TALLINN UNIVERSITY OF TECHNOLOGY
School of Information Technologies

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Apartment Association/Community Management Hub

ASP.NET
Project scope

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Tallinn 2024

Author’s declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

Author: Mehis Kasonen
21.01.2024

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Introduction

The goal of this project is to develop a comprehensive web platform to serve as a centralized hub for apartment associations and terraced housing associations and communities, enabling them to efficiently manage various tasks related to property maintenance, internal operations and vendor management.

The development of a comprehensive web platform to serve as a centralized hub for apartment associations and terraced housing communities has the potential to significantly improve the lives of residents and enhance the efficiency of property management operations. By providing a centralized platform for managing tasks related to property maintenance, internal operations, and vendor management, this web application offers several key benefits:

Key features include:

Task management system for tracking and scheduling routine maintenance tasks like snow removal, landscaping and other proporty-related services. Database manages task details, schedules and completion statuses.

Vendor directory for holding data for vendors who have done past jobs, their performance evaluations and service offerings.

Work order requests from residents for maintenance issues or repairs. Database tracks work order histories, resolutions and associated costs.

Internal workforce management allows associations to manage their internam maintenance teams, assign tasks and monitor work progress. Database manages employee profiles, work schedules and performance records.

Document repository maintains a secure repository for important documents, such as association bylaws, contracts and maintenance manuals. Database organizes document categories, versions and access permissions.

Financial management includes financial tools for tracking expenses related to maintenance, vendor payments and budgeting for future projects. Database stores financial records, budget details and transaction histories.

Communication hub that provides a communication platform for residents, association members and vendors to stay informed about upcoming maintenance sctivities, community news and service updates.

Resident feedback system for residents to provide input on maintenance services and vendor performance. Database stores resident feedback, vendor ratings and improvement suggestions.

Calendar for events and maintenance and important deadlines. Database manages event details, schedules and attendee lists.

Emergency response plan (premium) enables associations to create and manage emergency response plans, including contact lists, evacuation routes and crisis communication. Database stores emergency plans, contact details and incident reports.

Task assignment and notifications to specific vendors or internam teams with automatic notifications for upcoming tasks and deadlines. Database manages tasks assignments, notifications and status updates.

By providing tools for effective task management, vendor management, communication, and community engagement, the platform has the potential to make a positive impact on the lives of residents, improve the quality of property management operations, and create more vibrant and connected communities.

Users who have admin role can see User Manager where they can create and delete users and roles and add or remove roles from users. In ASP.NET application administrators also have full CRUD for every object and separate view for language strings.

Application has support for different languages (currently English and Estonian).

Diagrams

Diagram 1: Entity Relationship Diagram

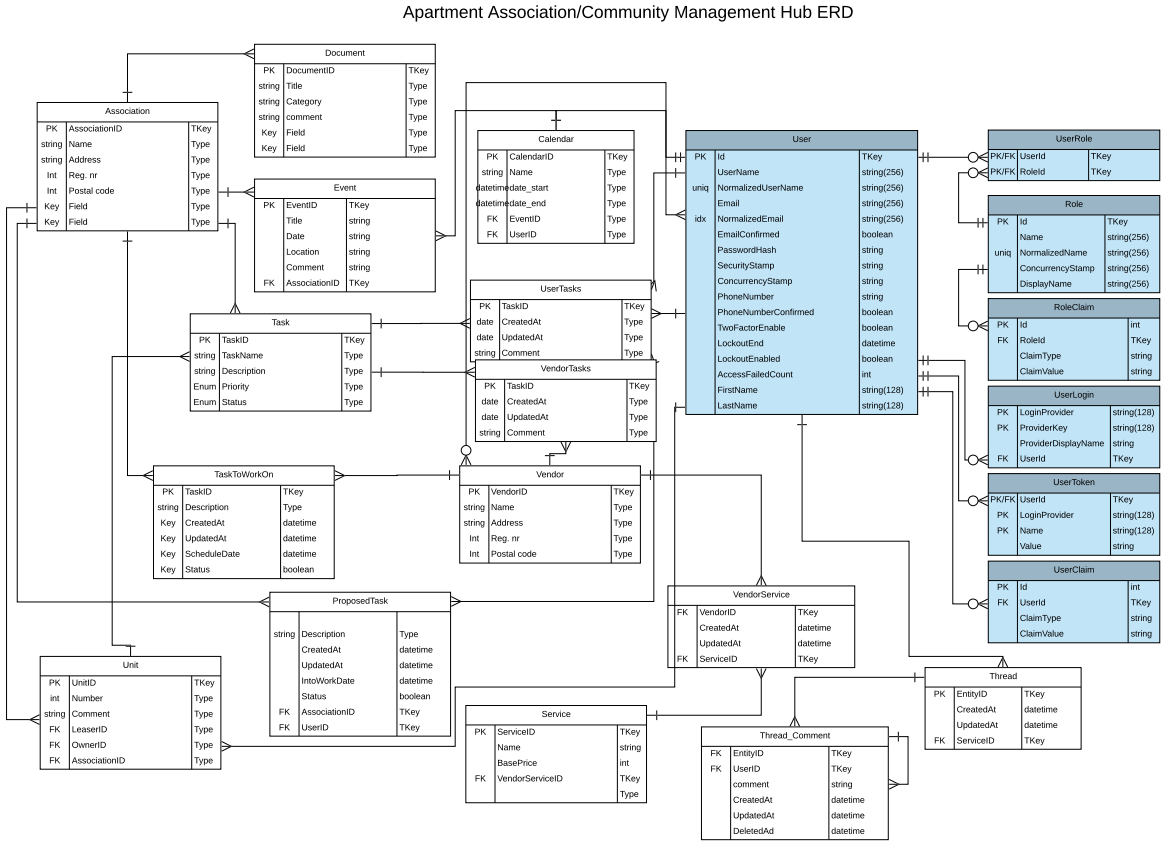
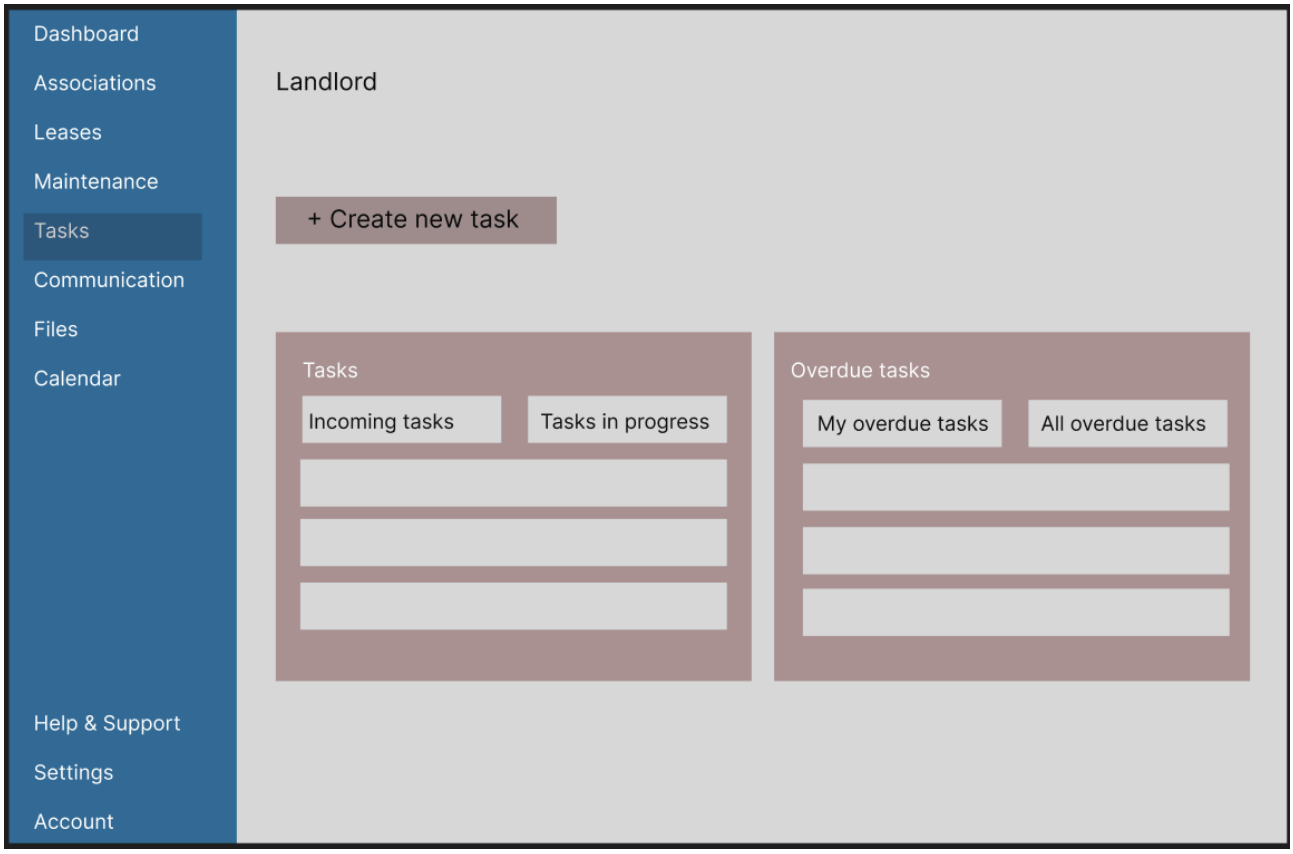
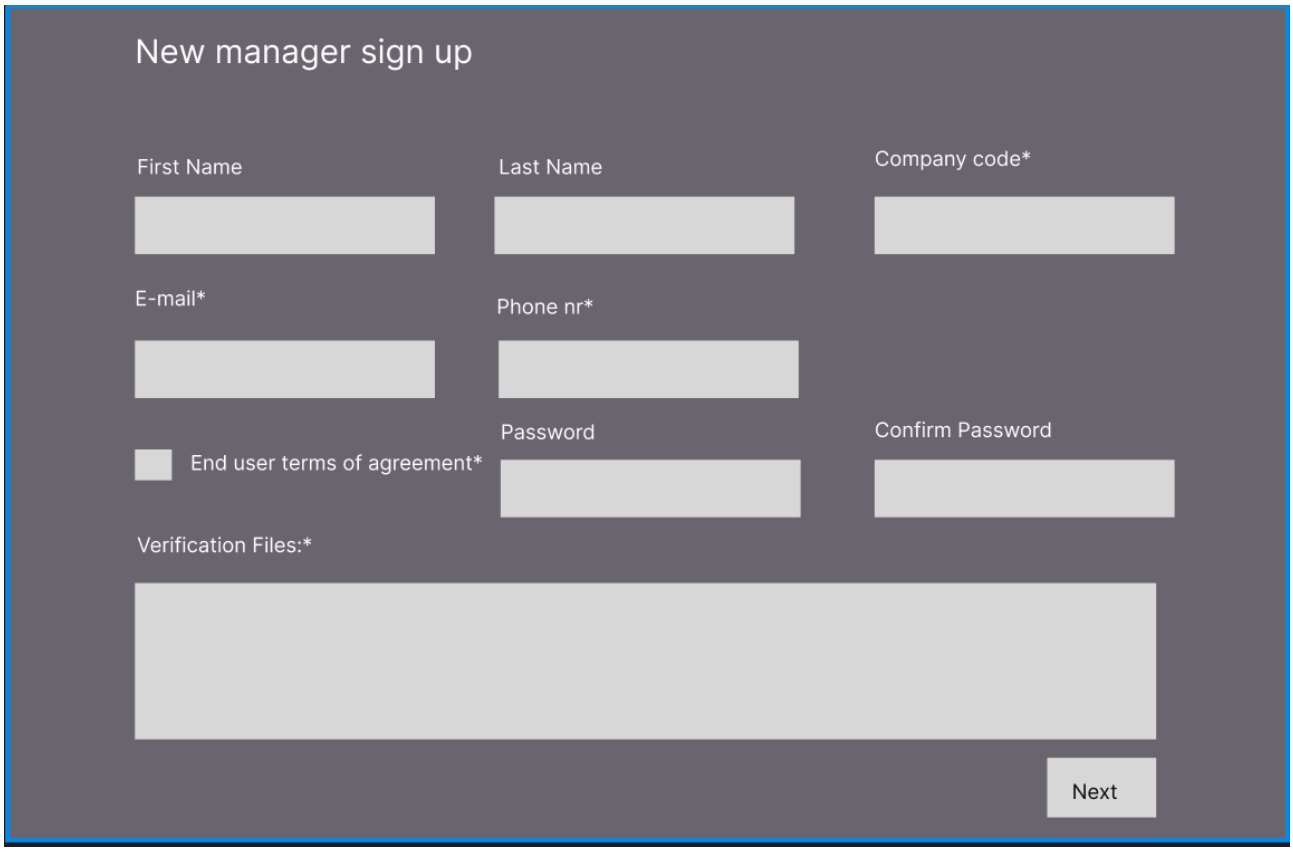
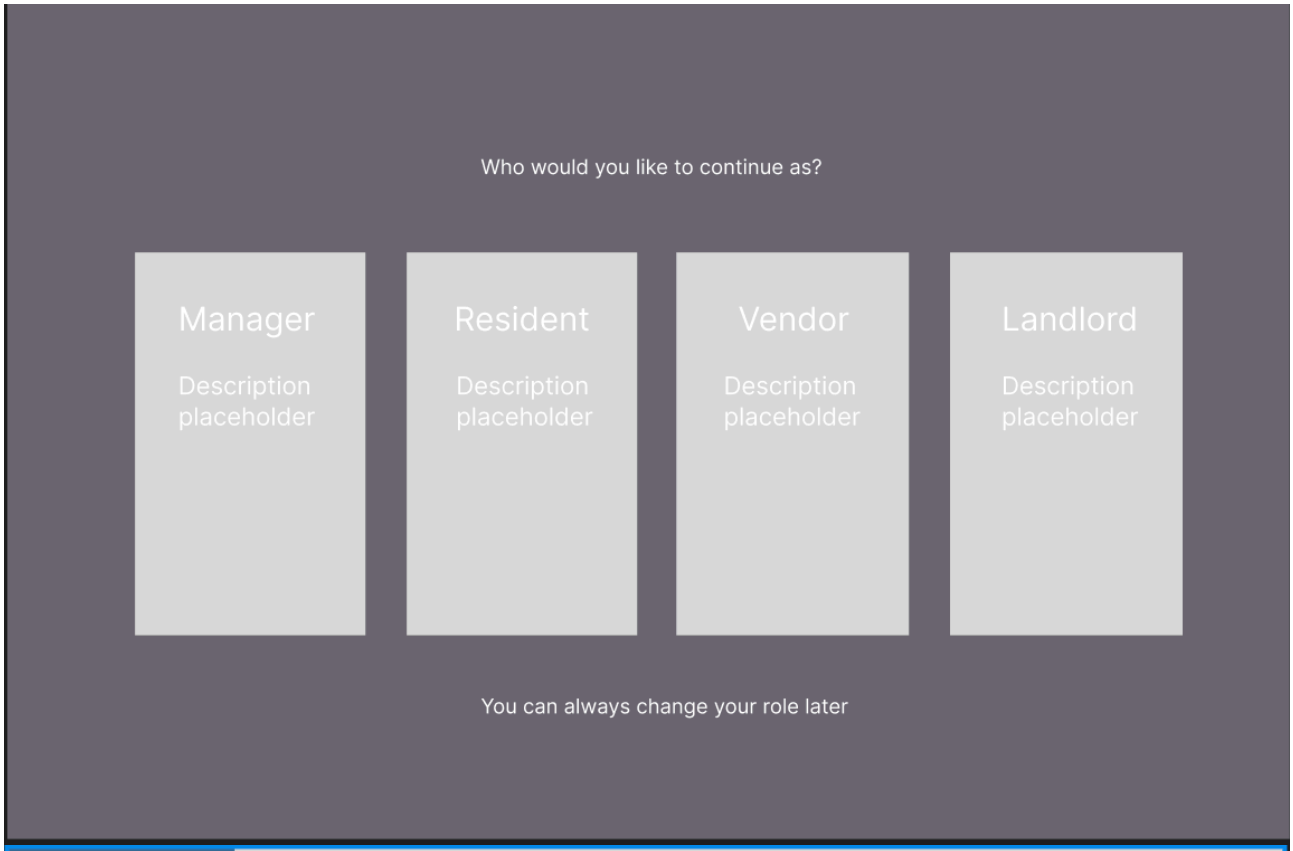
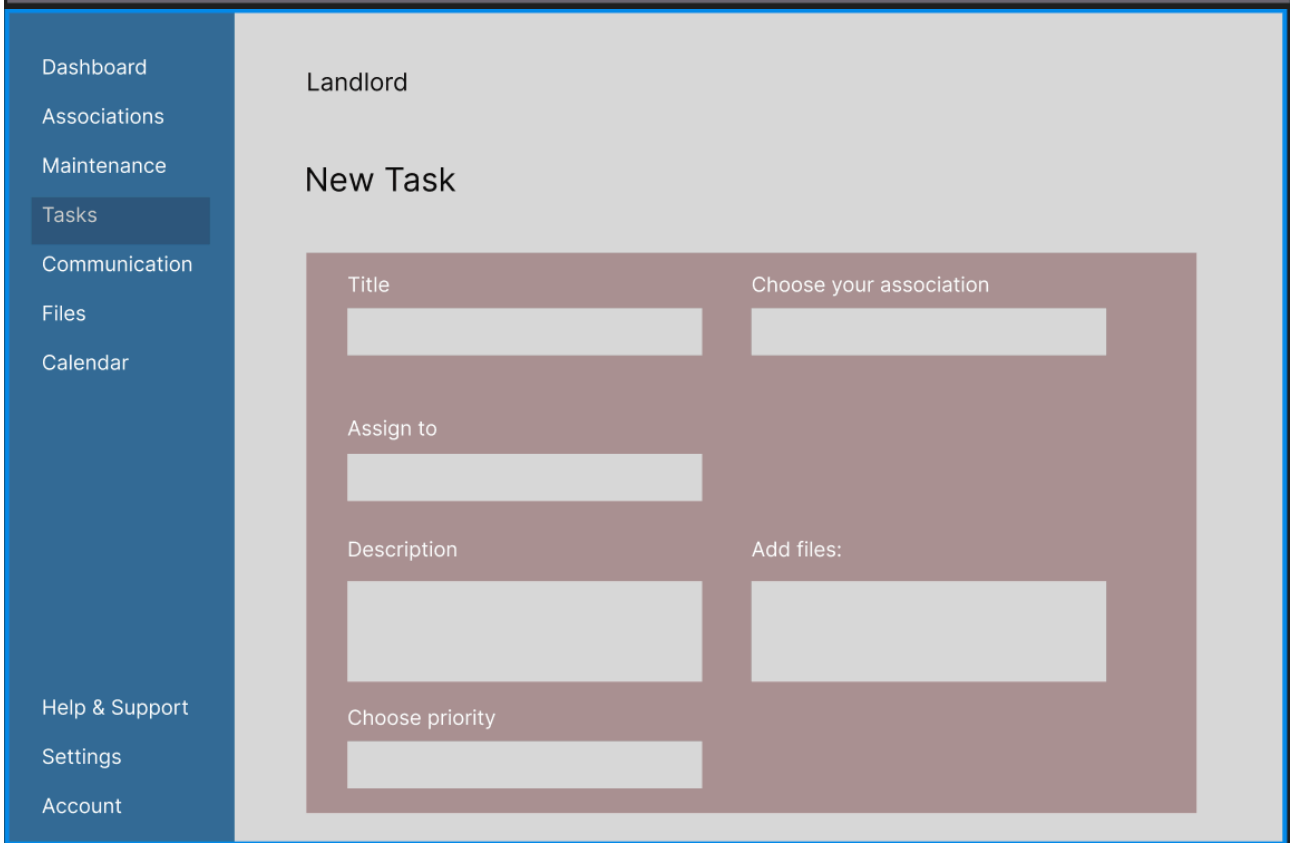


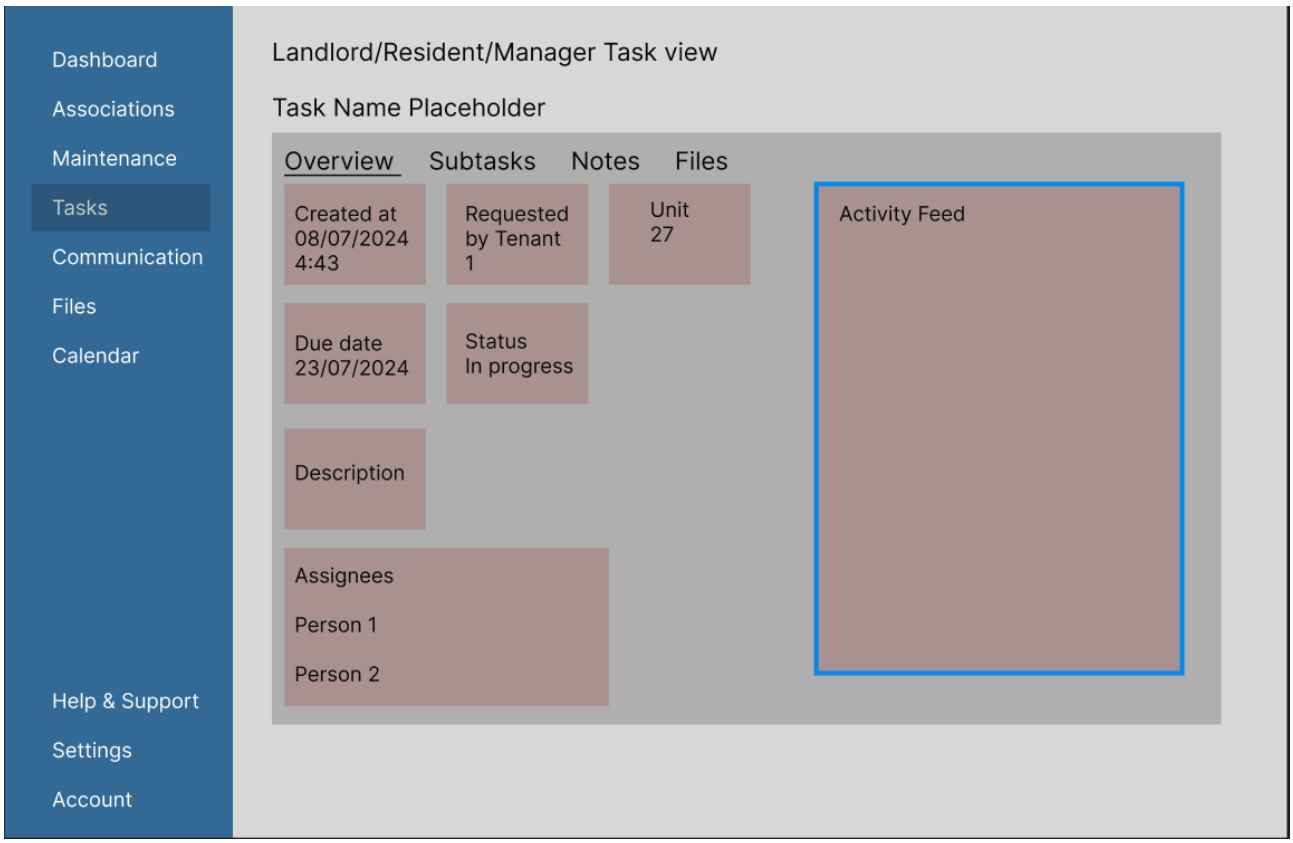
Diagram 2: Main client positive flow and view

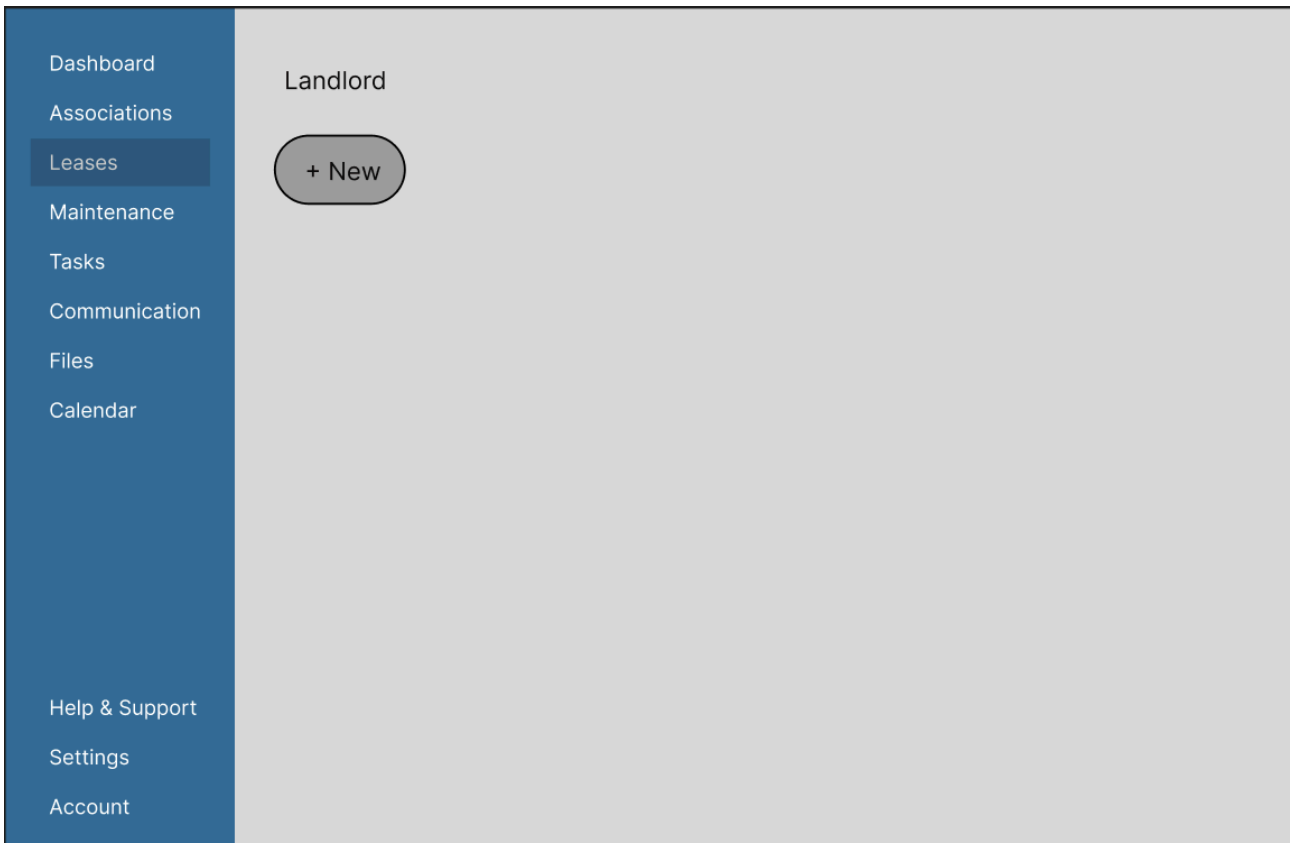


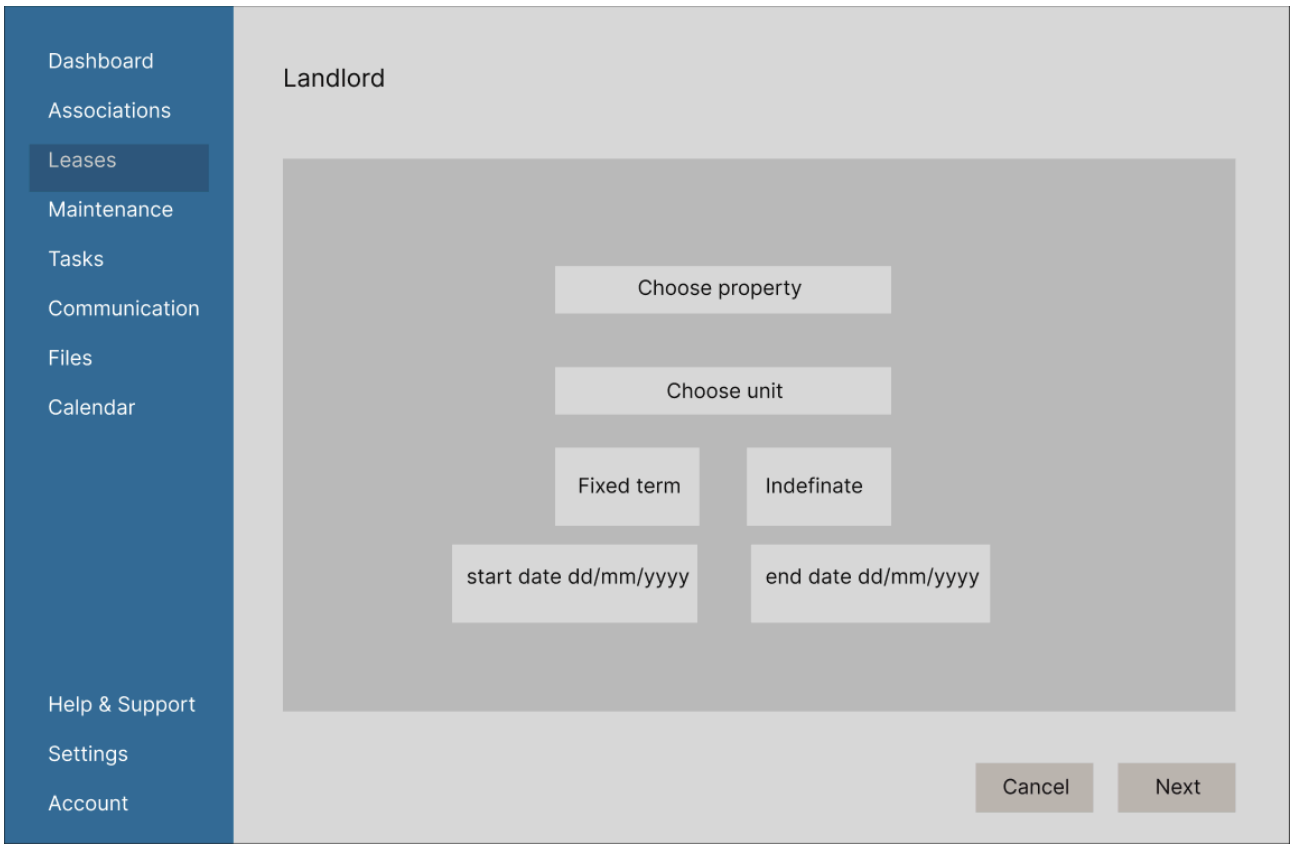



Who would you like to continue as?
Manager
Description placeholder
Resident
Description placeholder
Vendor
Description placeholder
Landlord
Description placeholder
You can always change your role later

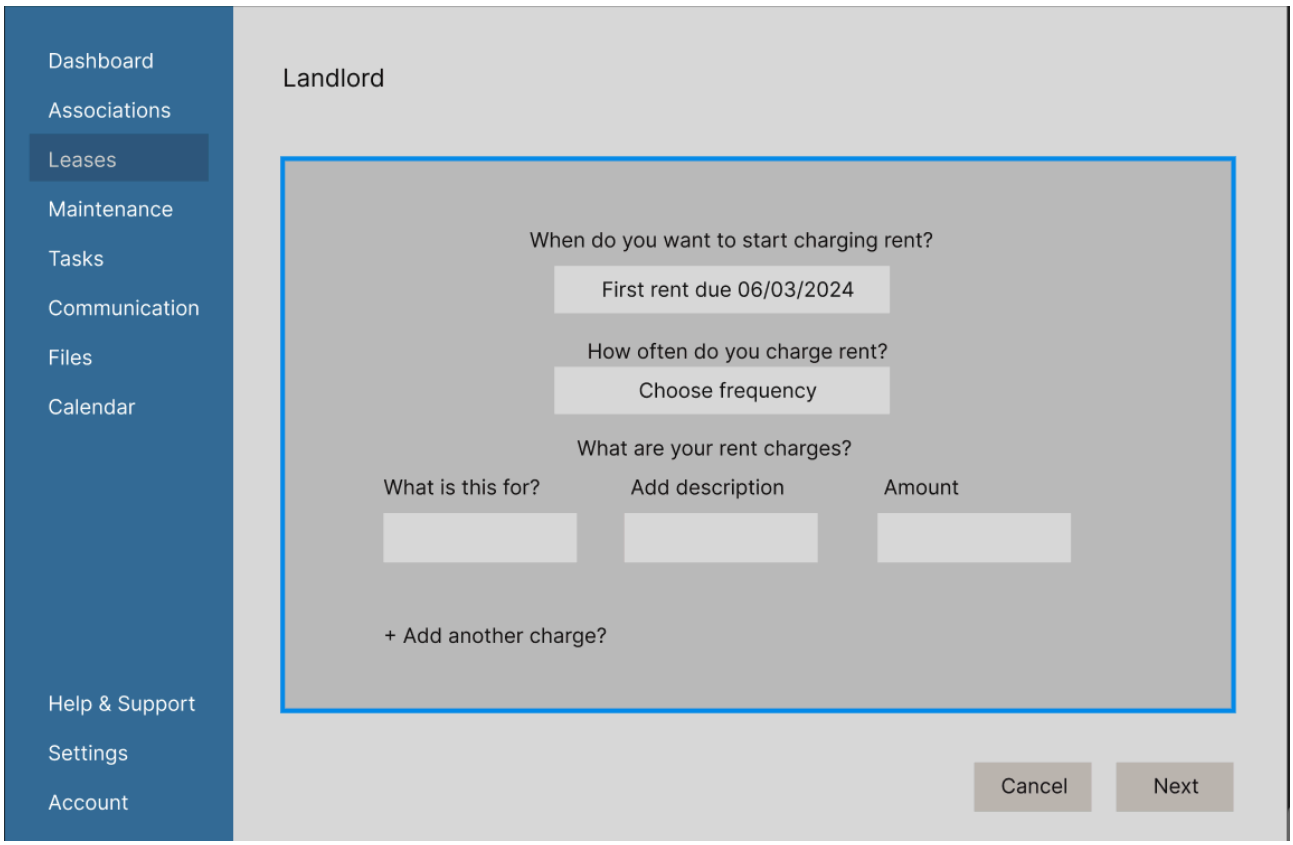

Dashboard
Associations
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Landlord
New Task
Title
Choose your association
Assign to
Description
Add files:
Choose priority

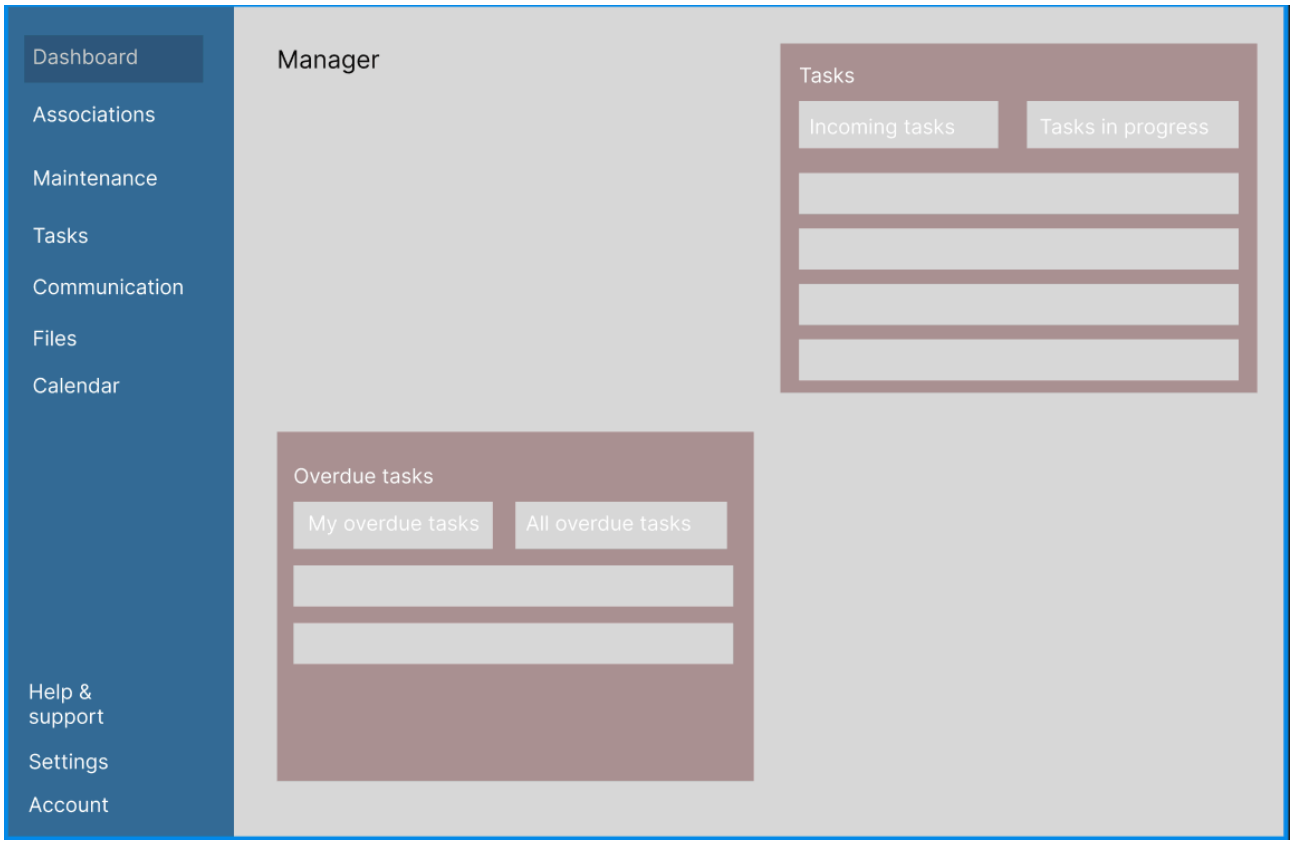

Dashboard
Associations
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Landlord/Resident/Manager Task view
Task Name Placeholder
Overview
Subtasks
Notes
Files
Created at 08/07/2024 4:43
Requested by Tenant 1
Unit 27
Due date 23/07/2024
Status In progress
Description
Assignees
Person 1
Person 2
Activity Feed


Dashboard
Associations
Leases
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Landlord
+ New

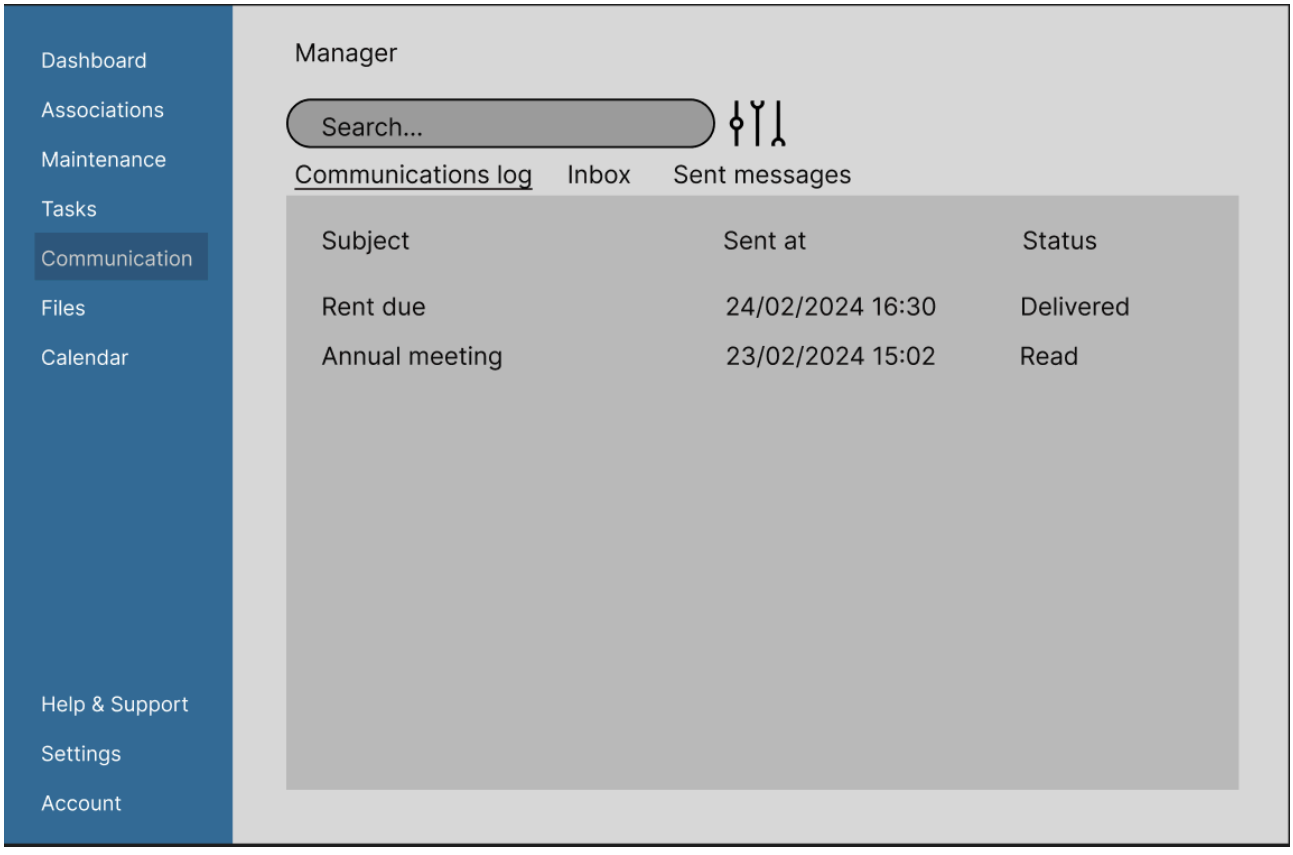

Dashboard
Associations
Leases
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Landlord
Choose property
Choose unit
Fixed term
Indefinate
start date dd/mm/yyyy
end date dd/mm/yyyy
Cancel
Next

Dashboard
Associations
Leases
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Landlord
+ Send tenant invite
+ New tenant
Cancel
Next


Dashboard
Associations
Leases
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Landlord
When do you want to start charging rent?
First rent due 06/03/2024
How often do you charge rent?
Choose frequency
What are your rent charges?
What is this for?
Add description
Amount
+ Add another charge?
Cancel
Next


Dashboard
Associations
Maintenance
Tasks
Communication
Files
Calendar
Help & support
Settings
Account
Manager
Tasks
Incoming tasks
Tasks in progress
Overdue tasks
My overdue tasks
All overdue tasks

Dashboard
Associations
Maintenance
Tasks
Communication
Files
Calendar
Help & support
Settings
Account
Manager
+ Add new association
My associations


Dashboard
Associations
Maintenance
Tasks
Communication
Files
Calendar
Help & Support
Settings
Account
Manager
Search...
Communications log
Inbox
Sent messages
Subject
Sent at
Status
Rent due
24/02/2024 16:30
Delivered
Annual meeting
23/02/2024 15:02
Read