

Exploration of Design Alternatives

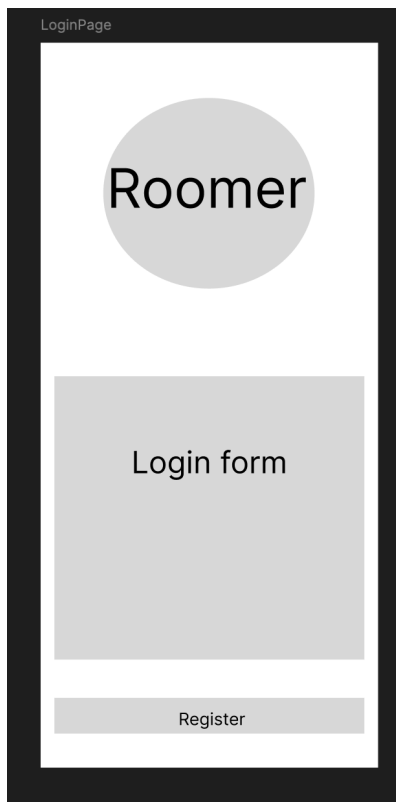
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1. Introduction

When approaching the design creation, it was essential to align creative ideas with core principals of good design to achieve both recognisable and unique look and high usability of the product. In order to determine future prime design basis, 4 low fidelity prototypes were created and analysed

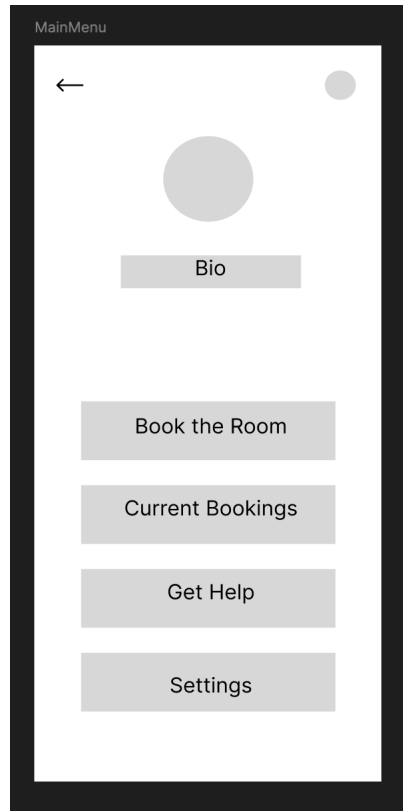
2. Design Prototype A



A1

Login Screen

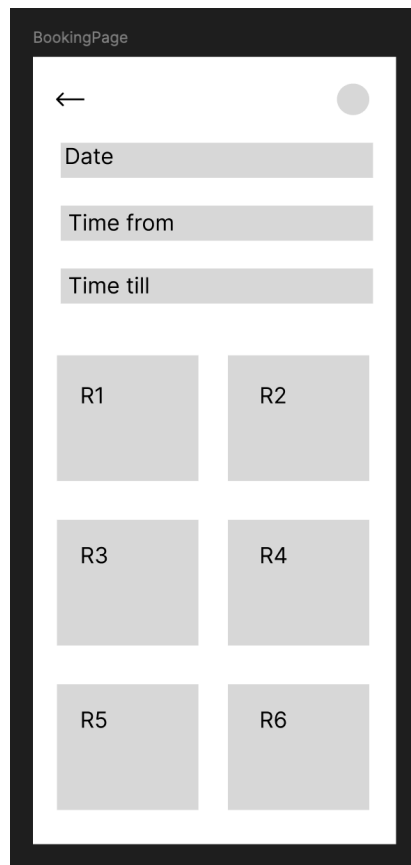
The following image presents the *Login Screen*, the first screen the user sees when opening the app. The *Roomer* app logo is positioned at the centre top of the screen, catching the eye and aligning with the idea of visibility and establishing the product's purpose. The login form is positioned at the finger level of the phone user, to ensure comfortable and fast tapping and the ability to perform all necessary actions with one hand. One of the most important requirements for the login screen is not to confuse the user with a complicated sequence of actions. Therefore, the login screen preserves only 2 necessary actions: Login and Register.



A2

Main Menu

For the *main menu screen*, the *central* top position is taken by the user avatar and bio, ensuring successful login and identity details and allowing quick access to visible account elements. The menu with all primary functions is positioned at the centre. Sticking to four main actions ensures that the menu is clear and easy to understand, which improves usability. Reserved space on the top-right corner allows for adding extra action in the development process, which ensures flexibility. Additionally, at the top left corner, the space designated for going back to the previous screen action is preserved. Ensuring the designated position for crucial actions at the early stage of the design process will help to avoid complicated changes and overlaps in the future.



A3

Booking Screen

The booking screen ensures by step-by-step application of filters to check the availability of the rooms. Design that separates the room display part of the screen ensures flexible ways to add and remove rooms with minimal interventions in the design. The colour system is planned to identify free and occupied rooms, as well as enough space between the rooms' labels preserved for other indications, to ensure robustness and avoid relying solely on colour. Filtering menu fields are big enough for comfortable selection and visibility.

Help

←

Enter your full name

Select a room

Describe the issue:

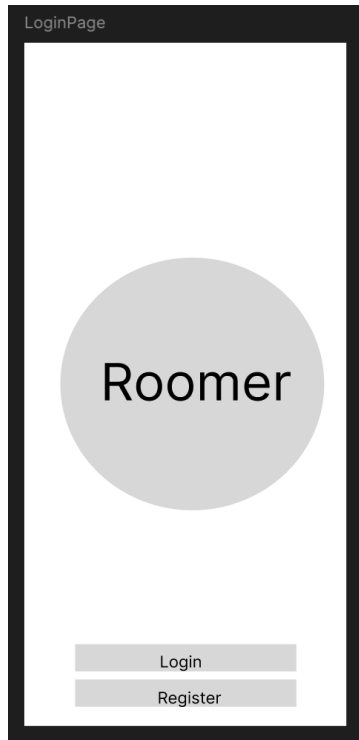
Add photos

A4

Help Screen

Help Screen allows users to report issues, problems and questions to the facility management. This screen presents understandable functionality and all necessary functions to process reports in a clear and structured way. *Select a room* and *Full name* fields ensure necessary information for processing the request and providing feedback to the user is set.

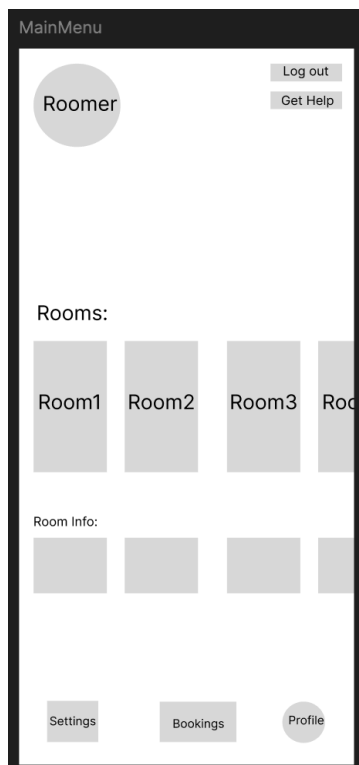
3. Design Prototype B



B1

Login Screen

The following image presents the *Login Screen*. We come across with the Roomer logo which is centered prominently in the center of the screen. It instantly draws visual focus. Below the logo there are the Login and Register buttons, aligned horizontally at the screen's bottom, positioned for optimal thumb accessibility to facilitate effortless one-handed interaction during entry. The *Login Screen* is simple and focused. It shows only essential elements (the app logo, login button and register button). Limiting the interface to these core components prevents user overwhelm. Research highlights the importance of simplicity and demonstrates minimalistic designs enhance user retention by lowering cognitive barriers (Verkijika, 2020).

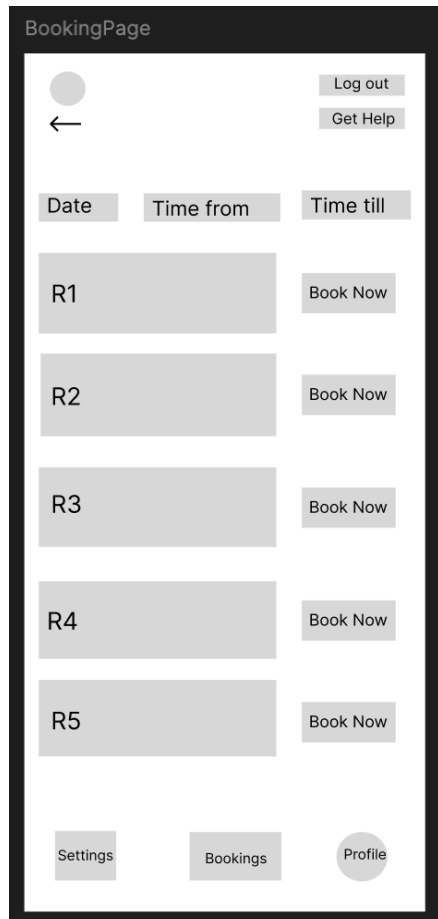


B2

Menu Screen

On the main *Menu Screen*, the app logo is positioned at the top left side, leaving the right side for the Log out and Get Help buttons which are not the primary purposes of the app. However, including them ensures that the users find their way easily. Room listings appear in the central section. It is placed to attract direct focus toward the app's fundamental goal of room selection. Central positioning optimizes visual engagement and user retention (Zhu, T. and Yang, Y., 2023). At the bottom, lies navigation elements: Settings, Bookings, and a Profile icon. This enhances internal consistency across

screens and empowers users with intuitive control over movement. This structured arrangement simplifies pathfinding. This idea is supported by multiple researches which demonstrate that bottom-placed navigation bars align with ergonomic principles to boost overall app interaction efficiency (Martinsson, 2017), (Korala, 2024).

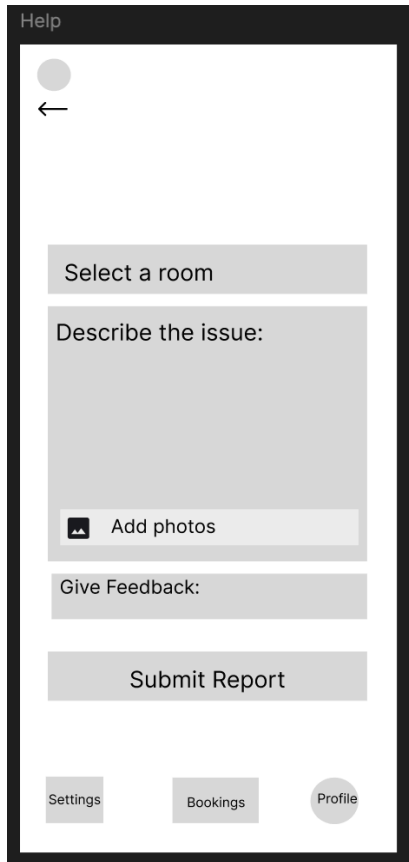


B3

Booking Screen

The *Booking Screen* incorporates an arrow, indicating going back to the main menu page, in the top-left corner. with Date, Time from, and Time till input fields laid out side-by-side has a step-by-step flow which minimizes confusion regarding the booking action. This horizontal field placement is supported by "How should form input fields on a landscape tablet be positioned...", advocating for adjacent placements to enhance space utilization and reduce navigational friction on mobile devices. Furthermore, the available rooms are presented like a list, arranged one below the other, each listed room accompanied by an adjacent "Book Now" button, which diminishes interface intricacy by permitting instant reservations directly within the listing without necessitating supplementary pages. "Book Now" buttons carry the features mentioned in multiple

researches, which state that contextual button integration is shown to elevate discoverability and minimize user pauses during tasks (Thimotheo *et al.*, 2015), (Korala, 2024).

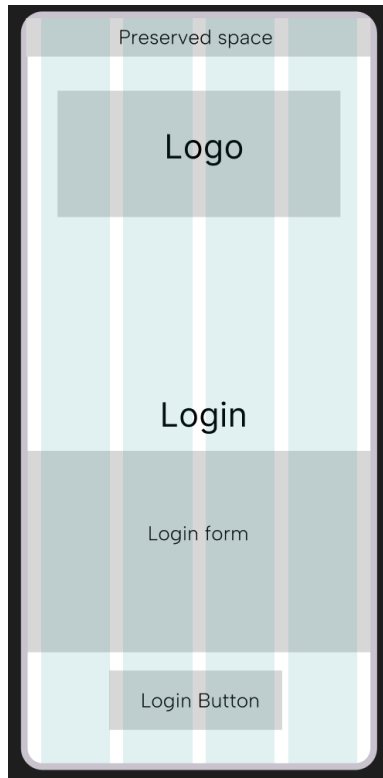


B4

Help Screen

Continuing with the *Help Screen*, we again see a back arrow at the top left, indicating going back to the previous page. Once more, at the bottom, lies navigation elements which enhance internal consistency across screens and empowers users with intuitive control over movement. Moreover, the screen has a guided top-to-bottom workflow that logically builds the report step by step. Locating the photo addition option right after the description field prompts users to include visuals promptly after articulating problems, optimizing the process flow. This stacked arrangement emphasizes vertical layouts for creating scalable, accessible forms that improve completion rates in mobile environments (Satpathy, 2020).

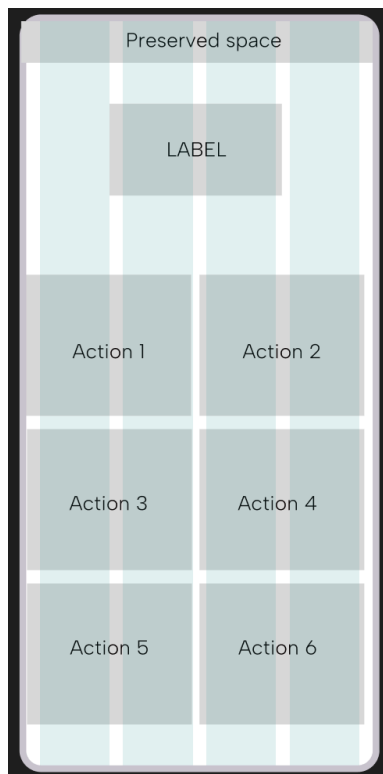
3. Design Prototype C



C1

Login Screen

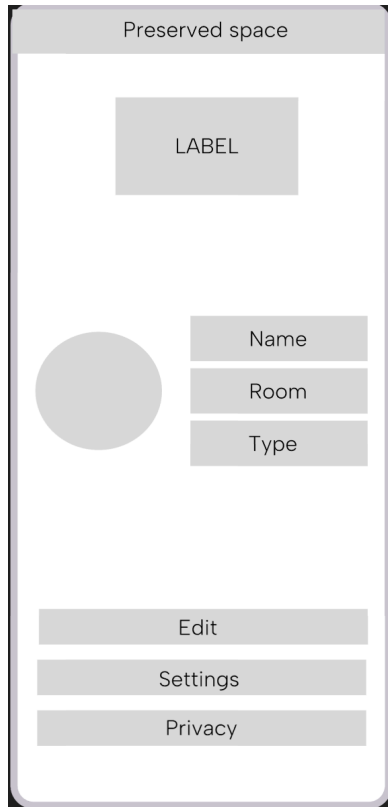
The *Login Screen* dedicates the upper part of the screen for the product logo, considering it is the first page that the user sees, enough space is preserved to make the logo centric and recognisable to clearly indicate the product. The bottom part of the screen is dedicated to the labelled login form. Clear forms and a comfortable font size align with the Minimalism design principle (Webflow Team, 2025). The bottom position of the login form and button helps users comfortably fill out all necessary information and navigate further.



C2

Main Menu

Main Menu screen follows the principle of Consistency and preserves the same shapes and font style for buttons. The action part, which takes two thirds of the screen, consists of same-style buttons. The position of the actions buttons allows flexibility to change the amount of available actions without redesigning the screen.



C3

Account Page

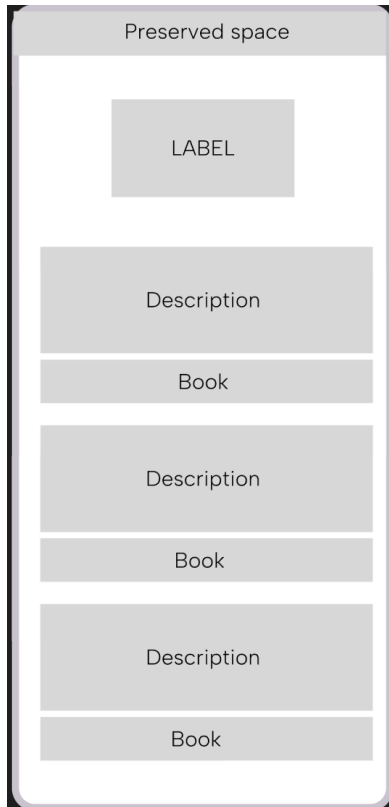
The Accounts page provides a visual user profile following with text box labels in the center of the screen to grab direct attention of the user. The buttons below are extra features designed specifically for the user profile. The buttons are placed near the bottom of the screen for easier finger navigation with adequate amount of space between each button to prevent misclicking.



C4

Personal Bookings

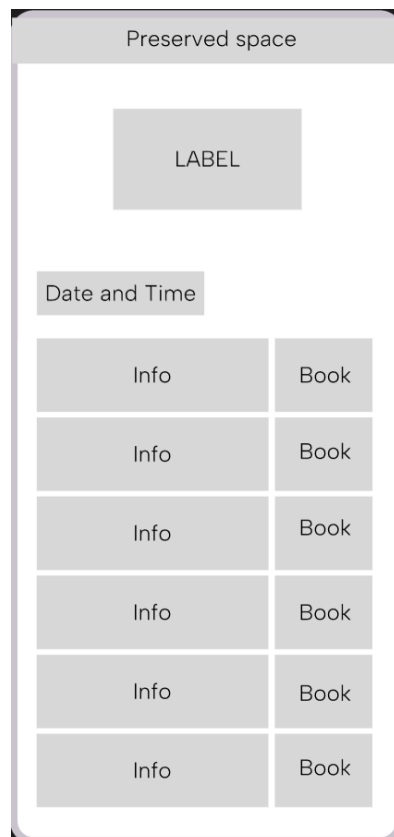
The structure of the app follows the main structure of using geometric menus and actions. Description is slightly larger than and placed above the action boxes, to signify importance by using a hierarchical structure of elements. Elements that are part of one group: Description, Action 1 and Action 2, have smaller separation between elements so but larger distance between different bookings to tell the user when the new element starts.



C5

Reserve Rooms

The geometric element structure has remained, however there is a larger size difference between the functional button and menu description. This allows users to comfortably read the description first before viewing the button below. Moreover, creating larger elements fills the screen which keeps the minimalistic look as well as improves usability as users are more comfortable viewing and navigating the screen. By filling the screen with the core objective elements, it focuses the users attention mostly towards their goals and not distract them with background visual features.



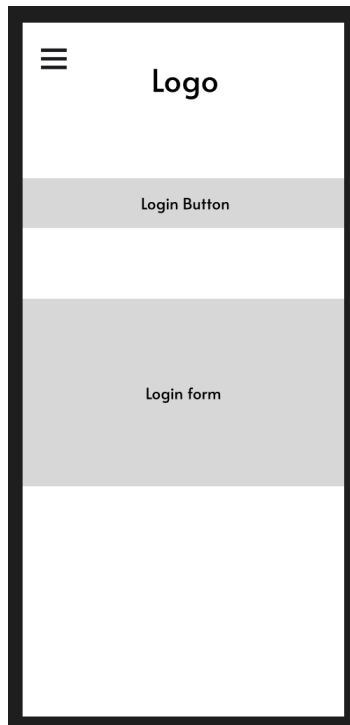
C6

Timetable

This screen displays the users options of the type of room they want to book and it is filtered by date and time via pressing the “Date and Time” box which will display a calendar. The box is a small element as this is an optional feature. The rest of the screen displays boxed elements describing the room type, date, time and cleanliness status. To add variety and maximise usage of space, the buttons were placed directly to the side of the information box. This also directly links the information menu and “Book” button as they are placed next to one another, this makes it easier for users to familiarise which button belongs to which menu.

4. Design Prototype D

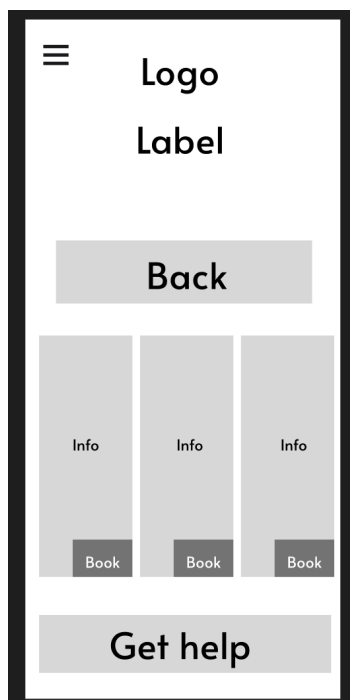
The design provided below (D) intentionally represents bad design practice. The given prototype is made with a goal to identify and analyse common mistakes and potential problems in the final design.



D1

Login Screen

The *Login Screen* is made using simple forms and a small number of elements to clearly demonstrate and focus on the following problem: The *Login Button* element occupies the top third of the screen, and the Login form is placed at the centre of the screen. Therefore, the principle of Physical Affordance is being violated, as the buttons' placement is made without consideration of the comfortable position of the hand and fingers of a phone user

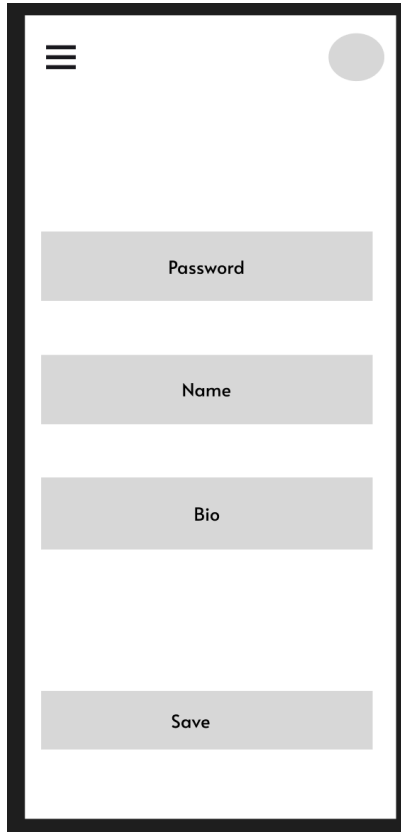


D2

Booking screen

The booking screen represents a common issue, often encountered in the complex design process, - overcrowding. The *Booking* screen violates the *Minimalism* design principle by containing a large number of irrelevant and confusing actions.

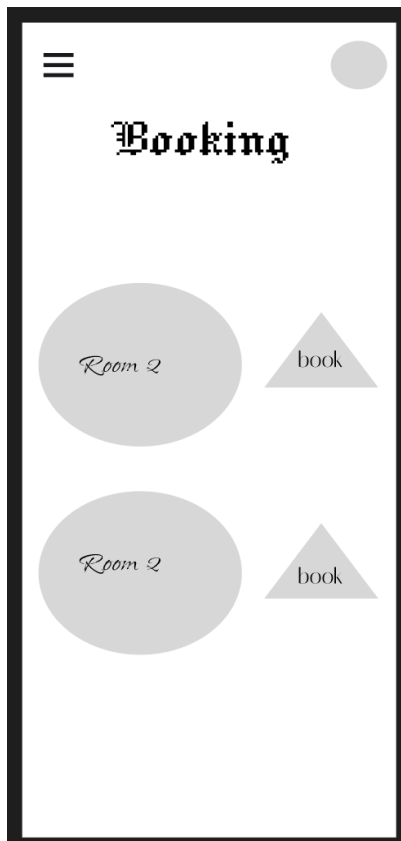
Such elements as the *help* button, logo, and separate *back* button are taking a significant portion of the screen while not directly related to booking operations. Therefore, space for rooms, room The information and booking buttons is limited, creating crowding and confusion.



D3

Personal settings screen

Provided the personal settings screen provides fields to change personal settings information. However, the given design represents a violation of the Visibility principle. A lack of a label field may confuse users, as it does not clearly indicate the shown page main purpose. Given design does not provide clear indications of actions that user should take to change their data, as well as contains no indications of current status of the data, saving and update status. Additionally, the small logo does not clearly indicate what account is currently being used.



D4

Booking Screen

The Booking Screen design represents the violation of the Consistency principle. The provided design uses different shapes for information and action button representation, which creates a confusing layout. Non-standart button shape may reduce usability by misleading the user. Different fonts and their size create additional informational noise. A complicated font for the room description may reduce the reading speed and create severe complications for users who experience difficulties reading.

6. Conclusion

Exploration of the design alternatives provides a deep overview of different design practices and solutions. After critical analysing Design Prototype A, Design Prototype B and Design Prototype C, it was necessary to work through common problems in the development. Prototype D was created to reflect on and highlight potential issues in the final project, intentionally employing poor design decisions—such as unreadable and inconsistent fonts and confusing button shapes—to expose what should be avoided. It was important to evaluate how well each prototype aligned with good design principles, which was later discussed in the reflection section.

After examining the alternatives and analysing design patterns, we concluded that Prototype B had poor placement of essential components, such as the account and logout options, which would be better located in a settings page. In addition, the logo was not centered, which contradicted conventional design practices. Prototype A showed layout issues in the main menu and other pages. Prototype C, however, combined the strongest features of both without inheriting their major flaws.

Therefore, after careful consideration, we decided to continue development with **Design Prototype C.**