Software Design Document
We Go to Cal State LA

Team 7 — Pacific Clinics

December 2025

Contents

Version Description

Version	Description	Date
1.0	Initial SDD created	Dec 2, 2025
1.1	Added System Architecture and UI sections	Dec 3, 2025
1.2	Completed Glossary and References	Dec 3, 2025

Chapter 1

Introduction

1.1 Purpose

This Software Design Document (SDD) describes the design, structure, and operation of the **We Go to Cal State LA** platform. It provides developers, reviewers, and stakeholders with a clear understanding of the system architecture, user interface, and database organization.

1.2 Intended Audience

This document is intended for:

- Software developers building or maintaining the platform.

- Project managers and academic supervisors.

- Testers validating functionality.

- Stakeholders at Pacific Clinics.

1.3 System Overview

The platform provides:

- Daily check-ins to support mental wellness.

- Access to categorized well-being resources.

- Surveys such as PHQ-9 and GAD-7.

- A chatbot for interactive assistance.

- Calendar events, reminders, and notifications.

The application is built using:

- **React Native** for cross-platform mobile UI.

- **Cloudflare D1** for SQL-based data storage.

- **AWS Lambda / Cloudflare Workers** for serverless backend logic.

- **Amazon Cognito** for secure authentication.

Chapter 2

System Architecture

2.1   System Workflow

The workflow of the system is shown below, capturing the interaction between users, external resources, video services, and internal logic.
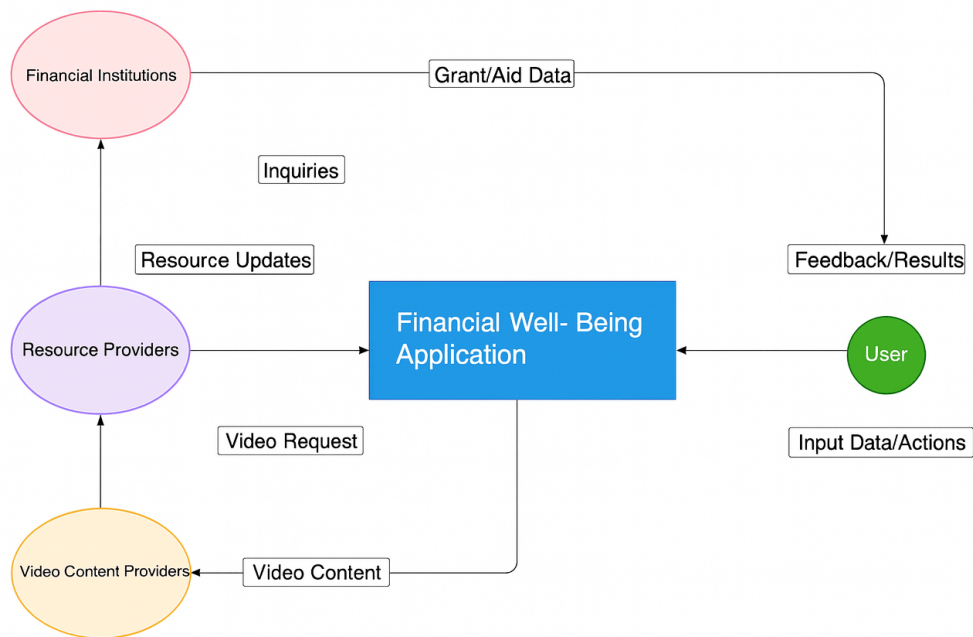
Financial Institutions

Grant/Aid Data

Inquiries

Resource Updates

Feedback/Results

Financial Well- Being Application

Resource Providers

User

Video Request

Input Data/Actions

Video Content Providers

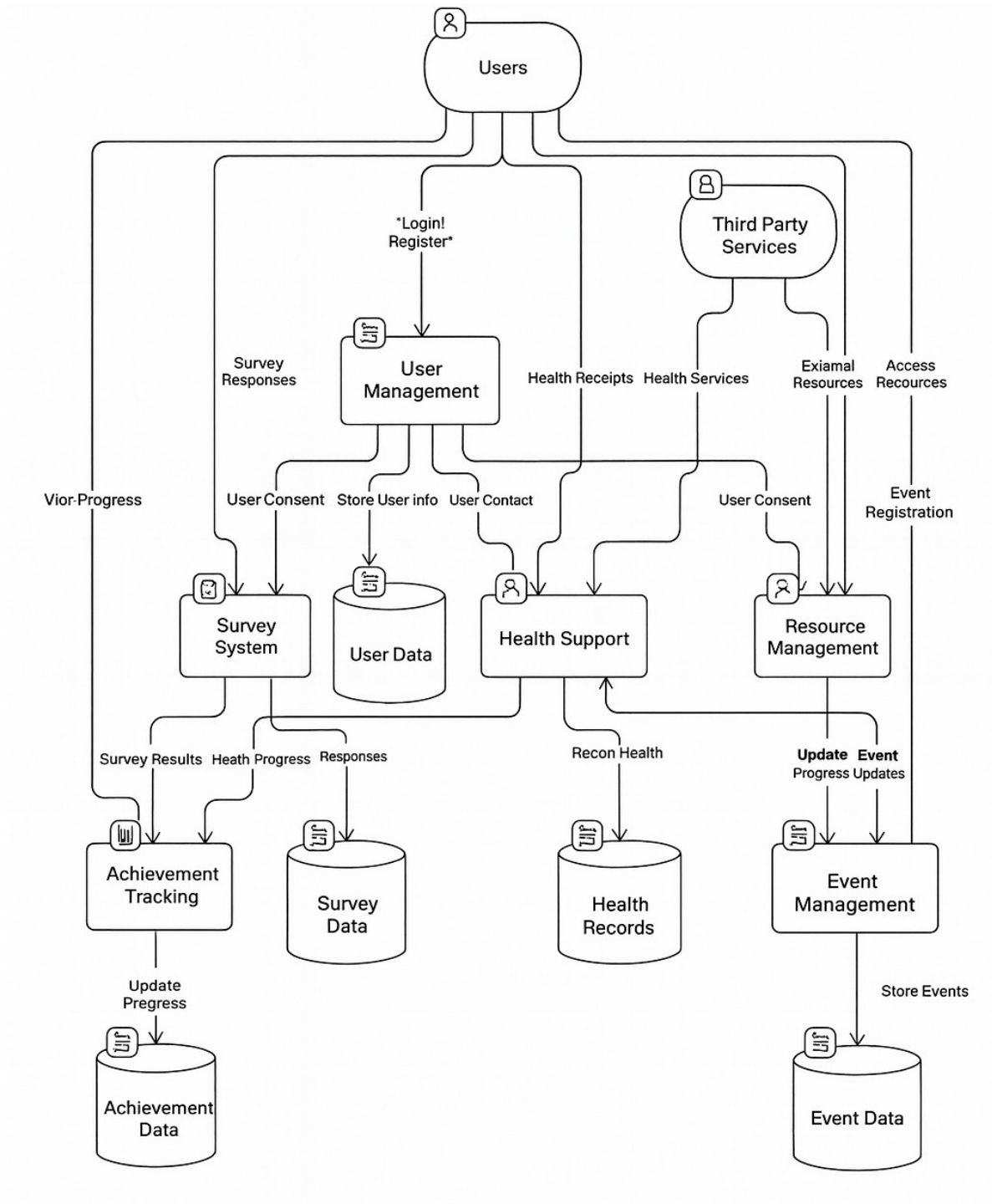Video Content

Figure 2.1: External Entity Data Flow

Figure 2.2: High-Level System Process Flow

2.2 Component Breakdown

The system is composed of the following major components:

Client-Side (Frontend)

- Implemented in React Native

- Handles UI rendering, user input, and navigation

- Communicates with backend through secure API requests

Server-Side (Backend)

- Runs on AWS Lambda and Cloudflare Workers

- Manages authentication, surveys, event scheduling, notifications

- Provides REST API endpoints

Database Layer

- Uses Cloudflare D1 (SQL relational model)

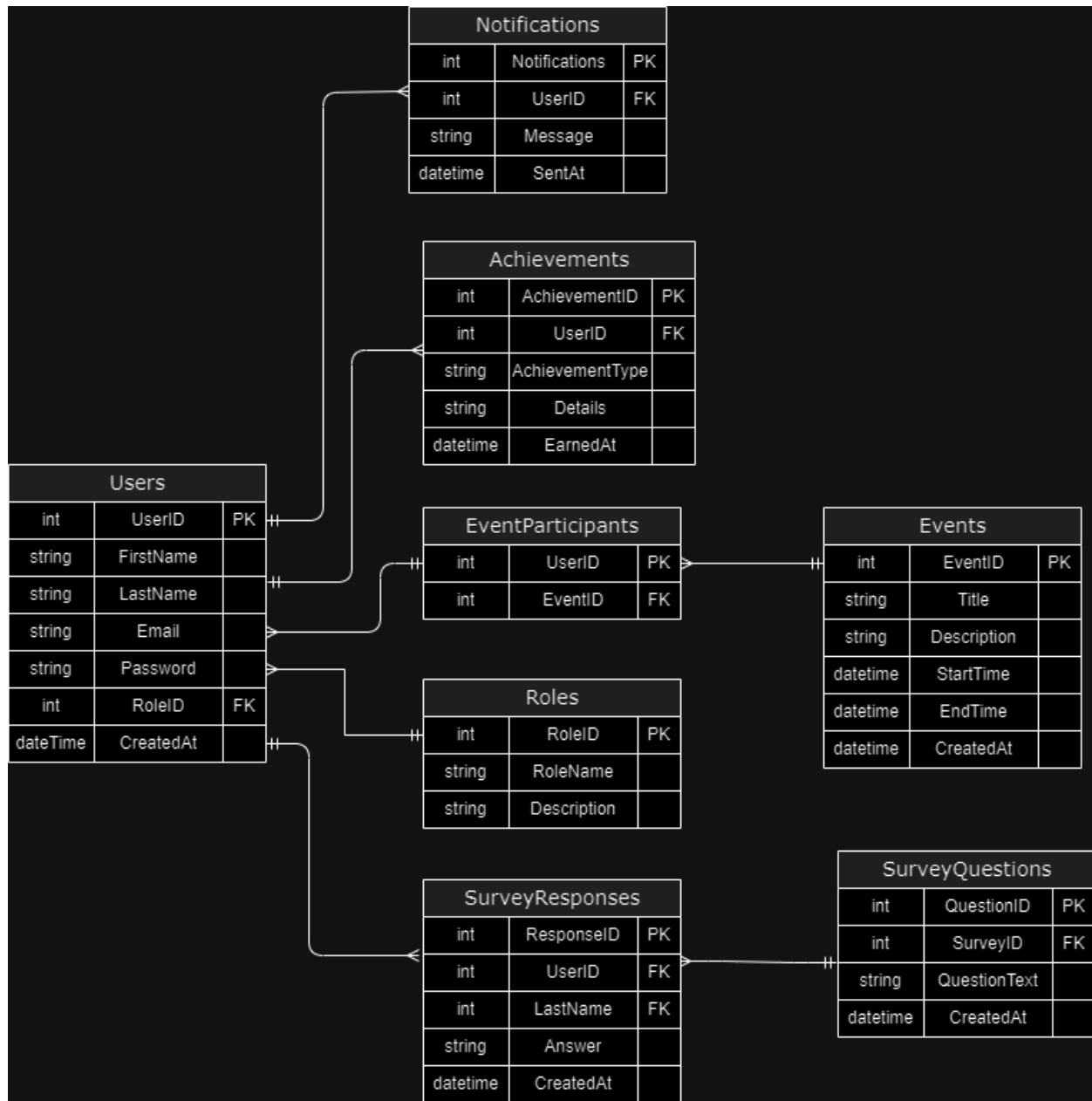- Stores users, survey responses, resources, achievements, events

Figure 2.3: Entity–Relationship Diagram (ERD)

Chapter 3

User Interface

3.1   How to Use the System

Daily Check-In

Users select an emotion and may receive a supportive message or recommended activity.

Resource Library

Provides categorized well-being resources such as:

- Mental health

- Financial well-being

- Academic support

Wellness Surveys

Includes:

- PHQ-9 (depression)

- GAD-7 (anxiety)

Chatbot

AI-powered support for questions, guidance, and navigation.

Calendar / Events

Users can:

- View mental health events

- Add reminders
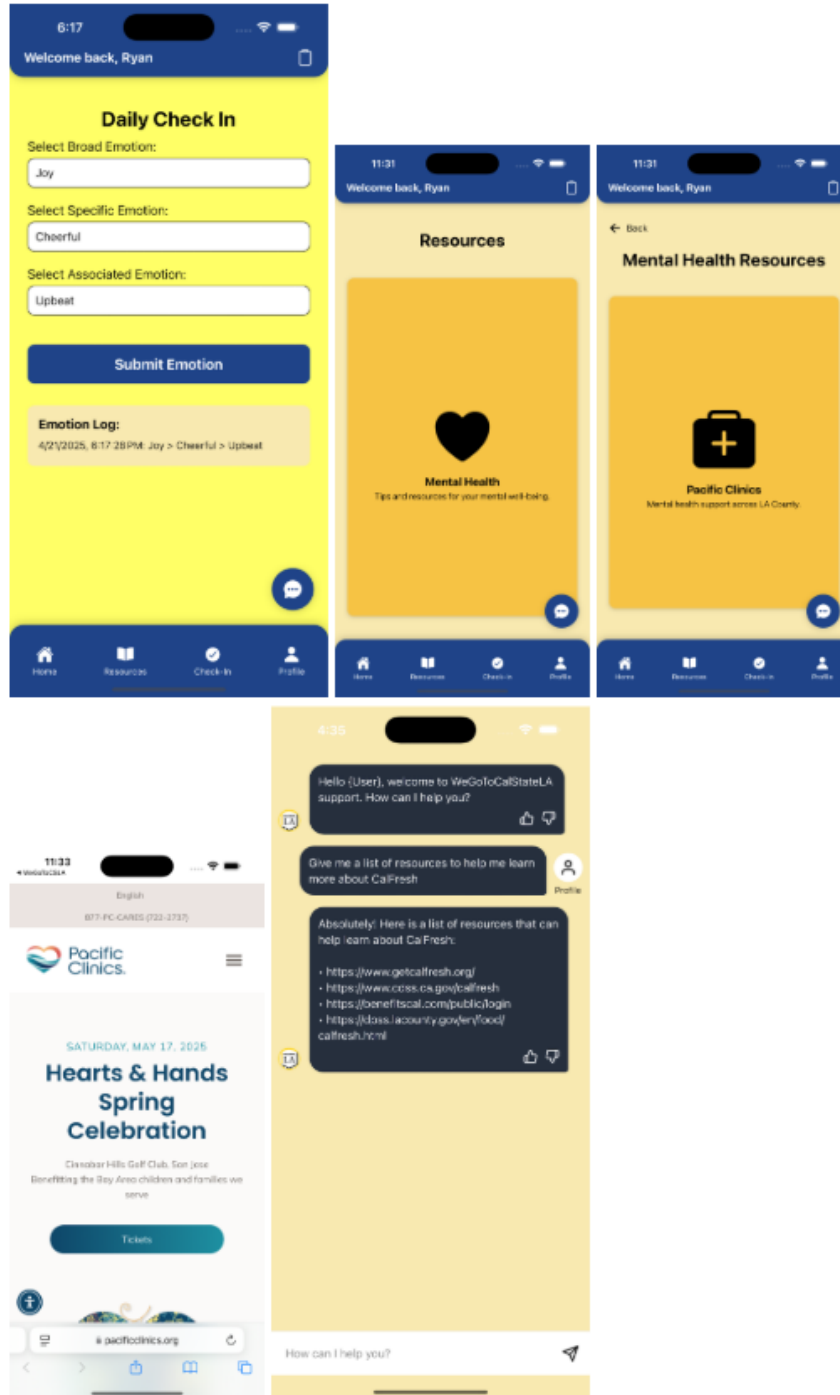
- Register for programs

3.2 UI Screenshots

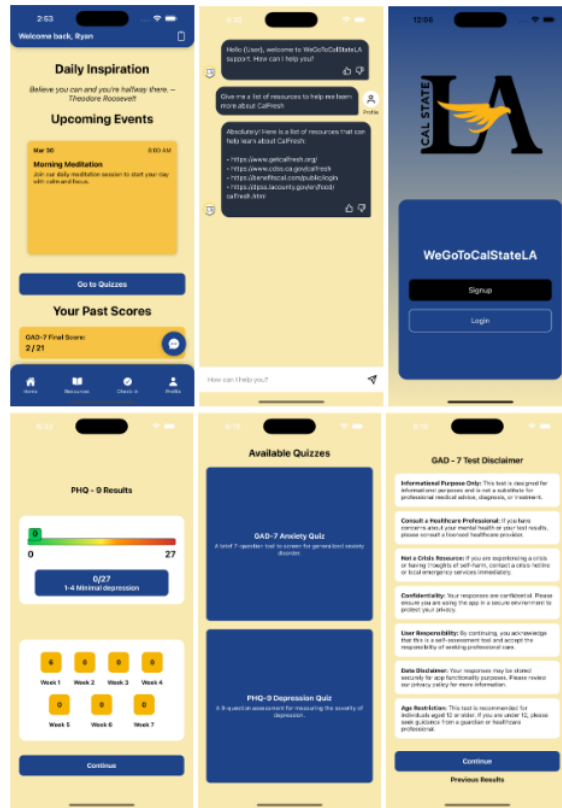Figure 3.1: Example UI Screens: Check-In, Resources, Chatbot

Figure 3.2: Example UI Screens: Inspiration, Surveys, Login
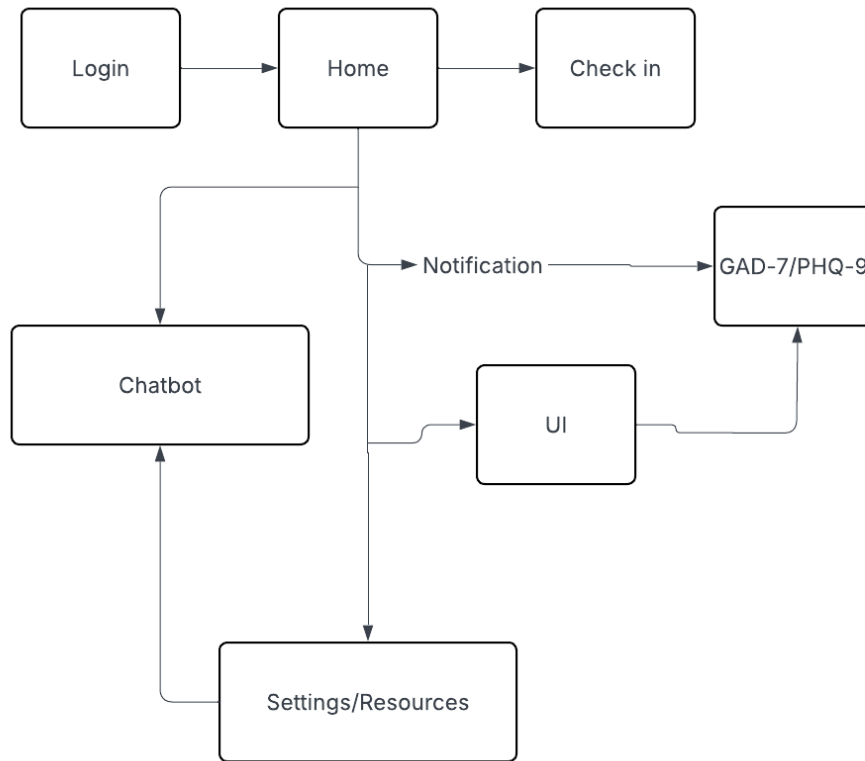
3.3 User Interface Flow Model

Figure 3.3: System UI Flow Model

Chapter 4

Glossary

Acronym	Definition
UI	User Interface
API	Application Programming Interface
DB	Database
JWT	JSON Web Token
PWA	Progressive Web App
WCAG	Web Content Accessibility Guidelines
SQL	Structured Query Language

Chapter 5

References

- Cloudflare D1 Documentation — https://www.cloudflare.com

- React Native Documentation — https://reactnative.dev

- HIPAA Guidelines — U.S. Department of Health & Human Services

- FERPA Guidelines — U.S. Department of Education

- WCAG Accessibility Standards — https://www.w3.org/WAI