CS 459: Software Engineering Senior Project

Spring 2025

Detailed Design Documentation

Project Title	HCAR Client Database
Sponsoring Company	Humboldt Community Access and Resource Center
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ABSTRACT

- This Detailed Design Document outlines the key aspects behind design choices made in the development of the HCAR Client Database project.

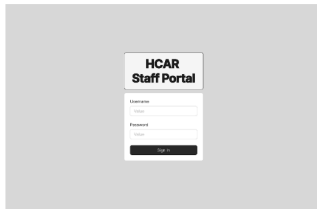# TABLE OF CONTENTS

1. INTRODUCTION

This Detailed Design Document outlines the user interaction with different aspects of the systems associated with this project. Sequences of possible events the user will encounter with the system are included in the dynamic model through various sequence diagrams. The Graphical User Interface (GUI) for this project is categorized through storyboards to explore possible paths that the user can take when navigating the wireframe designs. The classes of the project with their design elements are shown through the static class diagrams included in this document.

Traceability and rationale for decisions made on creating the design for the systems in this project are included in their respective sections of this document, preceding the engineering standards, constraints, and references relevant to this document's material.
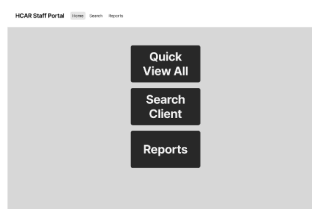
2. GUI (Graphical User Interface) Design
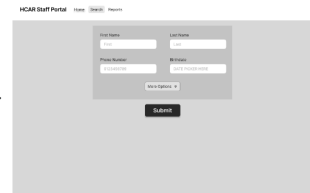
Storyboard 1 - Search / View Clients

Step 1: Log-In

HCAR Staff Portal

Username

Password

Sign In

User logs into the portal with their valid username and password

Step 2: Home

HCAR Staff Portal   Home   Search   Reports

Quick View All

Search Client

Reports

User is brough to the Home page and then clicks on the "Search Client" button

Step 3: Search

HCAR Staff Portal   Home   Search   Reports

First Name   Last Name

Phone Number   Birthdate

More Options

Submit

User inputs values to the search fields in the form then selects submit

Step 4: Search Results

HCAR Staff Portal   Home   Search   Reports

Photo	First Name	Last Name	Phone	Email	Date of Birth	Programs	Pronouns	Gender	PoS Status
	Example Field	Example Field	Example Field	Example Field	DD/YY	Example Field	Example Field	Example Field	Example Field

Go Back   ← Previous   Next →   Select

User reviews search results, then selects one row in the table and clicks the "Select" button

Step 5: View Client

HCAR Staff Portal   Home   Search   Reports

User views client details

Storyboard 2 - System Reports

Step 1: Log-In

HCAR Staff Portal

Username

Password

Sign In

User logs into the portal with their valid username and password

Step 2: Home

HCAR Staff Portal   Home   Search   Reports

Quick View All

Search Client

Reports

User is brough to the Home page and then clicks on the "Reports" button

Step 3: Reports

HCAR Staff Portal   Home   Search   Reports

Select a Document:
List of Inactive Subscribers

Edit   Export to PDF

User selects a document from a list in the "Select a Document" dropdown menu pertaining to general information (system, clients with PoS out of date, etc.), and chooses to edit or export the document as a pdf in the browser.

Storyboard 3 - View All Clients

Step 1: Log-In

User logs into the portal with their valid username and password

Step 2: Home

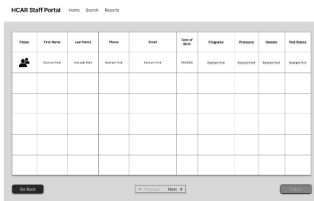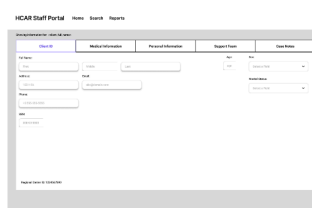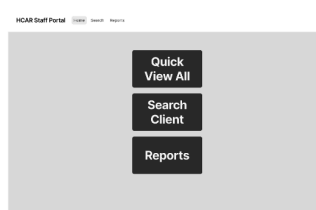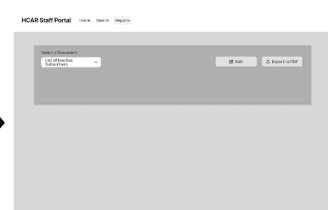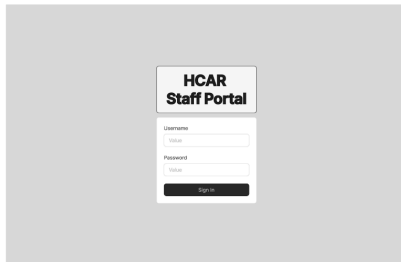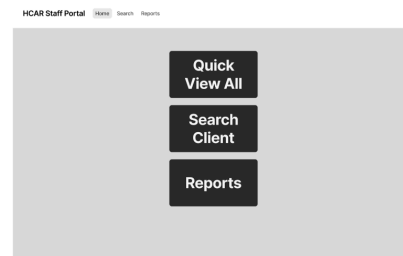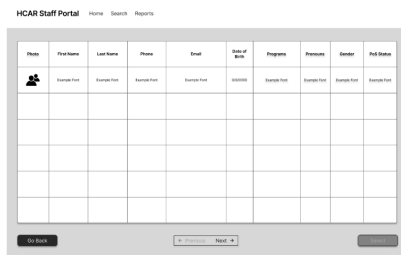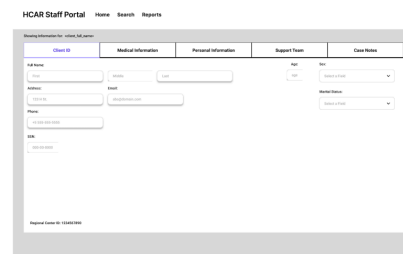User is brough to the Home page and then clicks on the "Quick View All" button

Step 3: Search Results
(All Viewable Clients)

User reviews search results, then optionally selects one row in the table and clicks the "Select" button

(Optional) Step 4: View Client

User views client details

3. STATIC MODEL
CLASS DIAGRAMS

4. DYNAMIC MODEL
SEQUENCE DIAGRAMS

5. RATIONALE FOR YOUR DETAILED DESIGN MODEL
- Design Patterns

6. TRACEABILITY FROM REQUIREMENTS TO DETAILED DESIGN MODEL

- provide a mapping between requirements (user story or use case) and detailed design model (your classes/diagrams)
- clearly describe how each requirement (user story or use case) in the *Requirements Documentation* is captured in the design (your classes/diagrams)

7. EVIDENCE THE DESIGN MODEL HAS BEEN PLACED UNDER CONFIGURATION MANAGEMENT

8. ENGINEERING STANDARDS AND MULTIPLE CONSTRAINTS

9. ADDITIONAL REFERENCES