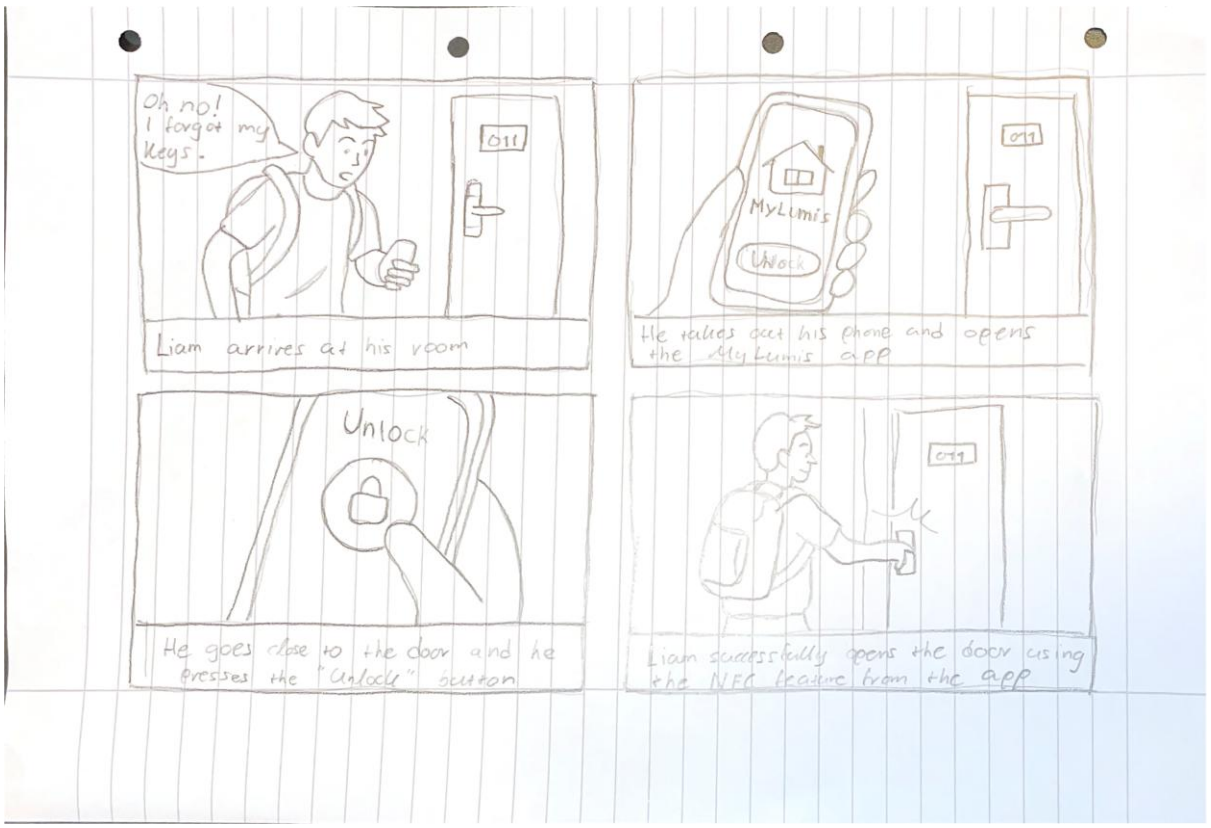
Activity 3: Exploration of Design Alternatives

Story Boards:

In this project, we used storyboards to visually map how users move through key moments in MyLumis, such as logging in, booking shared spaces, and responding to emergencies. Storyboards are especially helpful because they turn abstract UX ideas into clear and easy to follow narratives that everyone on the team can understand immediately as supported by (Nielsen Norman Group, 2018).


I'd like to use the cinema room and gaming room this weekend...
I would also want to book the gaming room from 10:00 to 14:00
She selects the study room and chooses 2 slots for 4 hours.
Bookings
Cinema Room
Events Lounge
Gaming Room
I want to book the cinema room tonight from 20:00 to 22:00
Emily opens the app and navigates to the booking page to book a room
Finally, no more arguements and fighting about the rooms
This is really convenient!
Emily successfully books the rooms.


Oh no! I forgot my keys.
011
Liam arrives at his room
Unlock
He goes close to the door and he presses the "Unlock" button
MyLumis
Unlock
He takes out his phone and opens the MyLumis app
Liam successfully opens the door using the NFC feature from the app

Low-Fidelity:

In the early stages of MyLumis development, we created four low-fidelity prototypes to quickly explore alternative layouts and interface structures for the app's core functionalities — Smart Booking, Door Unlocking, and Rent & Payment. Low-fidelity prototyping is described as a flexible, cost-effective technique used to test design concepts at an early stage, prioritizing layout, user flow and functionality over visual styling as stated by (Interaction Design Foundation, n.d.).

Design Exploration:

During this phase, four low-fidelity prototypes were produced: three effective designs exploring different interface layouts, and one intentionally poor design used for comparative evaluation. The designs were evaluated through brief peer feedback sessions with MyLumis residents.

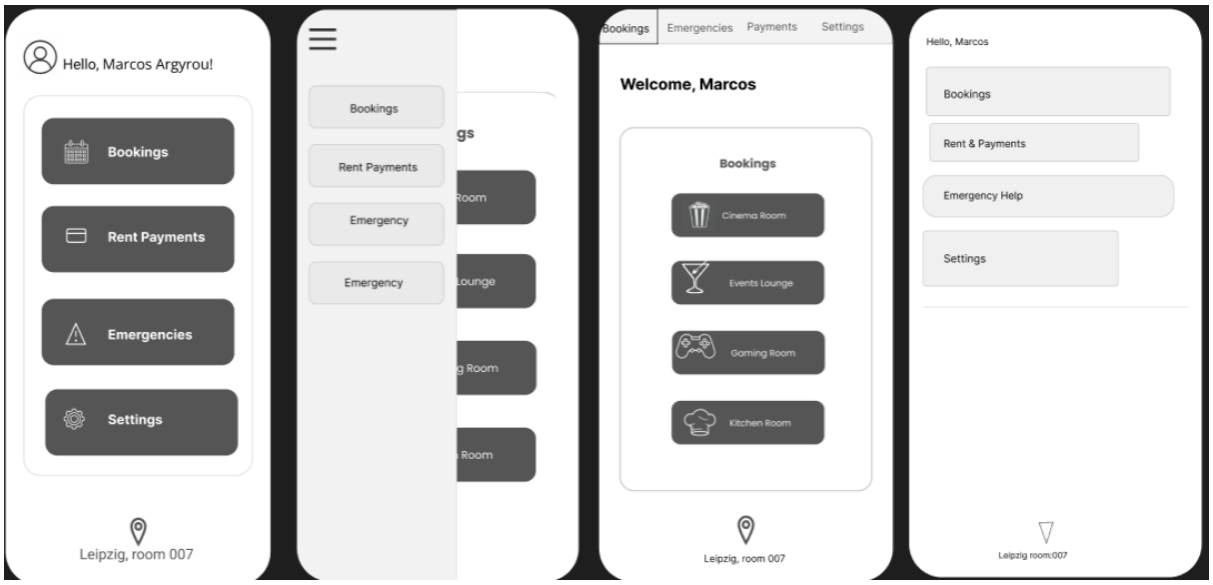
Scope

The scope of the prototypes was deliberately limited to the critical functionalities identified during requirements gathering accessing bookings, tracking rent payments, and managing emergency interactions. Additional features such as profile management, general building information, community tools, or aesthetic interface components were intentionally excluded to maintain focus on the most important user needs. Each prototype variation addressed the specific workflows within these three areas—selecting rooms, choosing time slots, viewing payment details, completing transactions, unlocking rooms, and accessing urgent assistance—while avoiding unnecessary system complexity.

Resolution

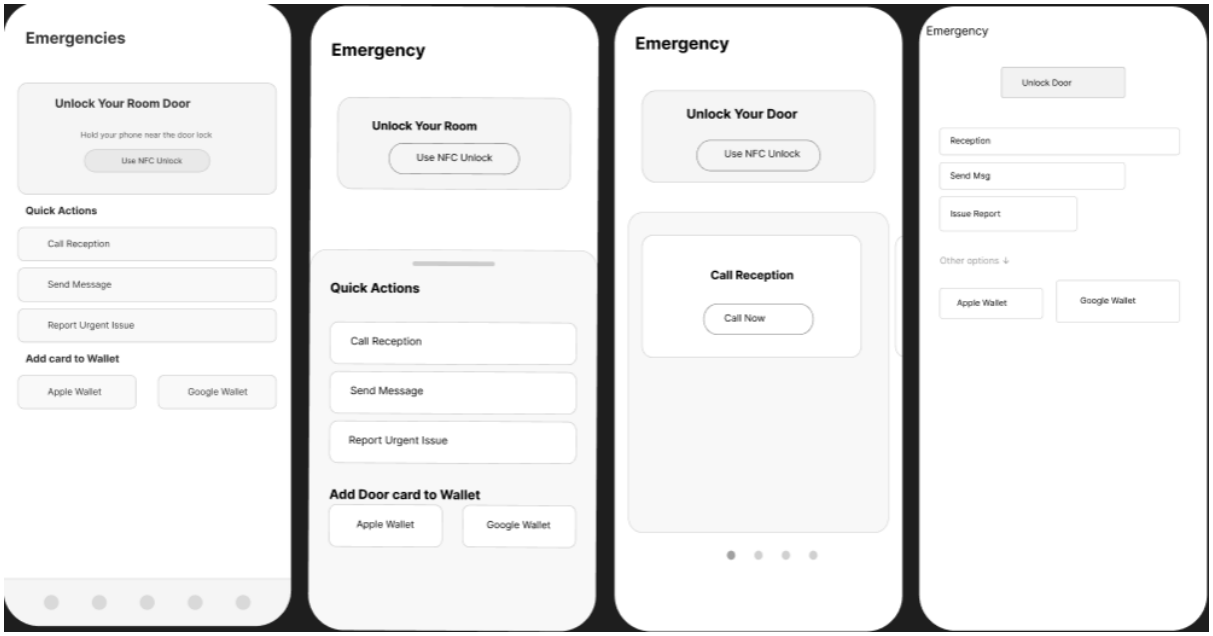
All prototypes were produced at a low-fidelity resolution, using monochrome wireframes, basic shapes, and minimal typography. This approach emphasized functional structure, task sequencing, and information hierarchy rather than visual design, color schemes, or branding. Low resolution allowed rapid iteration across many design alternatives, facilitated early evaluation, and prevented users from being influenced by decorative elements instead of the underlying usability of the layouts.

Evaluation and description that led to final choice:



We finally selected the first design alternative for the homepage. This was because it offered the most clarity and accessibility, presenting all the core functions Bookings, Rent Payments, Emergencies, and Settings right on the home screen. Both design team members believed that the button designs featured large, highly distinguishable buttons with a clear icon-label combination that could not be mistaken for anything else. Out of all the options, this one caused the least cognitive load and had the shortest average task time. It also correlated best with user feedback that asked for simple designs and features visible right away. Moreover, users don't want to put in too much effort to navigate paths to reach a relevant outcome.

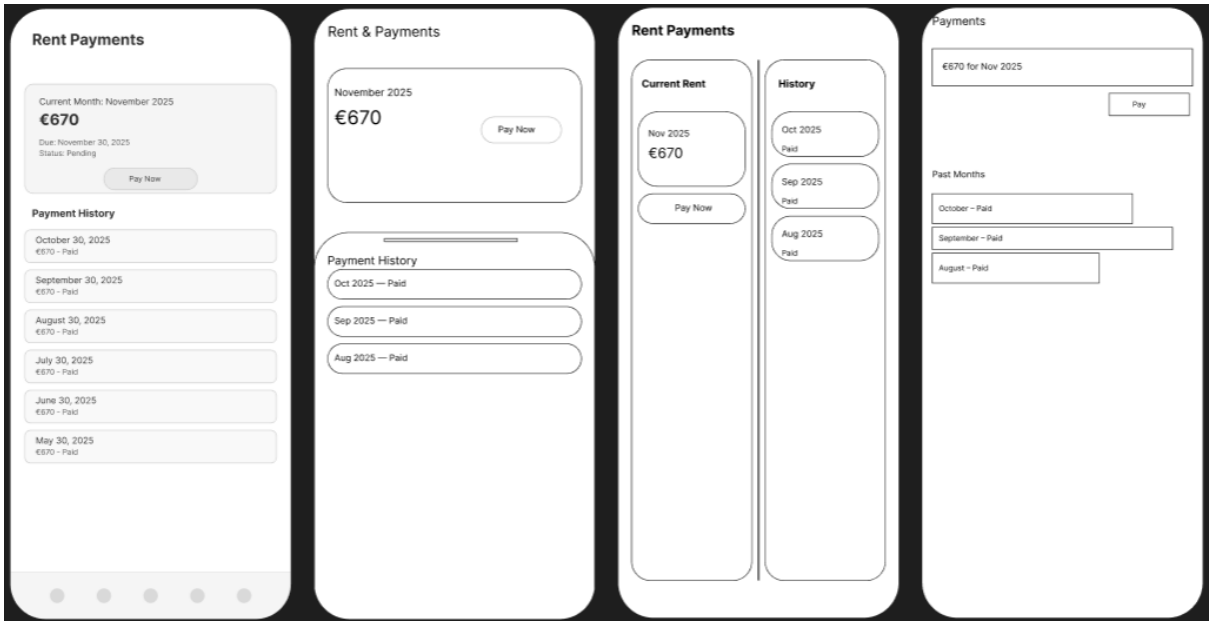
The other alternatives were not selected because they introduced unnecessary complexity: the side drawer navigation model concealed essential options behind an additional interaction step, the tab-based interface required users to scan multiple smaller targets across the top of the screen, and the minimalist list layout lacked strong visual hierarchy, increasing the risk of mis taps. In contrast, the chosen layout supported mobile ergonomics, one-handed operation, and core accessibility principles far more effectively. The intentionally poor design alternative was rejected because it demonstrated weak usability characteristics, including inconsistent spacing, poorly aligned elements, small interactive targets, and low discoverability, all of which could hinder users' ability to locate key functions, particularly in time-sensitive situations such as emergencies. Overall, the selected design provided the strongest balance of clarity, efficiency, and user-friendliness, making it the most suitable foundation for further development.



After feedback from the group, they chose the first emergency-page design because it has more coherent, organized and user-centered layout for a feature people may need to access under stressful or time-pressured circumstances. The product lists three essential functions in a neat and organized way: unlocking your door with NFC, executing actions in emergencies, and being linked to your wallet. The product lists the functions in a vertical and consistent manner. Each function is well-labelled and corresponds with a large and recognizable interaction area. This structure places the primary task of unlocking the door at the very top of the screen, allowing for easy access. The secondary tasks include calling reception or reporting an emergency, which are grouped further down the screen. The design minimizes thinking effort and compatible with accessibility principles; including one-handed use, high legibility, and error prevention.

In contrast, the other alternatives compromise usability in various ways. The sliding-panel design introduces an unnecessary interaction layer that could delay users during an emergency, while the layout with oversized central buttons disrupts the overall hierarchy by overemphasizing a single action.

The last design is obviously the weakest option. It has elements which are not aligned, buttons which are not same size, no spacing and weak grouping of related actions. Because of missing visuals elements, users may find it hard to quickly spot important functions. This can have negative consequences in critical situations. Thus, the first design offers the most reliable, effective, and user-appropriate solution.



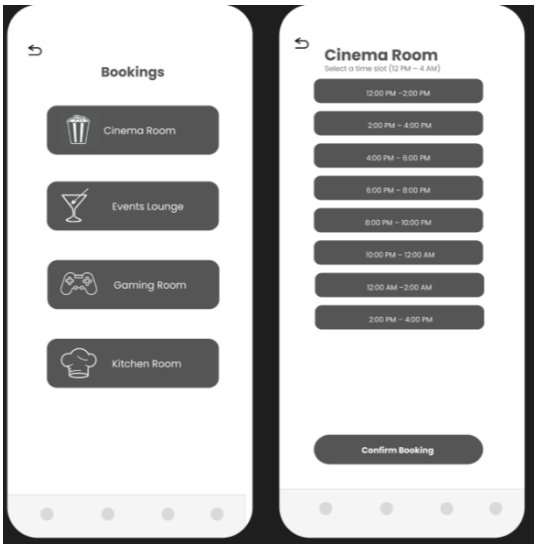
The first option for Rent & Payments design was selected because it has the clearest layout. Plus, it also has the strongest info-structure.

At the top, there is a well-defined container that places the current month's rent, due date, and payment status in a fact that is most important. The past payment history is presented as a clean vertical list with uniform spacings and sizing, making it easy for users to review past payments.

The second design was not chosen because its decorative separators and curved elements introduce visual noise that distracts from the financial information.

The third design is less effective because it splits the screen into narrow columns, compressing text and forcing users to scan in parallel rather than in a natural top-to-bottom flow.

The primary faults of the final design include the lack of proper spacing, inconsistent button widths, major misalignments, and poor grouping of related information. Add spacing, ensure button widths are consistent, properly align everything and group related information together. When we tamper with the brain's design, the results are not often pleasing. Overall, the initial design is the most straightforward and dependable for rent payment management.



Most members of the group voted in favour of the first bookings design with a two-page structure. They found that it provided the clearest navigation flow and the most intuitive interaction pattern for selecting rooms and time slots. Making two screens, one for choosing the room and one for choosing the time, reduces the cognitive load and also prevents the information on a single page from being overloaded. The first screen uses big room cards that are very clear with recognizable icons so they are easy to access. The second screen lists the time slots in vertical format so that the user can easily scroll and compare time slots to select one without confusion. This separation fulfills users' needs to book step by step to prevent errors in case.

The alternative designs were not chosen for specific reasons. The dropdown-based layouts place too many decisions on one screen, forcing users to repeatedly open and close menus, which slows interaction and increases the likelihood of mis-selections.

The tile-and-grid design distributes options across the page horizontally, making scanning more difficult and requiring more visual effort.

The final design is a bad design because it compresses timelines into small blocks, uses inconsistent spacing, and forces users to interpret a dense, overly technical layout, which is inappropriate for quick mobile bookings.