

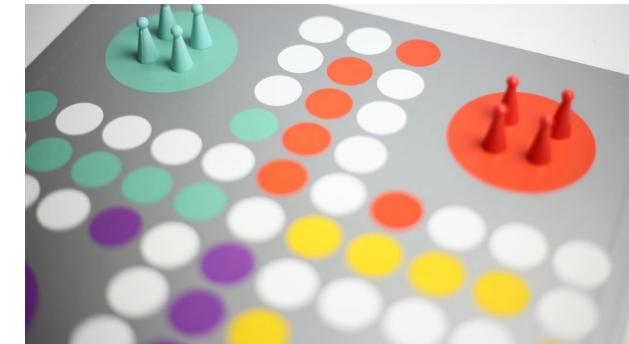
UNIVERSITY GAME ROOM DASHBOARD

GROUP-10

- Digvijay Hethur Jagadeesha - 212619721
- Jateen Joharapurkar - 212620553
- Ashwini Sudheerkumar - 212641730

CSC 541 – Advanced Software Engineering
Project Proposal

Professor: Dr. Bhrgu Celly



CSUDH

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS

Project Overview

- **Purpose:**

- Develop a Games Room Dashboard to streamline activities.
- Enhance user experience and operational efficiency.
- Facilitate event planning and management.

- **Scope:**

- Software development, testing, deployment, and maintenance.
- Integration of advanced technology stacks.
- Implementation of user-centric design principles.
- Real-time data tracking for interactive functionality.

- **Considerations:**

- Replace Excel sheets for shift reports.
- Automate tracking of student activities and transactions.
- Calculate card and cash totals for each shift.



Stakeholder Analysis

Students:

Interests: Utilize the user-friendly dashboard for checking game availability and registering for events.

Expectations: Seamless and efficient access to game-related information and event registration.

Game Room Attendant:

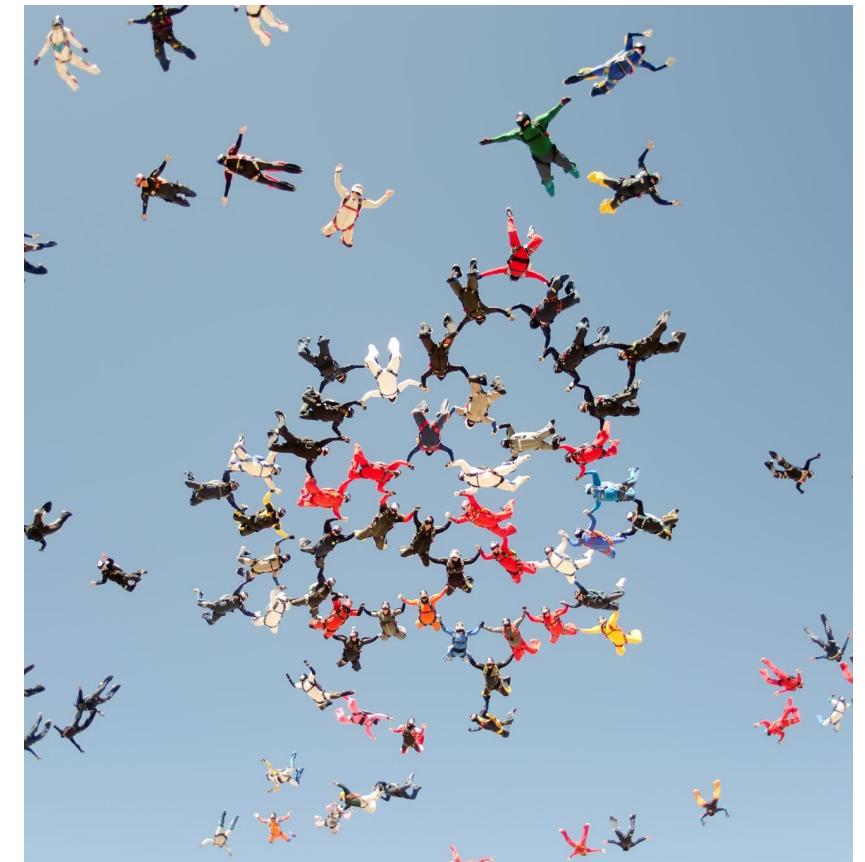
Interests: Check in and check out customers, collect payments, keep track of transactions, monitor games and events

Expectations: Ensure smooth operation of the game room and accurate record-keeping.

Business Operation Manager:

Interests: Monitor daily and weekly reports to keep all stakeholders accountable.

Expectations: Maintain transparency and efficiency in daily operations.



Stakeholder Analysis

Building Manager

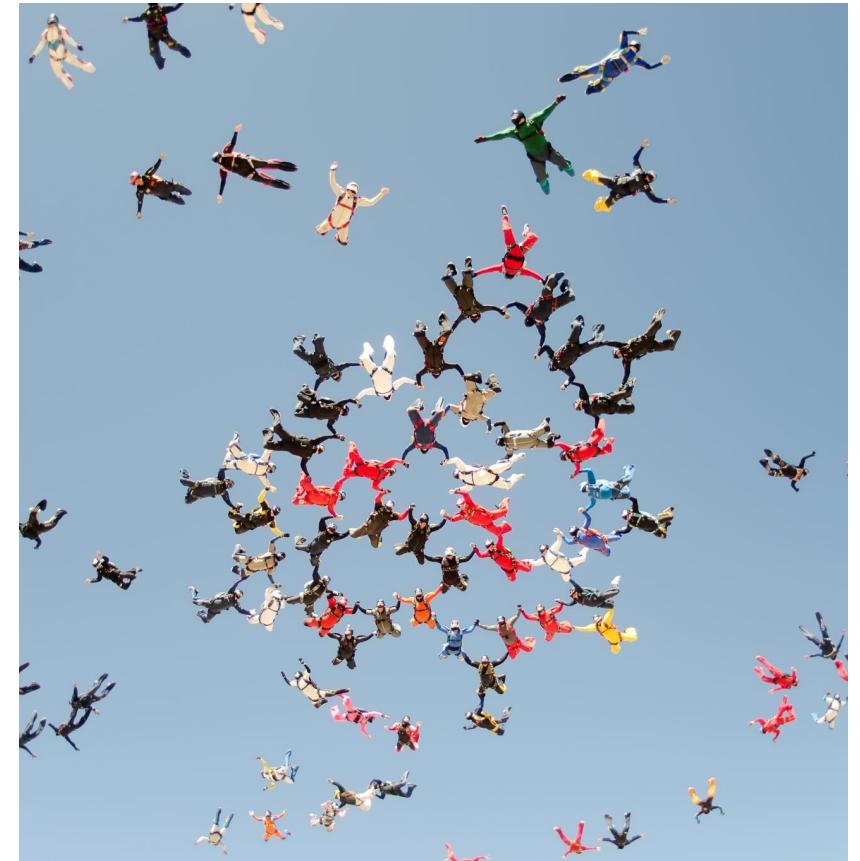
Interests: Ensure the game room operation and maintenance aligns with the university's objectives.

Expectations: To access reports on day closure for transaction verification.

Project Team:

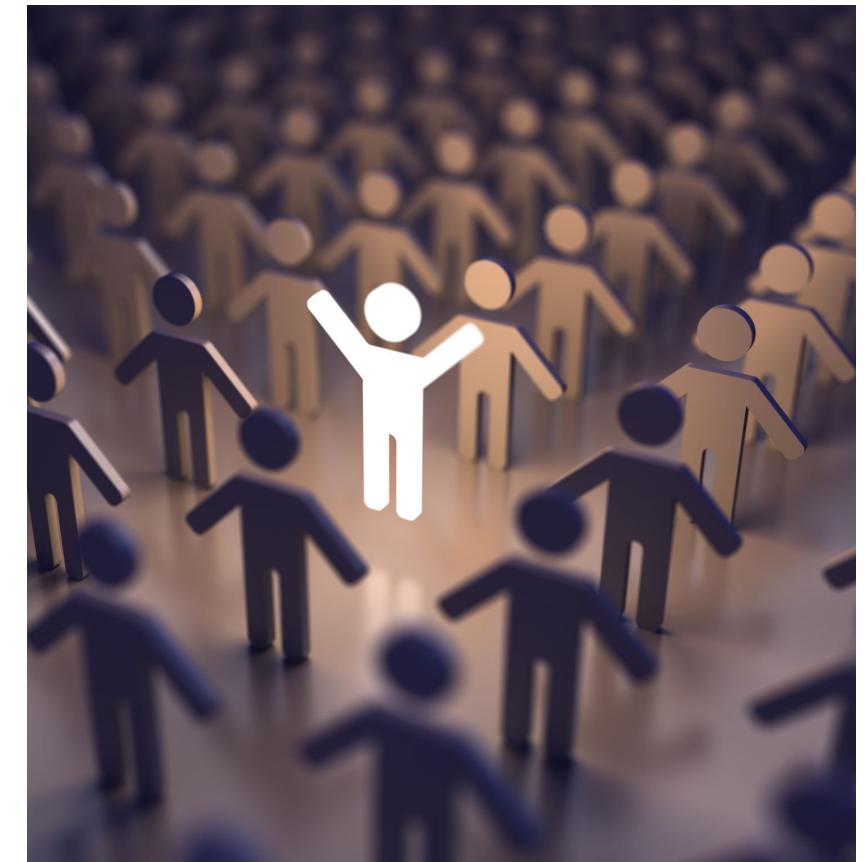
1. Project Manager : Oversees and coordinates the entire project.
2. Developer : Responsible for software development.
3. Tester: Ensures the quality and functionality of the developed software.

Expectations: Collaborate effectively to deliver a successful and well-functioning games room dashboard.



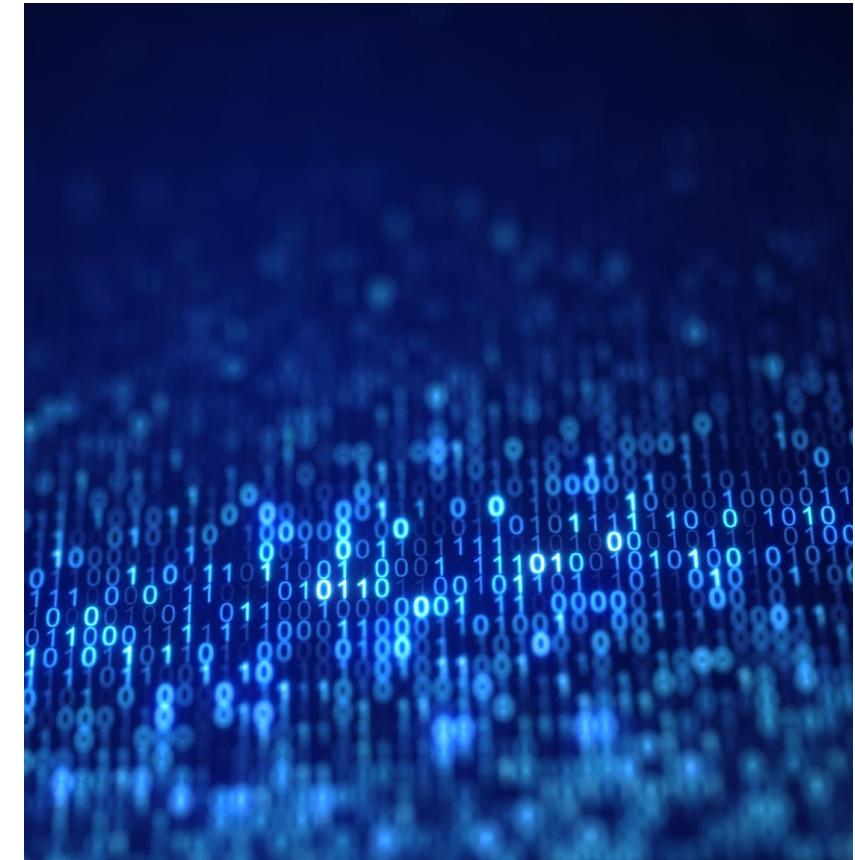
Requirement Gathering

- Helps us to understand what the stakeholders expect from us
- Conducted interviews with game room attendants and students that use the game room to learn more about the enhancements they would like to see.
- **Challenges Encountered:** Finding a balance between the project's scope and the required features to prevent scope creep.



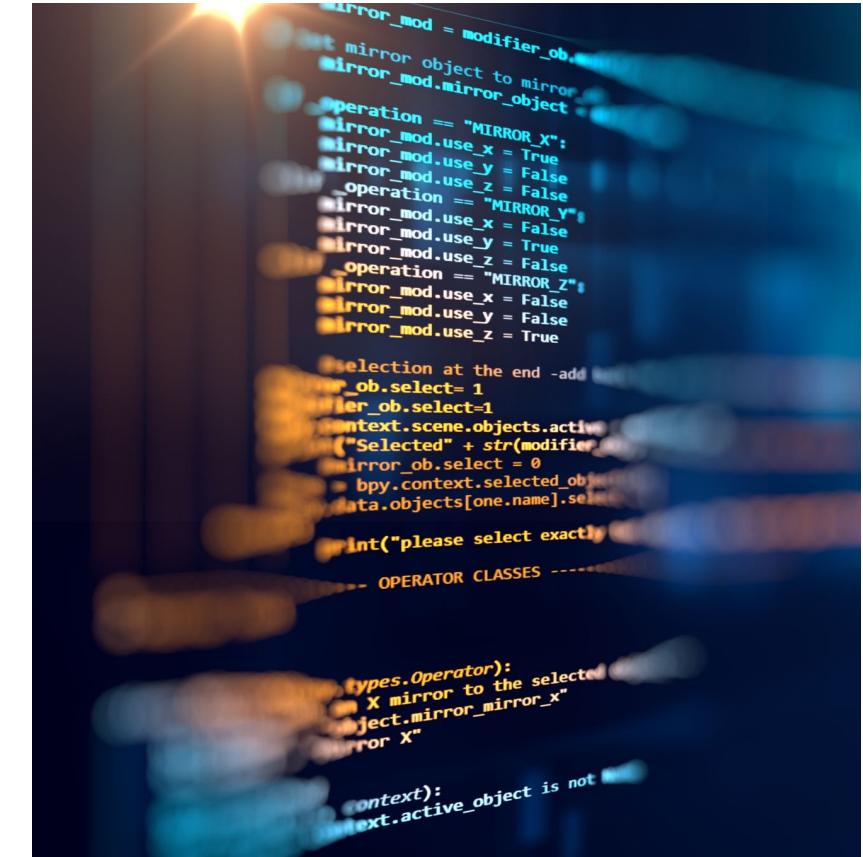
Software Requirements

- **Technology Stack:** Java 21, Virtual Threads, Spring Boot, GraphQL, REST API, OAuth Authentication with JWT Tokens, Kafka, NoSQL, Caching, CAT tool, CockroachDB, Kubernetes (Rancher), Docker, Gradle, Spock, Cron Jobs.
- **Front End Development:** Use React (latest version) to develop a landing page, login page, dashboard, data manipulation page for Excel, and a report access page for documents stored in Dropbox.

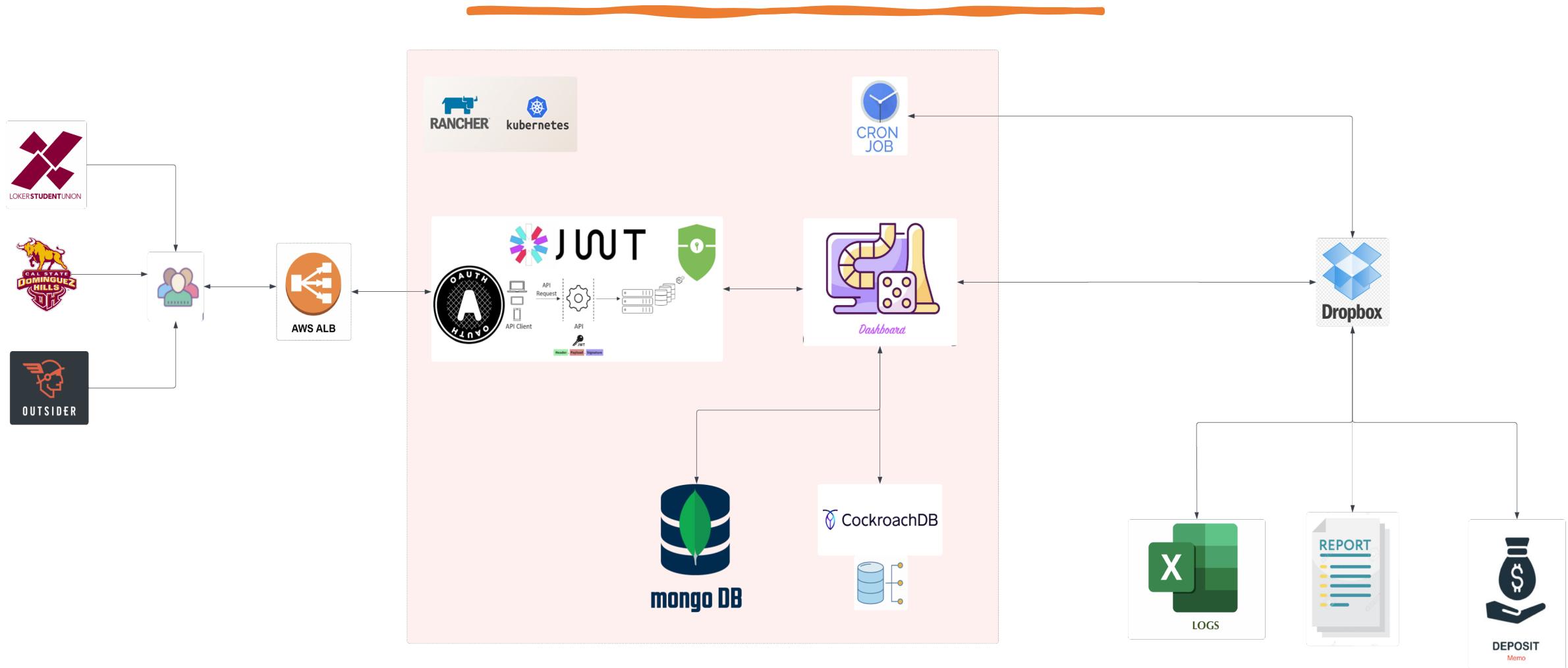


Software Requirements

- **Functional Requirements:** User authentication, dashboard features (add, edit, update, delete), financial report generation.
- **Non-Functional Requirements:** Performance monitoring with Splunk, Datalog, Grafana; Configuration management with CAT, Terraform.
- **Prioritized Features:** Landing page, authentication, dynamic dashboard functionalities, integration with Dropbox for report access.



Architecture Overview



User Interface

- Landing Page
- Login Page
- Dashboard
- Reports



THANK YOU