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Problem description: The project involves developing a modular mobile application for Android and iOS that enables the management of multiple buildings and companies within a single system, including the ability to add users to individual buildings.

Solution architecture:

Backend:

- Framework: NestJS (Node.js)
- Database: PostgreSQL with Prisma
- Notifications: Expo Push Notifications
- Email: SMTP
- Email verification: Hunter.io
- Geocoding: Google Geocoding

Frontend:

- Framework: React Native with Expo
- Platforms: iOS and Android

Solution features:

The application manages users and buildings. It allows adding users individually or in bulk (CSV/JSON), automatically sends temporary passwords, and verifies emails via Hunter.io.

It supports the roles SUPER_USER, BUILDING_MANAGER, and OCCUPANT with different permission levels, as well as assigning users to specific buildings.

For buildings, full CRUD is available, along with filtering by location (country, region, city, state) and building image management.

Communication is handled through push notifications (Expo), including scheduling and notification history.

Status: Currently in company testing.

Evaluation:

We successfully completed the project and tested it within the team. The application behaves stably in typical scenarios and achieves the defined goals. However, it lacks modularity in the form of configurable, switchable modules/integrations set by an administrator for a specific building.

