

In Motion Care LLC - C.N.A.T.

Team: sdmay20-51

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Team Website: <http://sdmay20-51.sd.ece.iastate.edu>

Problem Statement:

- The healthcare industry is in a transitional period
- A care plan details how to care for each resident
- Current care plans issues:
 - Large amounts of paper
 - Multiple changes a day
 - Confusion between different versions
- It is difficult to keep healthcare staff accountable the time spent in residents' rooms
- Moving to a web application helps alleviate these problems

Detailed Design:

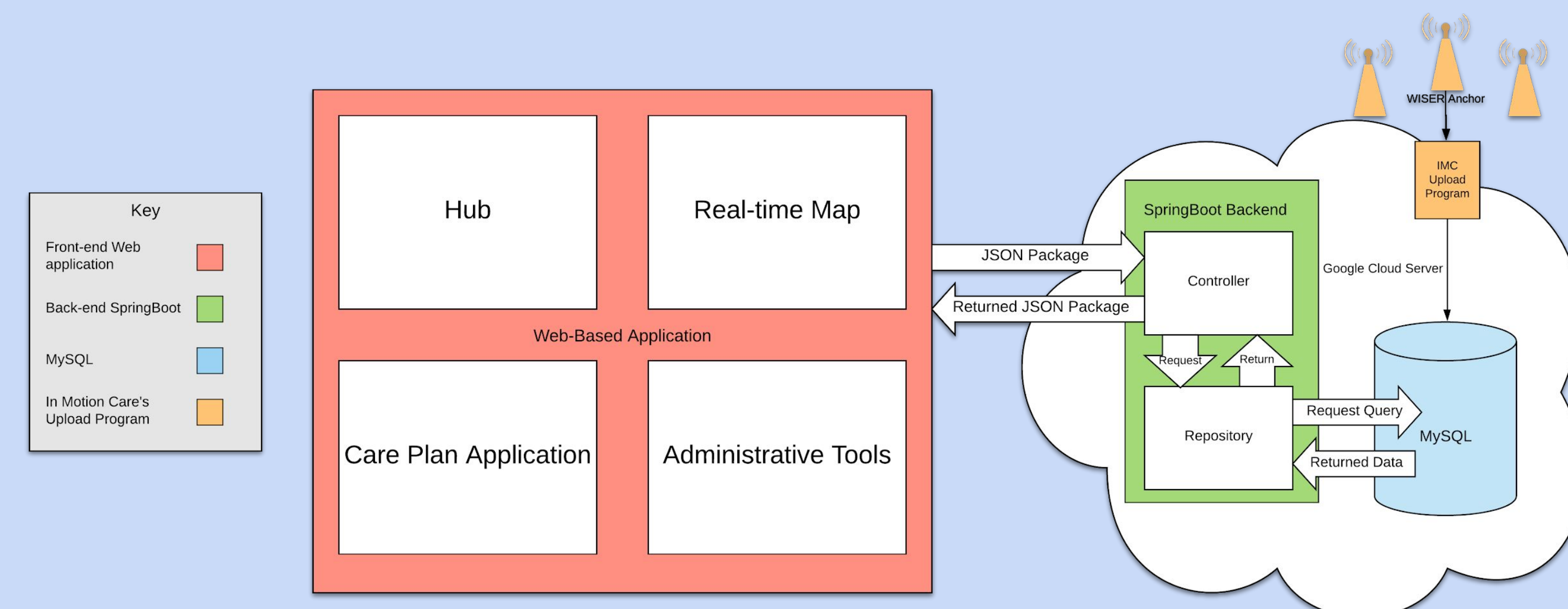


Figure 1: Design flow and overview of our project

Technologies Used:

- JavaScript (React)
- Redux
- Bootstrap
- GIT Lab
- Java (Spring Boot)
- MySQL
- Wiser Systems API
- Google Cloud

Screen Designs:

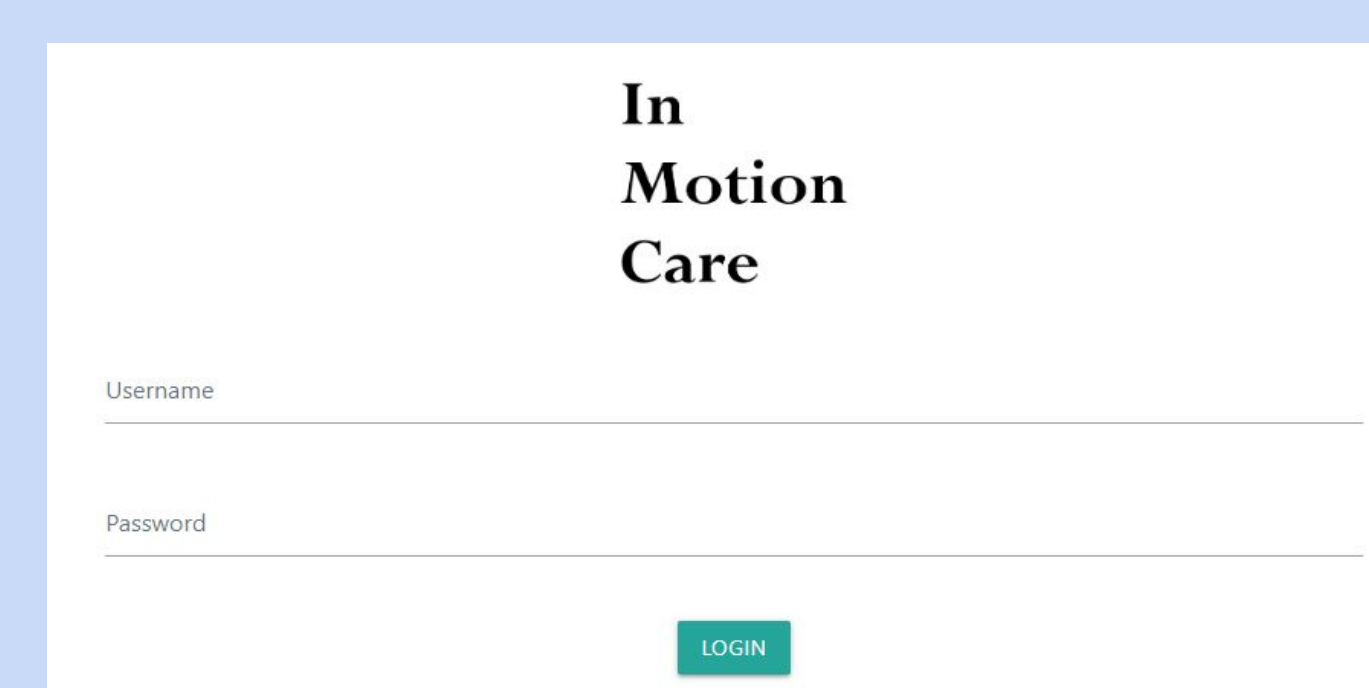


Figure 3: Login Screen

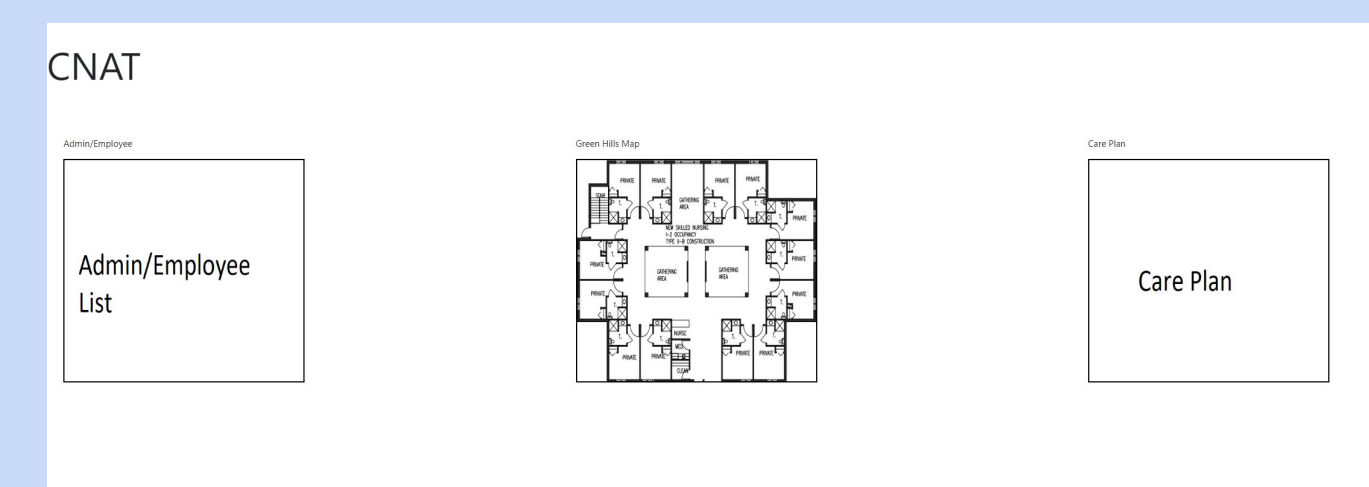


Figure 4: Homepage/Hub with easy access to most used pages

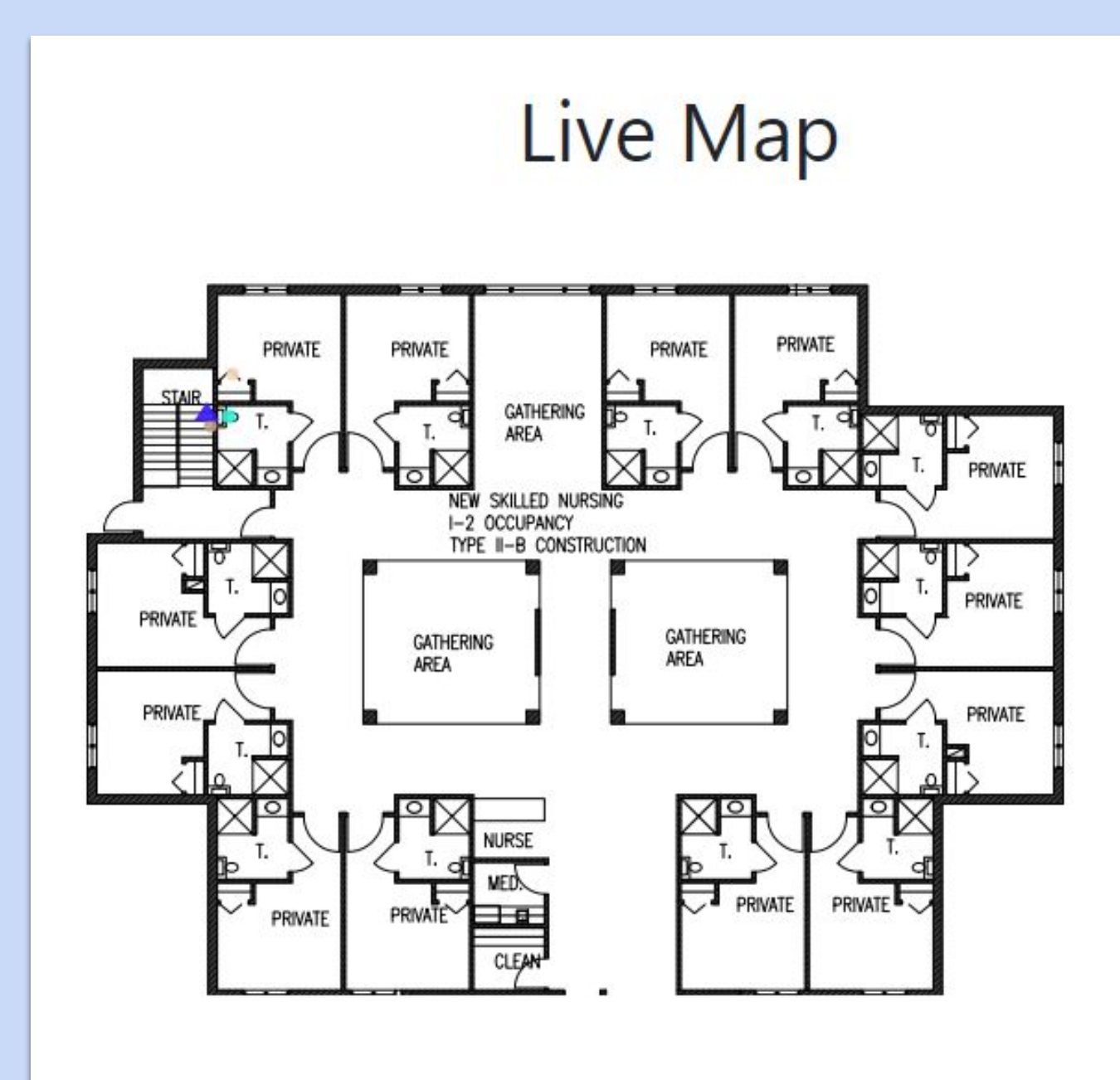


Figure 5: Map with real time location of assets

Employees

Name	Tag ID	Position	Role	User Name	Status
kirk keith	AB12	The King	IDT	kirk.keith	active
ben z	AB13	IDT		ben.z	active

Figure 6: Employee Page within the Admin functionalities

Room	Diet	Bowel & Bladder	Transfer And Mobility	Fall Devices	Sensory Devices	Showers	Special Instructions & Appointments
101	Vegan	Ind.	Cane	LifeAlert	Binoculars	April	We're in France instead now.

Figure 7: Care Plan

Project Overview:

- Build tools for administrative and tracking services
- Provide system to register users
- Implement access control based on job position
- View location of employees wearing a tracking tag
- Display important events for auditing/logging:
 - System changes
 - Care plan updates

Requirements:

Functional:

- Dashboard to select sub-applications
- Resource tracker
- Care plan
 - Editing, viewing, auditing
 - Statistics
 - Weekly summary of time visited per room
- Google Chrome

Non-Functional:

- Maintainable
 - Use technology already in use by client
- Scalable
 - Modular design implementation
- Secure
 - Provide levels of access
- Usable
 - Easily accessible and intuitively designed

ER Diagram:

- Modular Database schema to allow expansion of application in the future.
- Support for users with varying levels of permissions and access
- Built-in care plan for residents

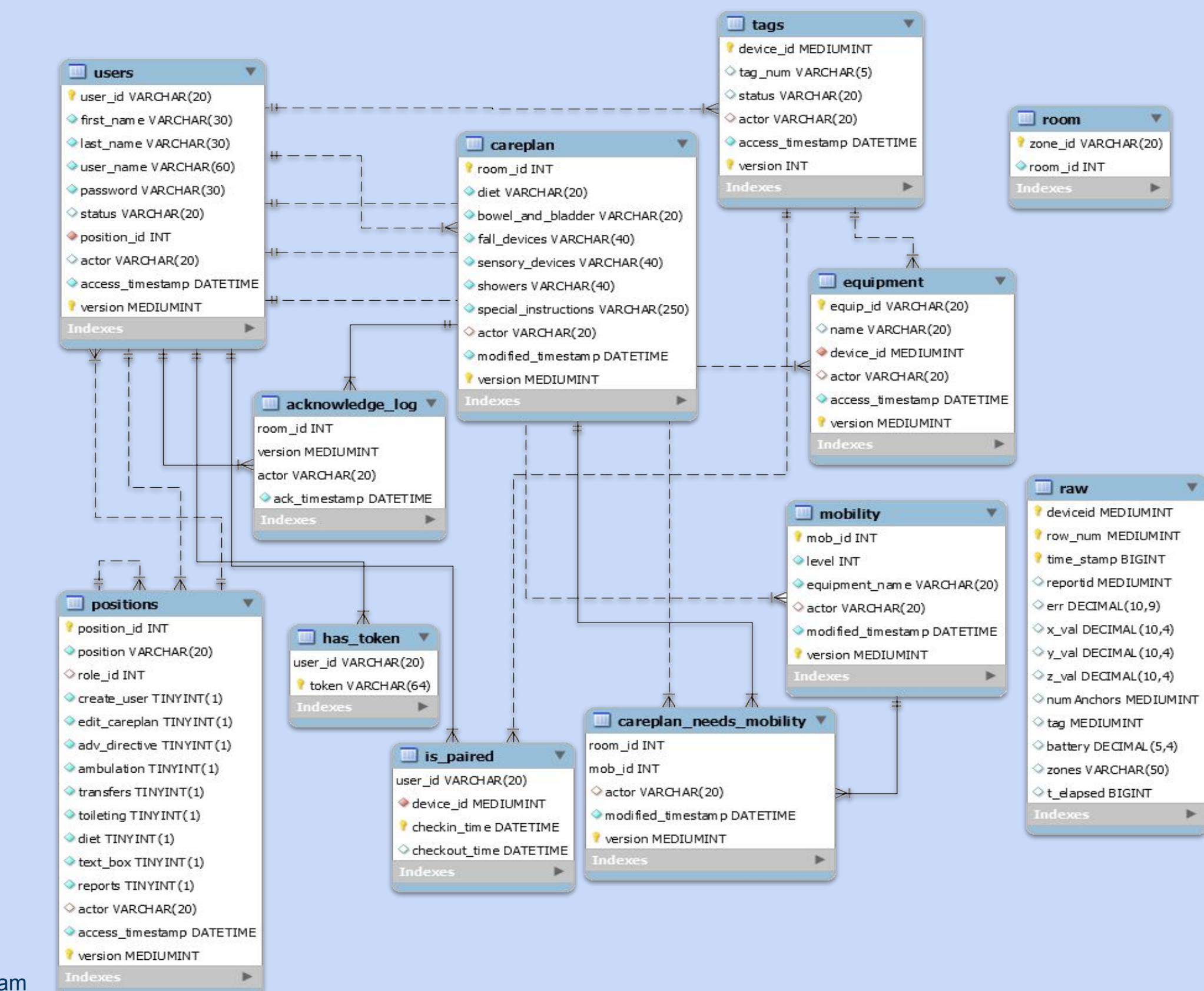


Figure 2: Database ER Diagram

Testing:

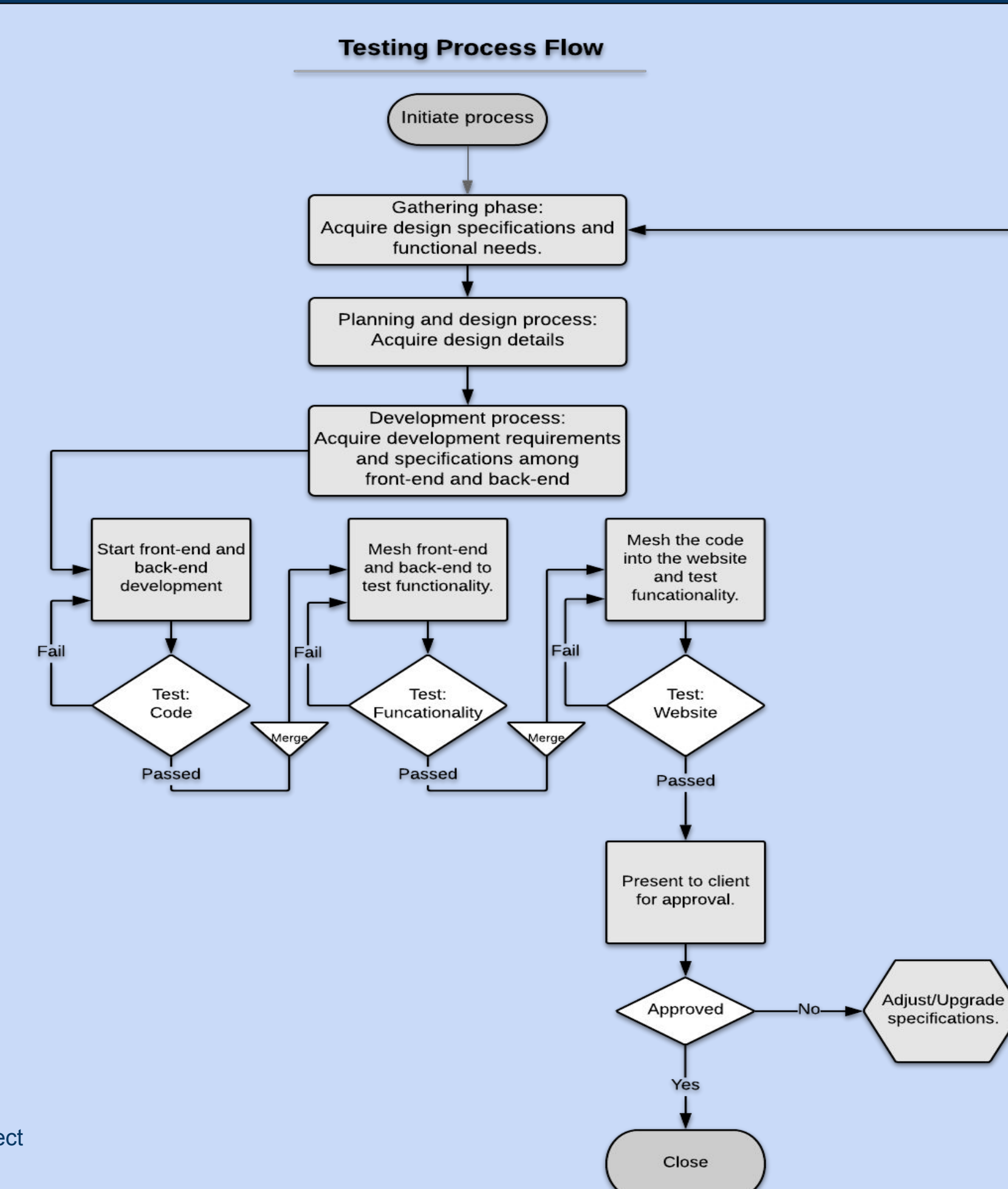


Figure 8: Testing plan for our project

Engineering Standards and Design Practices:

- ISO/IEC/IEEE International Standard - Systems and software engineering—Measurement process, IEEE 15939-2017
- ISO/IEC/IEEE International Standard - Systems and software engineering -- Software life cycle processes, IEEE 12207-2017
- ISO/IEC/IEEE International Standard for Software Engineering - Software Life Cycle Processes - Maintenance, IEEE 14764-2006
- Health Informatics—Point-of-care medical device communication Part 10201: Domain Information Model, IEEE Std 11073-10201-2018
- Software and Systems engineering—Software testing—Part 4: Test Techniques, IEEE 29119-4:2015(E)