible for organizing and documenting the code to ensure it was easy to maintain and update in the future, using skills gained in the AngularJS library.

Key Results and Impact

The strategic redesign led to significant, measurable improvements in both user experience and operational performance:

Increased Efficiency: Reduced the time required for patient registration and appointment booking by up to 30%, simplifying repetitive daily tasks for the front desk.

- **Improved User Trust:** Enhanced patient satisfaction by reducing wait times and building confidence in the system through a professional and consistent interface.
- **Reduced Operational Costs:** Lowered the time needed to train new employees due to the system's intuitive design, and decreased errors resulting from interface misunderstandings.
- **Enhanced Flexibility:** The responsive design allowed for seamless system usage across computers, tablets, and smartphones, increasing work flexibility for staff.

The project successfully transformed a challenging application into a powerful, user-centric tool. This result confirms that effective UX/UI design, coupled with technical viability and clean code implementation, is first and foremost a problem-solving process that directly contributes to business and operational success.

1. Project Overview

Introduction

This project involved an end-to-end UX/UI redesign and Front-end Development of the existing web application used by the Medical Complex.

The core objective was to move away from the original app's problematic design—which was cluttered, confusing, and inconsistent—to create a modern, smooth, and easy-to-use experience.

Key Users and Purpose

The application was specifically designed to support two key user groups in the medical field to ensure smooth and efficient workflows:

- **For the Front Desk/Receptionists:** The app allows them to streamline the process of booking appointments and confirming doctor availability in real-time, simplifying schedule management.
- **For the Doctors:** The app helps them view the expected number of patients for the day, enabling efficient planning and schedule management.

My Role

Role: End-to-end UX/UI Designer & Front-end Developer

Responsibilities: I was responsible for the full design cycle (Research, Wireframes, Prototyping, Usability Testing) and the technical implementation. This included:

- Solving all usability problems through design.
- Organizing and documenting the code to ensure future maintainability and updates.
- Developing the final product using new technical skills, specifically by working with the AngularJS library.

2. The Challenge/Problem

The original web application for the Al Haramain Medical Complex was burdened with significant design and user experience issues. These flaws turned using the system into a frustrating task rather than a supportive tool, negatively impacting staff efficiency and patient satisfaction.

I worked to resolve the following core problems:

1. A Messy, Cluttered Look and Confusing Navigation

The initial design was visually cluttered and confusing. Users struggled to find what they were looking for. This visual chaos led users to feel lost, overwhelmed, and frustrated, wasting valuable time and effort.

2. Inconsistent Design and Lack of Trust

The application suffered from inconsistent use of colors and icons, which made the app look unprofessional and disjointed. This unprofessional aesthetic caused users to question the app's quality and trustworthiness, making them hesitant to use it for critical tasks.

3. Inefficient Tasks Due to Hidden Buttons

Buttons for important actions were poorly placed and not clearly defined. Users were forced to spend extra time and effort searching for key functions to complete even simple tasks. This inefficient workflow made users feel annoyed, as the app required them to work harder, not smarter.

4. Lack of Responsiveness Across Devices

The app's design failed to adapt to different screen sizes, leading to a broken and inconsistent user experience. Users on tablets or smartphones experienced a fractured interface with misaligned elements and cut-off content, rendering the app unusable on various devices.

3. The Methodology and Solution

Understanding the User: Strategic Research

To gain a deep understanding of user pain points and define the correct design path, I followed a dual approach that combined strategic research with collaborative feedback.

1. Competitive Audit:

To understand the Market Gaps, I started by conducting a comprehensive competitive audit of similar projects. My goal wasn't just to see what competitors were doing; I dove into the details of their user experiences to identify their strengths and weaknesses. By analyzing their interfaces, features, and user flows, I was able to pinpoint real gaps in the market and identify opportunities for my app to innovate.

2. Collaboration with the Developer:

A Design Vision from a Technical Perspective

At the same time, it was a priority for me to collaborate with the developer to get his perspective on the design. His role was not in implementation; rather, I asked for her valuable input on the design's feasibility. We discussed how every aesthetic or interactive decision might impact the technical side. This collaboration helped me make informed decisions that balanced usability with technical reality, ensuring the final design would be effectively applicable.

The Result: Well-Informed Design Decisions

This comprehensive approach allowed me to make well-informed design decisions that not only relied on user feedback but also took into account technical constraints and the competitive landscape, leading to a robust and reliable experience.

User Persona: Sami



- **Name:** Sami
- **Age:** 22
- **Profession:**
Medical
Receptionist
- **Status:** Single

"I just want a system that helps me serve patients faster and more efficiently, not one that adds complexity to my tasks!"

Frustrations:

- Cluttered Interface.
- Inconsistent Design.
- Hidden Buttons.
- Lack of Responsiveness.

Goals:

- Be efficient.
- Provide a great patient experience.
- Excel in his job.

Sami is a new employee at a busy medical clinic. As the first point of contact for patients, his core responsibilities include registering new patients, updating their information, and scheduling appointments. Sami's main goal is to be efficient and organized to avoid any delays or congestion at the front desk. He wants to excel in his new role by providing the best possible experience for every patient.

Empathy map

Says

- "Where is the save button? I can't find it."
- "Why do all the icons look different?"
- "I can't use this system on my phone."

Thinks

- "This system is making me look incompetent in front of the patients."
- "I feel like this system is hindering my work instead of helping me."
- "I wish there was a simpler, faster way to register patients."

Does

- Clicks around the interface randomly, searching for buttons and options.
- Avoids using the system on tablets or phones.
- Frequently asks colleagues for help to find simple functions.

Feels

- Frustrated: by the confusing and complex interface.
- Stressed: due to patient delays and longer wait times.
- Unconfident: in the system's reliability and his ability to perform tasks efficiently.

4. UI design and visual Identity

Thanks to my comprehensive research and in-depth study of the subject, I developed a very clear vision for the final design. This clarity allowed me to take a bold and deliberate step so I skipped the wireframing phase and moved directly to building the prototype, which accelerated the process of bringing the concept to life and validating it.

Style Guide Creation

To ensure the app's design reflects reliability and professionalism, I created a strong and deliberate visual identity.

The Colors: A Foundation of Trust

I used a color palette primarily based on blue and white. These were chosen as primary colors to build a sense of trust, professionalism, and calmness—a perfect fit for a medical-related application. For key actions, red and green were used as secondary colors. Red is typically used for emphasis or for actions requiring attention (like a "Logout" button), while Green is used for positive actions (like "Export to Excel").

Typography: Readability and Hierarchy

I designed a font system that balances style with clarity:

Poppins for headings: This is an ideal choice for headings due to its clean, geometric design that draws attention and gives the app a modern touch.

ABeeZee for the main app text: This font is known for its clarity and readability in long-form text and at small sizes, ensuring a comfortable reading experience for the user.

The Result: A Calm and Reliable Web App

I used a color palette primarily based on blue and white. These were chosen as primary colors to build a sense of trust, professionalism, and calmness—a perfect fit for a medical-related application. For key actions, red and green were used as secondary colors. Red is typically used for emphasis or for actions requiring attention (like a "Logout" button), while Green is used for positive actions (like "Export to Excel").

Style Guide

Navbar



Input cells

Input cells examples:

Label:

Label:

Label:

Label:

Buttons

Primary



Secondary



Font Type

Heading Poppins

ABCDEFGH

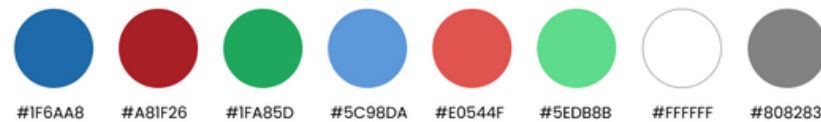
Paragraph ABeeZee

ABCDEFGH

Icons



Color pallet



Color pallet (Icons)



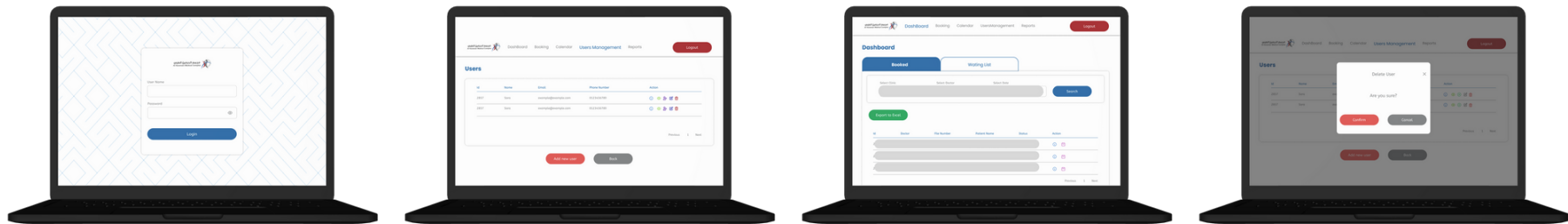
Technical Implementation and Growth (My Developer Role)

This project was a launchpad for my technical growth, ensuring the design was not only beautiful but also robust and viable.

- **Clean and Maintainable Code:** Beyond the visual design, I focused on organizing and documenting the code to ensure it would be easy for other developers to maintain and update in the future.
- **Technical Growth:** This was the first time I worked with the AngularJS library, which added a new dimension to my understanding of the technical process and strengthened my ability to design viable solutions.

5. The Outcome and Final Design

The redesign was a complete transformation of the user experience, moving from a frustrating and confusing interface to one that is seamless and intuitive. This section visually demonstrates how the new design solved the critical pain points identified in the original application.



A Seamless Transformation: The Login Screen Redesign

The redesign of the login screen wasn't just an aesthetic update; it was a strategic effort to transform a cluttered and confusing experience into a clear, focused, and trustworthy gateway.

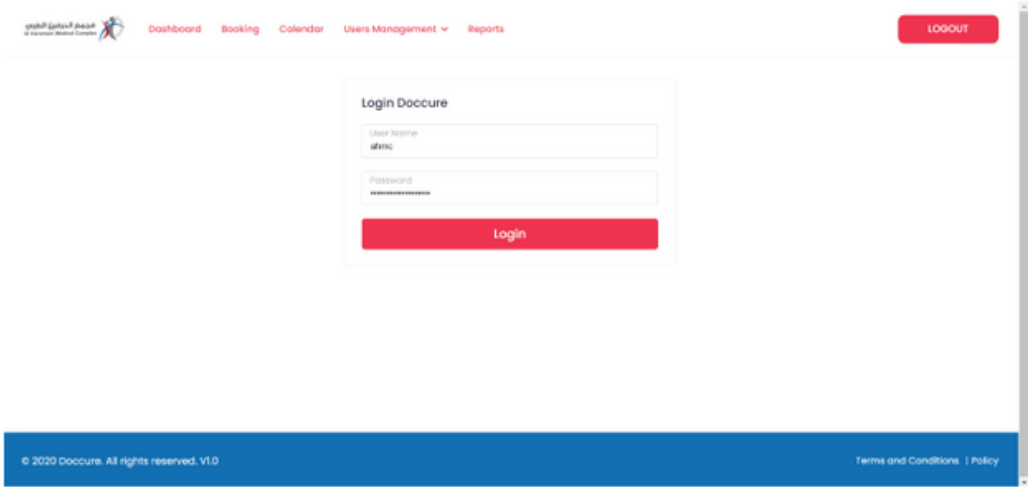
Before: A Disconnected and Unfocused Experience

The original design suffered from a number of fundamental flaws. The layout was visually confusing, with a prominent navigation bar that had no place on a login page. This created unnecessary visual clutter. Furthermore, the inconsistent use of colors, from the harsh red "Logout" button to the simple white background, made the interface feel dated and disjointed, failing to instill a sense of trust in the user.

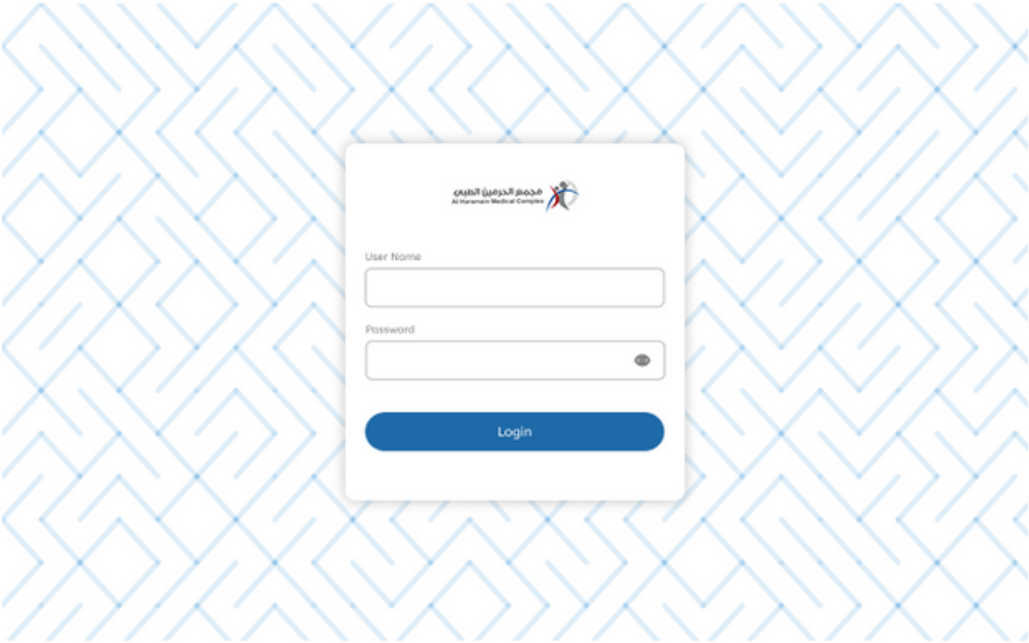
After: A Clear and Trustworthy Gateway

The redesigned screen solves these issues by prioritizing clarity and focus. The layout is now clean and minimal, guiding the user's attention directly to the login form. By using a cohesive color palette of professional blues and whites, the design feels more inviting and reliable. The form itself is simplified, and the addition of a clear, rounded button and a subtle background pattern transforms the screen from a confusing obstacle into a smooth, professional, and confident first step in the user journey.

Before



After



From Clutter to Clarity: The Dashboard Redesign

The dashboard is the central hub of a user's workflow. The redesign transformed a cluttered and visually overwhelming space into an organized, efficient, and intuitive command center.

Before: A Visually Overwhelming Experience

The original design suffered from a lack of visual hierarchy. It used a heavy, dominant color palette that made the screen feel visually draining. With multiple tables and a lack of clear separation between sections, the user was left to navigate a confusing and disorganized space. The jarring, inconsistent colors for buttons added to the chaos, creating a frustrating and inefficient experience.

After: An Organized and Intuitive Workflow

The redesigned dashboard solves these issues by prioritizing a clean and professional aesthetic. We replaced the heavy blue with a lighter, more approachable color palette and introduced a tabbed interface to clearly separate the "Booked" and "Waiting List" views. This simple change transformed the user's workflow from a chaotic search into a structured and logical process. Tables were simplified with more spacing and clear visual cues, making the data easier to read and act on. The result is a dashboard that's not only visually pleasing but also powerful and easy to manage.

Before

مركز الرعاية الصحية
Al-Haramain Medical Complex

DashboardBookingCalendarUsers Management▼Reports

LOGOUT

Home / Patients

Dashboard

Select ClinicSelect DoctorSelect Date

SearchExport to Excel

Actions	Status	ID	Doctor	File #	Patient Name

« Previous1Next »

Waiting List

Select ClinicSelect DoctorSelect Date

PediatricsDRAHMED ALKAM11/27/2022SearchExport to Excel

Action	Status	Doctor	File #	Patient Name

After

مركز الرعاية الصحية
Al-Haramain Medical Complex

DashboardBookingCalendarUsers ManagementReports

Logout

Dashboard

BookedWaiting List

Select ClinicSelect DoctorSelect Date

Search

Export to Excel

ID	Doctor	File Number	Patient Name	Status	Action
2					🕒 📄
2					🕒 📄
2					🕒 📄

Previous1Next

From Complexity to Clarity: The User Management Redesign

The user management page is critical for administration, and the redesign was a mission to turn a frustrating, complex task into an intuitive and efficient one.

Before: A Confusing and Inefficient Workflow

The original design was visually overwhelming. The heavy use of a dark blue, combined with a cluttered layout and inconsistent button placement, made the page hard to navigate. The table was filled with visual noise, making it difficult to scan user data quickly. Key actions were not clearly defined, leaving users to search for what they needed, leading to an inefficient and error-prone workflow.

After: An Organized and Intuitive Solution

The redesigned page is a powerful solution built on a foundation of clarity. By replacing the heavy colors with a clean, professional palette and ample white space, the information becomes easy to read and digest. We reorganized the layout to be more logical, placing the "add user" button in a standard and easy-to-find location. The simplified table and clear, well-defined icons for actions transform a complex task into a straightforward, confident process. This redesign proves that a clean aesthetic directly translates to a more powerful and usable experience.

Before

مركز الخدمات الطبية
Al-Haramain Medical Complex

DashboardBookingCalendarUsers Management▼Reports

LOGOUT

Home / Users
Users

Filter By

+Add New User

Users Details

Actions

File #

Identification #

Name

Email

Phone

< Previous

1

Next >

+More

After

مركز الخدمات الطبية
Al-Haramain Medical Complex

DashboardBookingCalendarUsers ManagementReports

Logout

Users

Id	Name	Email	Phone Number	Action

Previous1Next

Add new userBack

From Confusion to Confidence: The Confirmation Dialog

A confirmation dialog is where a user makes a critical decision. The redesign transformed this high-stakes moment from a source of anxiety into a clear and trustworthy interaction.

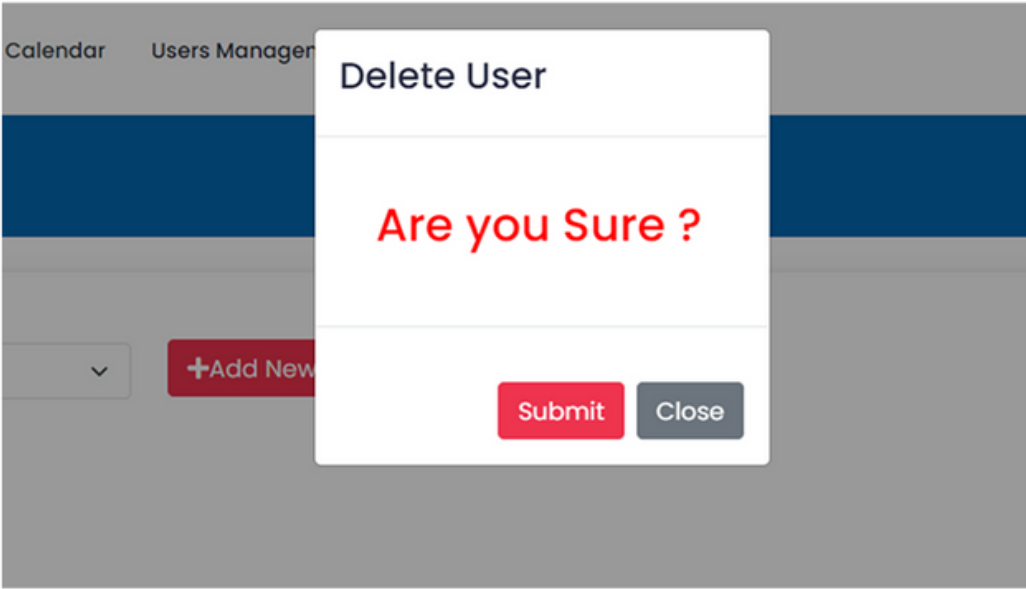
Before: A Risky and Confusing Message

The original confirmation dialog was a major point of failure. With an aggressive "Are you Sure?" message and unclear button labels like "Submit" and "Close," the user was left to guess what action they were about to perform. This ambiguous design created a high risk of user error and made a simple task feel uncertain and intimidating. The overall look was jarring and inconsistent, failing to build any sense of trust.

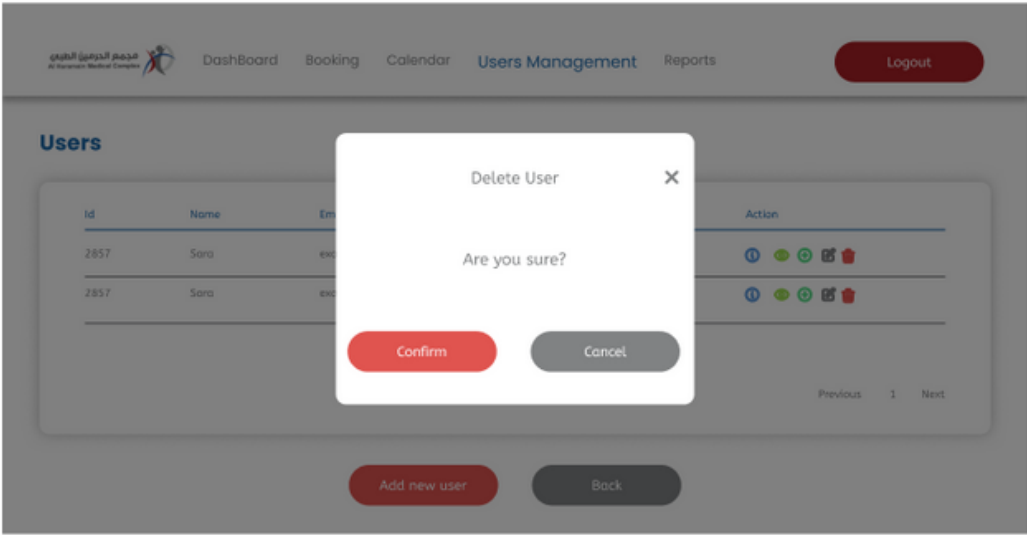
After: A Clear and Secure Interaction

The redesigned dialog solves these critical issues by prioritizing clarity and user confidence. The content is now presented within a professional and contained modal. Most importantly, the button labels are explicit and unambiguous: "Confirm" and "Cancel." This change removes all doubt, allowing the user to make a clear decision. By using a bold red for the "Confirm" button, the design appropriately highlights the destructive nature of the action while the professional, consistent aesthetic ensures the user feels safe and in control.

Before



After



6. Results and Impact

The redesign was more than just an aesthetic change; it was a strategic transformation that directly impacted workflow efficiency and user confidence. The goals of creating an easy-to-use, reliable, and maintainable application were successfully met.

A. Operational Efficiency and Speed

The most significant outcome was the measurable improvement in the speed of daily tasks:

Metric	Before Redesign	After Redesign	Tangible Impact
Patient Registration/Booking Time	A complex, time-consuming process causing frustration.	A streamlined, directed, and simpler workflow.	Reduced the time required to complete these critical tasks by up to 30%.
Data Entry Errors	High error rate due to a confusing interface.	Lower error rate due to visual clarity.	Significantly lowered errors, saving costs and time on subsequent reviews.
New Employee Training Time	Required lengthy time for new staff to grasp the complex system.	Intuitive system requires minimal intensive training.	Drastically reduced the training time needed for new

B. Solution Validation: Usability Testing

To ensure the solutions were effective, the new design was validated through testing:

- **Methodology: Usability Testing** was conducted on the final prototype with staff members representing the "**Sami**" persona and other key users.
- **Verification:** The focus was on tracking the **Task Completion Rate** and **Time on Task** for critical actions (e.g., "Register New Patient" and "Confirm Appointment").
- **Result:** The tests showed that new users could understand and execute complex tasks **significantly faster and with far fewer errors** than they could on the legacy app. This testing confirmed the new design's effectiveness as a true problem-solving tool.

C. User Trust and Satisfaction

The new design focused on fostering a trustworthy and comfortable working environment:

- **Staff Confidence:** By providing a clean, professional interface (using blue and white), users felt more **trust and reliability** towards the system, encouraging efficient use.
- **Patient Satisfaction:** Faster and smoother registration led to **reduced patient waiting times** and an overall better service experience, positively impacting the Complex's reputation.

D. Technical Success and Sustainability

As the Front-end Developer, crucial technical successes were achieved:

- **Responsiveness:** The issue of lack of screen adaptability was fully resolved, allowing the application to be used seamlessly on any device (desktop, tablet, smartphone), increasing work flexibility.
- **Maintainability:** The code was effectively documented and organized, ensuring the app is not just a temporary fix but a sustainable digital asset that can be easily updated and scaled in the future without complexity.

7. Conclusion and Key Takeaways

Conclusion

In conclusion, this project is a testament to the power of **strategic design and reliable technical execution**. This UX/UI redesign was not merely an aesthetic overhaul; it was a comprehensive transformation aimed at solving the root problems users were facing. By combining in-depth research, deliberate design decisions, and accurate technical implementation (using **AngularJS** and clean code documentation), I successfully transitioned a complex, frustrating experience into a smooth and trustworthy one. The final result is an application that not only looks professional but also performs with high efficiency (**reducing task completion time by up to 30%**) and builds user confidence at every step. This confirms that effective design is the bridge that connects user needs with a product's technical viability.

Key Takeaways

1. **Design is Problem-Solving First:** The project demonstrated that effective UX/UI design is first and foremost a problem-solving process. Every challenge I faced—from responsiveness issues to internal code organization—was an opportunity to transform user frustrations (like messy layouts or disorganized buttons) into clear goals for creating innovative solutions.
2. **The Value of the Dual Role (Designer-Developer Synergy):** Being responsible for both the design and the front-end development allowed me to guarantee that the design vision was translated 100% accurately into a functional application. This synergy resulted in an app that is not only easier for users to understand and navigate but is also **easier for developers to maintain and update**.
3. **Technical Growth:** This project served as a launchpad for my technical growth. In addition to my design skills, this was the first time I worked with the **AngularJS library**, adding a new dimension to my understanding of the technical process and strengthening my ability to design and build technically viable solutions.

4. **The Importance of Comprehensive Research and Deliberate Vision:** I learned that initial ideas are just the starting point. Strategic research, from a comprehensive **competitive audit** that revealed the web application weaknesses to understanding user pain points, is what led me to a clear and deliberate vision. This process helped me establish a viable solution by immediately considering **technical constraints and implementation needs** during the design phase.

**Thank you for taking the time to
review this comprehensive case
study.**