

ICS Office Space Management

Honggun (Eddy) Jeon, Timothy Ro

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Information and Computer Sciences Department - University of Hawai‘i at Mānoa

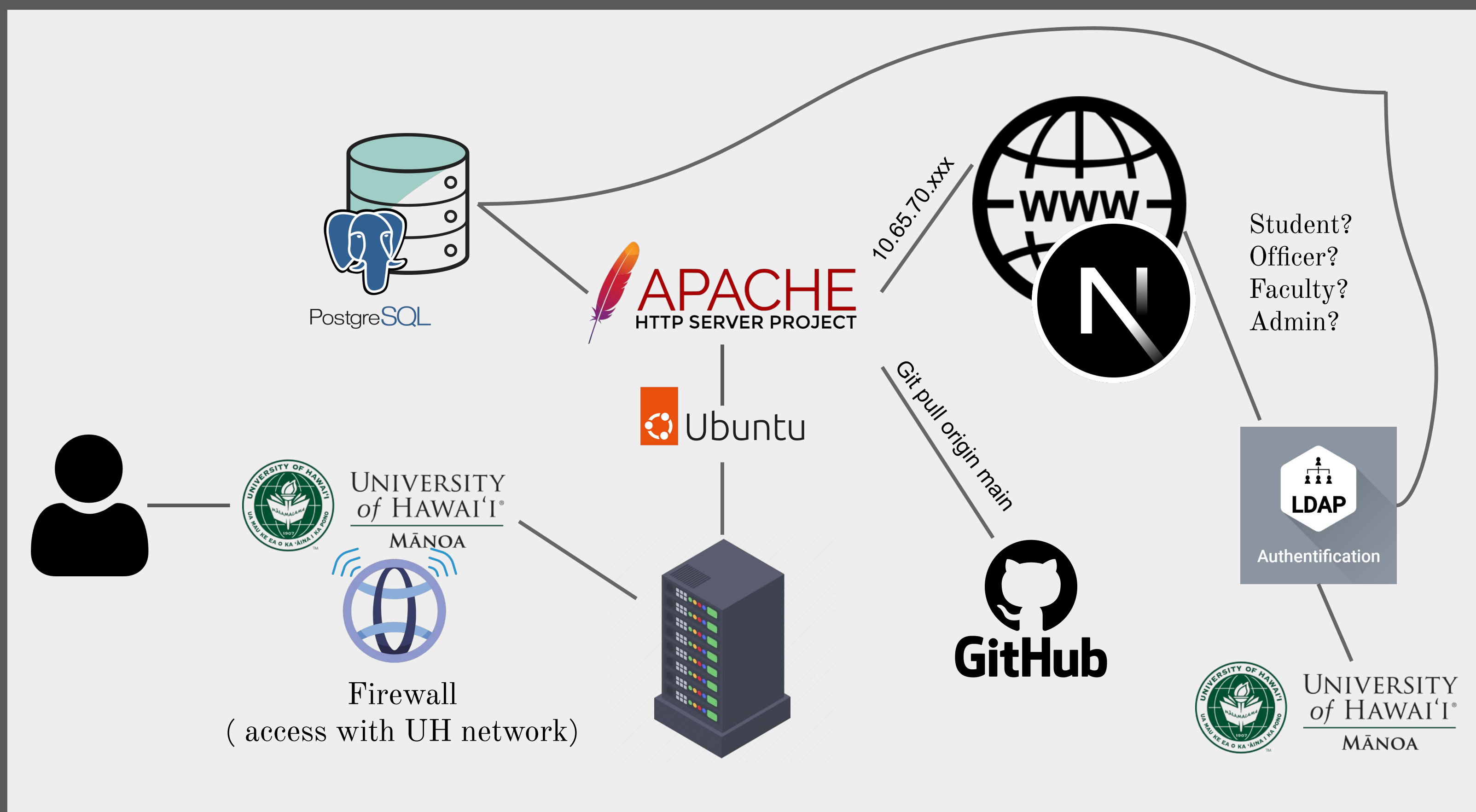
Sponsor: Todd Tomita and Charles Shackford
ICS Department IT Staff



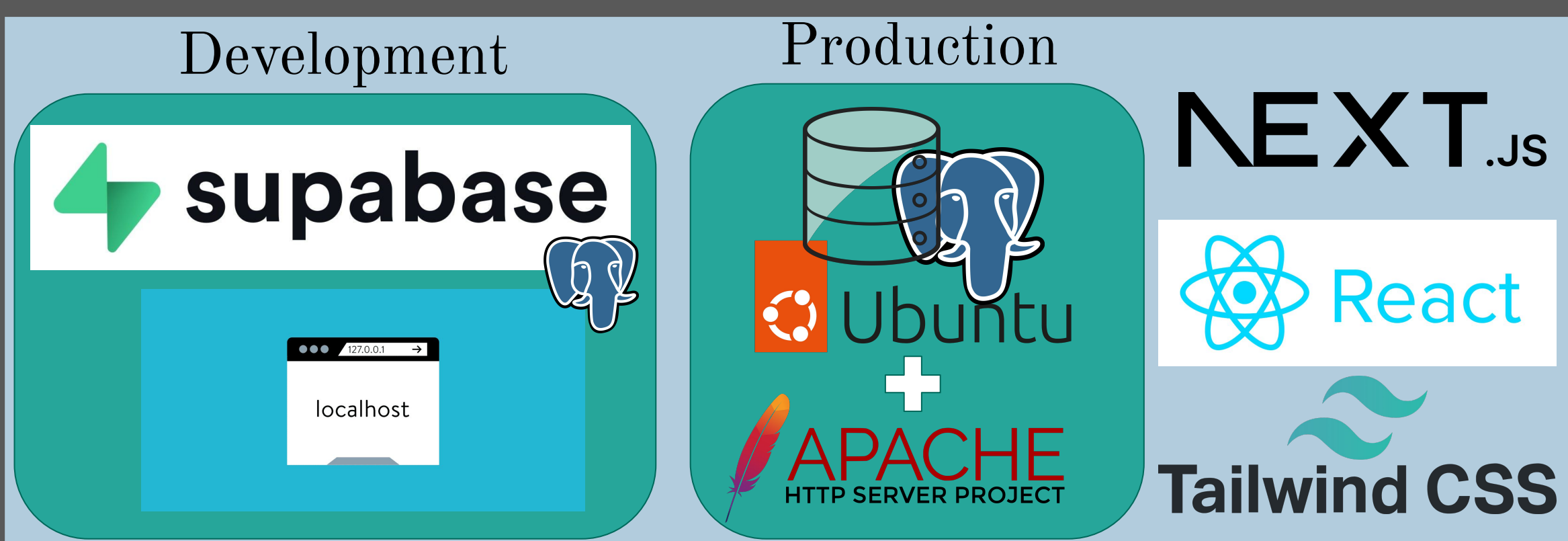
Introduction:

- IT Staff in the ICS Department wanted a way to keep track of who was in what room
- Current solution is to store who is assigned to what room on a spreadsheet
- We built a web application to modernize this process

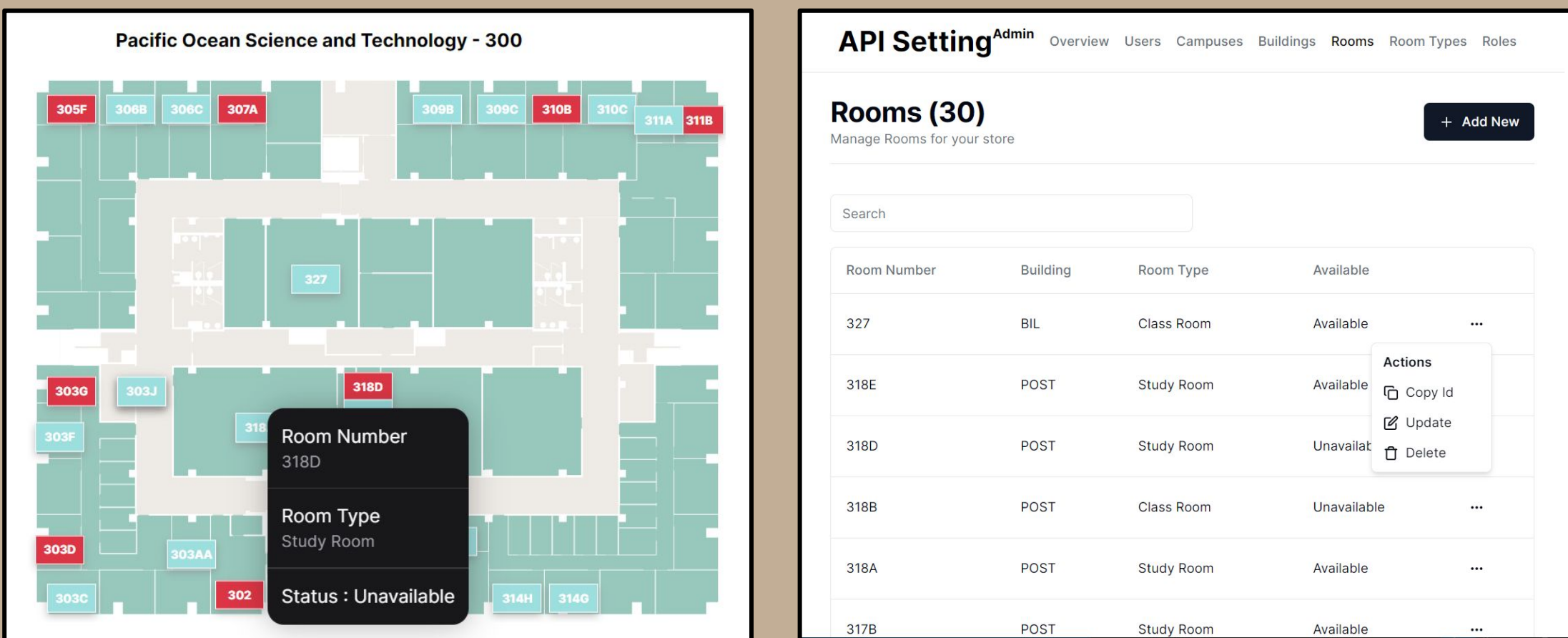
Flow Chart:



Technology Stack:



Accomplishments:



- Backend relational database creation and documentation
- Map page for quick identification of available and unavailable rooms
- API page for office staff to update users and room assignments
- Admin page for adding/deleting/updating people, rooms, buildings,
- Calendar page for users to see scheduled events
- Accessing our client's server remotely through a VPN
- Setting up Apache web server on client server
- Creating PostgreSQL database on client server
- Linking project to client server PostgreSQL database with PrismaDB

Process:

- Methodology:**
 - Agile development methodology with weekly in-person client meetings to get feedback on changes from the previous versions.
 - Eddy: requirements and technical lead
 - Tim: communications and testing lead
 - Both: took notes at client and team meetings.
- Solution:**
 - Design and implement a PostgreSQL database with PrismaDB and Supabase (testing) then a live PostgreSQL database on a physical server.
 - Create a Next JS frontend for quick:
 - identification of room statuses
 - assigning users to rooms
 - adding/deleting users, etc. depending on each user's role
- Skills Learned:**
 - Authentication, Authorization, Accountability (AAA)
 - Designing relational database
 - Setting up Apache web server with PostgreSQL, Deployment

Issues:

- Migrating Meteor/MongoDB project to NextJS/PostgreSQL project
 - Getting familiar with NextJS API & React
- Conflict between CSS libraries
 - In-line styling
- Slow progression after miscommunication about the concept of the map that user is going to see for the room detail
 - Keep asking and try to get lots of feedback

Next Steps:

- More color options for quick identification of room status
- Abbreviations for building names
- Add users that will need to have access
- Get room statuses from office staff
- Better Design
- Setting for PostgreSQL in actual production server
- Authentication with LDAP Provider