

Prototyping

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1.About the Prototype:

The high-fidelity prototype was developed by using Figma, with following the horizontal scope approach, by implementing all requirements: Dashboard, Account, My Booking, Reserve Room, Complaint, Submit Cleanliness Photo and view status of room. However, these features are not fully functional but represent the logic and approach clearly.

The prototype is designed to offer the residents a “homey” and calm feeling by including simple and consistent geometric structures, vibrant colors, familiarity and consistency throughout the app.

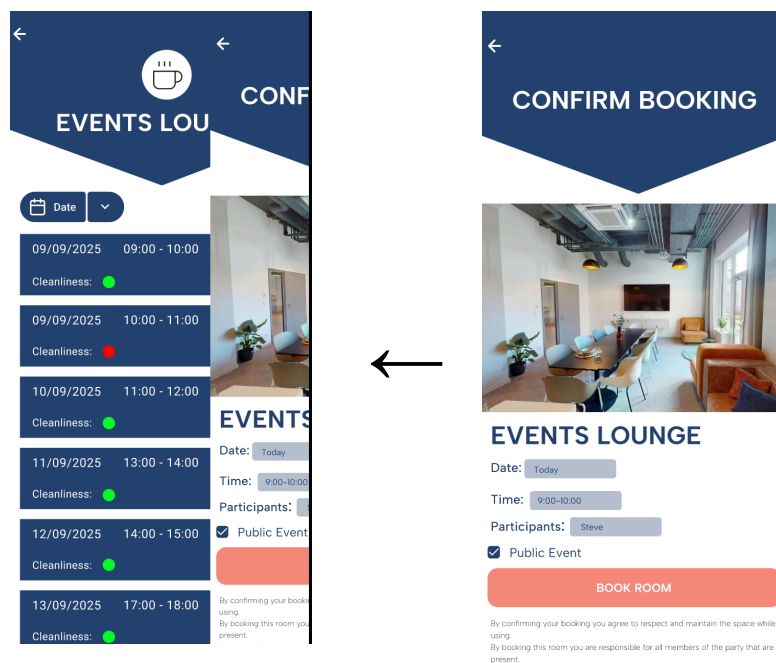
2.UI and Error Handling:

In order to make navigation in the map more intuitive and more emotionally engaging (Pressley, 2024), many design features were implemented. For instance,most of the buttons changed their shape or color to show the user they are clickable.

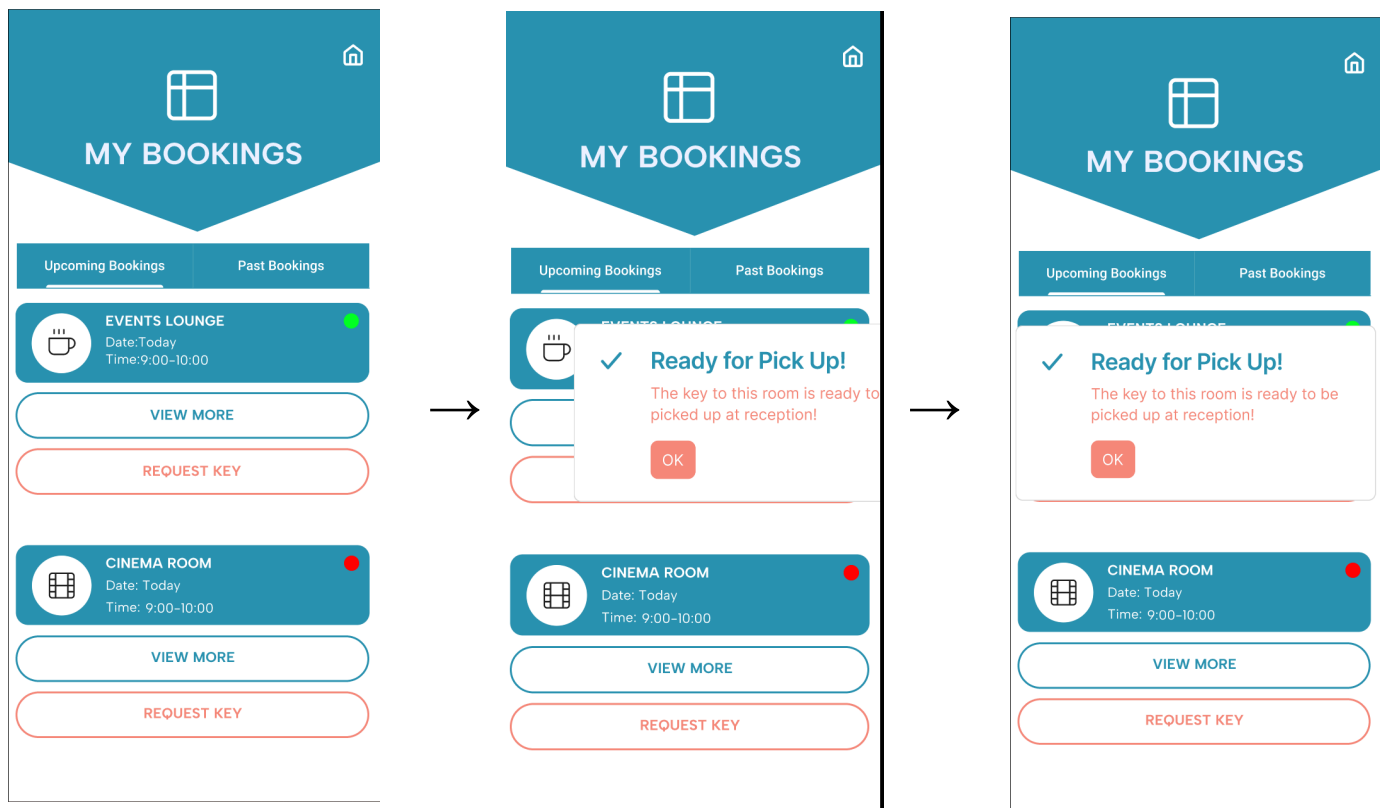




Also, animation for swiping screens were added to resemble interaction with an actual book. This way we avoid instant changes, making overall interaction smoother and more appealing.



The same principle applies to pop-ups.



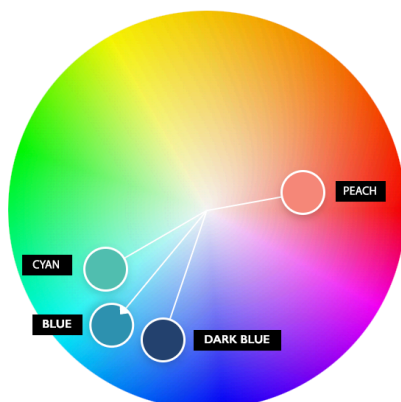
Also, some information that is displayed on some screens are loaded dynamically, depending on what action user made previously.

3.Color Palette:



The app is specifically designed for users who reside in the “Lumis” accommodation. Therefore, the high-fidelity prototype was designed using four of the company colors of the “LUMIS” logo (Figure 1): Cyan, Peach, Dark Blue, Blue (Figure 2). The company's primary and secondary colors were purposefully selected to establish recognition and trust whilst the resident uses the app. Reusing familiar colors creates consistency, maintains professionalism and deepens trust through the users view point.

(Figure 1: LUMIS Logo)



The primary colours for “The Roomer” are three analogous shades that represent various sections and subsections: Cyan, Dark Blue, and Blue. The blue colours were chosen as

primary colours because they create harmony and cohesiveness between different parts of the app. Additionally, the secondary colour is Peach as it is complementary to the analogous Blues (Interaction Design Foundation, 2022). The Peach colour is primarily used in buttons, some interfaces, and accents. Using the primary and secondary colours accordingly reduces cognitive load. It enhances visibility, with the blue colour harmony representing the central systems and the contrasting colour drawing focus to functional elements.

(Figure 2: Color Wheel)

Login Page:

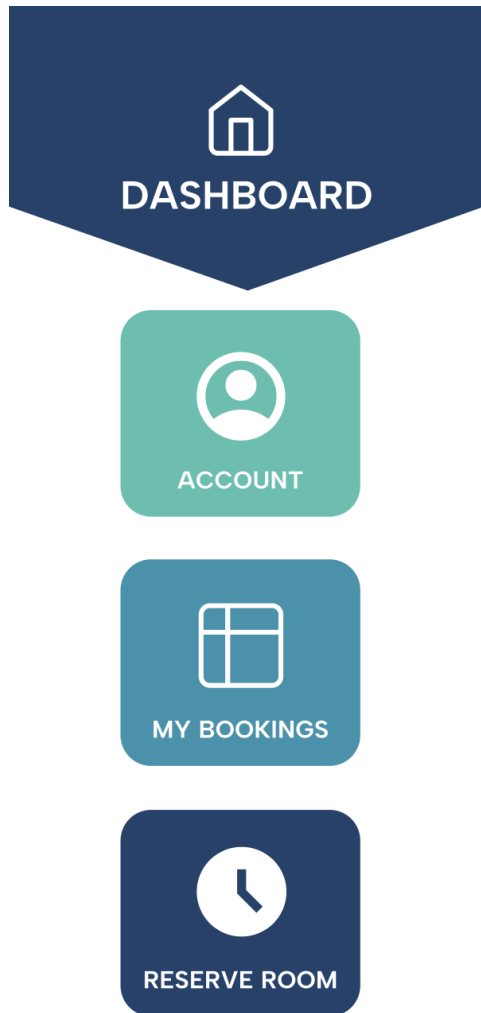
(Figure 3: Login Screen)

The login screen features a dark blue background with a white geometric shape resembling a house's rooftop. At the top, the 'Roomer' logo is displayed in a dark blue serif font, with a light peach circle behind the 'o'. Below the logo, the word 'LOGIN' is written in a bold, white, sans-serif font, underlined with a thin light blue line. Underneath, the text 'Email/username' is in a small, light blue font, followed by a white input field containing the text 'admin'. Below this, the text 'Password' is in a small, light blue font, followed by an empty white input field. At the bottom, a light peach rounded rectangle contains the word 'LOGIN' in a bold, dark blue, sans-serif font.

Opening the application directs the user to the Login Screen (Figure 3). The login interface is divided into two primary sections, distinguished by color: the upper white segment and the lower blue section. The upper white segment displays the centrally positioned logo to enhance visibility and prominently display the brand's name. The lower black segment is composed of a dark blue geometric shape that represents an organised login area. The geometric shape was intentionally designed to resemble a home's rooftop. Furthermore, the login section is clearly labelled in bold, white, underlined text reading "LOGIN" to attract attention to the lower portion of the screen. Below this label, smaller white text accompanied by input fields provides guidance regarding the required information and its respective location to be filled out by the user. Users are typically expected to enter a username or email in the first input field and a password in the second: obeying the standard User Input concepts. Following the input fields is the login button, positioned at the bottom of the screen and slightly smaller than the

other elements: however, the peach accent color makes it prominent against the dark blue background. Once the button is pressed, the user is taken to the Dashboard screen.

Dashboard:
(Figure 4: Dashboard)



The Dashboard functions as the applications Home screen, with a house icon symbolising the main page, following the standard interface conventions. This interface allows users to access core features of the applications: Account, My Bookings, and Reserve Room. The upper dark-blue geometric structure serves as a banner that displays the current user's location within the application. Furthermore, users are not required to rely solely on memory and recall to identify the screen they are viewing. The remaining sections of the application present the primary functionalities and menu options available for user selection and navigation. The program's three primary colours are Cyan, Blue, and Dark Blue, arranged from light to dark to ensure smooth visual transitions during browsing. Additionally, the colours assigned to each menu correspond to the main section's colour, making it easier for users to remember. Moreover, each menu button is accompanied by a unique icon related to the app section, aiding in pattern recognition through repetitive, distinctive icons that represent the core responsibilities of the app. These icons are slightly larger than the accompanying text but are deliberately paired for easier app navigation, enabling users to scan and recognise familiar icons. The overall design adopts a minimalistic approach, utilising the base colours to avoid unnecessary distractions, considering that short-term

memory is volatile, and users may forget or become distracted while pursuing their objectives. Once the user clicks one of the three following buttons, they will be taken to the assigned screen.

Account

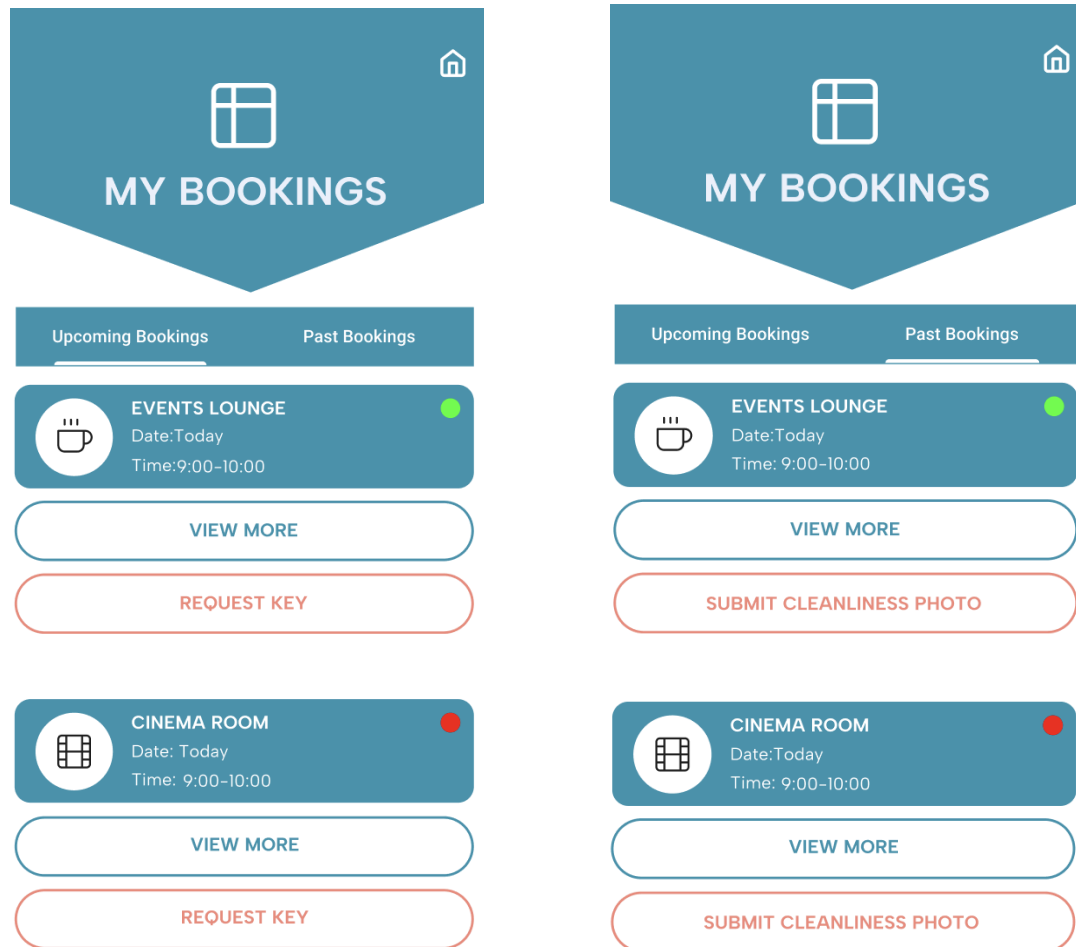
(Figure 5: Account Screen)



The Account page presents the user's general information, including Name, Age, and Status (Student or Admin). The colour scheme and icons on the Account page are directly correlated with those on the Dashboard's menu screen facilitating recognition and ease of navigation throughout the application by allowing users to identify sections through colour, text, and distinctive icons, accompanying textual and visual learners. At the top corners of the screen are navigational buttons: on the left is the logout button, which returns the user to the login interface; this button is unique to the Account section. The Dashboard button, imaging the main Dashboard "Home" icon, helps users recall and understand device navigation. The logout button features a distinctive icon consistent with standard interface conventions. The main section of the screen contains a large coral-coloured "persona" icon, which shall implement users inserting profile pictures to allow customisation: however, this feature is not functional on the prototype but serves a purpose of display. The lower portion of the screen shows rebound-edged rectangular viewing boxes that show only shallow user information. The boxes are aligned with the primary colour scheme of the Account segment of the app and provide a contrast against the white background.

My Bookings

(Figure 6: My Bookings)

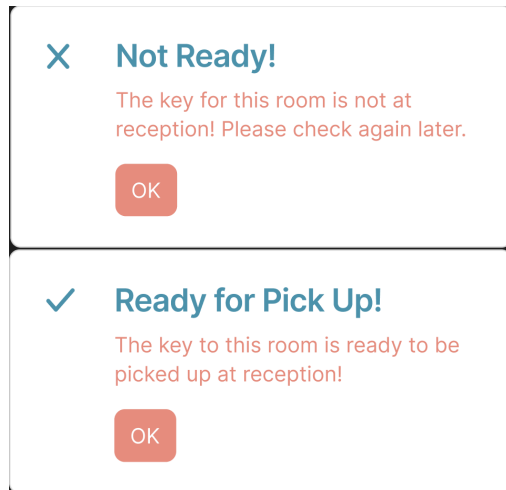


(Figure 6.A)

(Figure 6.B)

The “My Bookings” screen allows users to view their personal reservations, including upcoming and past bookings. To avoid overwhelming users with too many elements, functions or text, information about upcoming and past reservations is organised using clickable tabs that separate functionalities available before and after reservation completion. The initially visible tab is labelled “Upcoming Booking” (Figure 6.A). Beneath the tab menu, blue, rounded rectangular menu cards are used to attract users attention by applying high-contrast colours to prominent elements. These cards display minimal information, including Room Type, Cleanliness Status, Date, and Time. The Room Type text is slightly larger and in bold compared to body text, with icons to avoid recognition, catering to diverse user groups, including visual and text-based learners. The buttons on this interface have slight variations; the base and accent colours outline the rounded buttons. These buttons on this screen have slight variations; the base and accent colours outline the rounded buttons. These buttons are more rounded than the menu

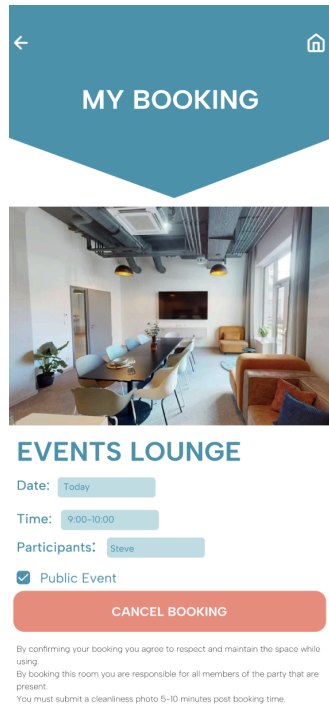
cards to create a visual distinction between functionality and user interface. Furthermore, the functional buttons are smaller and outlined in colour to minimise visual distraction from the menu cards. The “VIEW MORE” button, outlined in blue and positioned directly beneath the menu card, opens a detailed view of the user’s booking information; hence, the colour remains



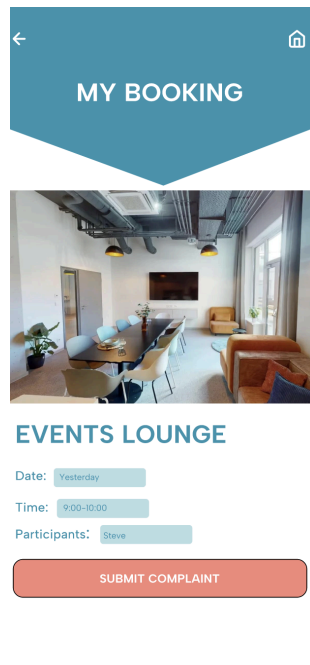
blue. The coral accent button labelled “REQUEST KEY” displays a pop-up notification indicating whether the key is ready for pickup at reception. This segment is formatted as a pop-up message to prevent user confusion and reduce cognitive load from repetitive tasks. Additionally, this approach reduces frustration from navigating multiple options: users can click “OK” after reading the message without returning to the top of the screen by using the navigational buttons such as “Dashboard” or “Back”.

If the user clicks the “Past Bookings” tab (Figure 6.B), they are directed to a similarly structured menu, except that the “REQUEST KEY” button has been replaced with the “SUBMIT CLEANLINESS PHOTO”

button. This button takes the user to a different screen where they can upload a photo of the room after the event to verify cleanliness (Figure 8.A).



(Figure 7.A)



(Figure 7.B)

The “VIEW MORE” button directs the user to the “MY BOOKING” page (Figure 7.A) associated with the selected menu. The image of the user’s reserved room is prominently displayed as the primary element, accompanied by large, bold text. Beneath this, general information regarding reservation: date, time, participants, and an interactive checkbox for indicating the user’s choice to make the event public or private. To create contrast against the blue theme the “CANCEL BOOKING” (Figure 7.A) or “SUBMIT COMPLAINT” (Figure 7.B) button is coloured in coral, reflecting the application’s secondary colour utilised for functionalities. The button is filled with colour rather than outlined to guide users on where to click and to provide visual variety. Below the button, grey subtext displays the general policies for utilising public rooms.

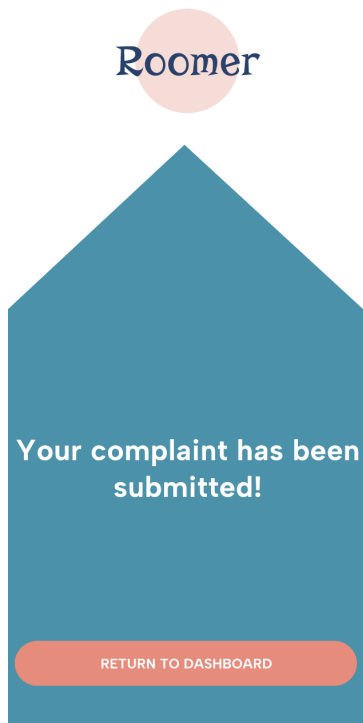
The “CANCEL BOOKING” button navigates the user to a final screen (Figure 7.C), which confirms the successful cancellation. The “SUBMIT COMPLAINT” button directs the user to the complaint screen (Figure 7.D).



(Figure 7.C)

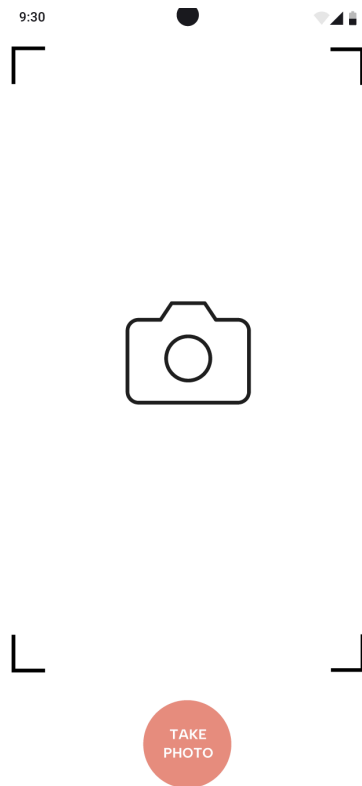
(Figure 7.D)

The “COMPLAINT” screen (Figure 7.D) is accessed via the “MY BOOKINGS” page. This is the section where users can submit a complaint. Since this section is accessed through the My Booking menu, the theme colour remains the same (blue), with coral pink used for the button. The information below the header is for viewing only, as the booking details have already been confirmed, as the menu selection is from “Past Bookings”. A large, partially transparent blue box indicates the “text box” area where the users can write their complaint, with supporting textual guidance provided. To avoid overwhelming users with too many bright and contrasting colours, the main element (text box) has been made subtly transparent to reduce brightness and create a softer visual experience. Once a complaint is submitted, users are reassured by the subsequent gratitude screen (Figure 7.E), confirming that their complaint has been received.



(Figure 7.E)

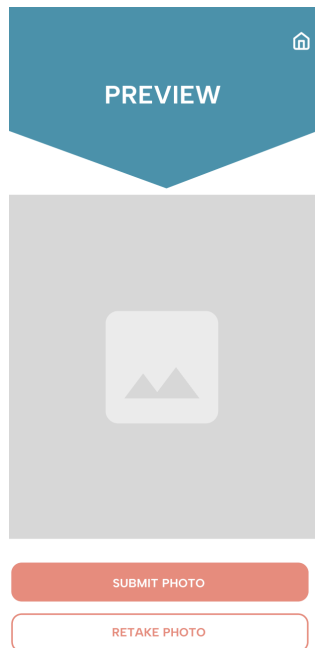
Cleanliness Submission Screen



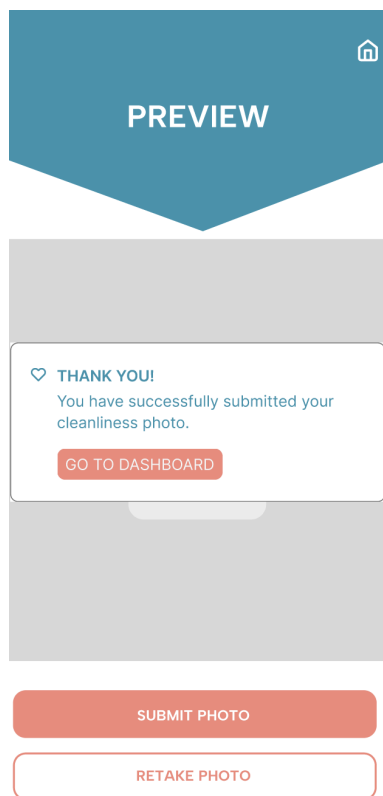
Once the user selects the “SUBMIT CLEANLINESS PHOTO” option below past bookings (Figure 6.B), the camera view opens (Figure 8.A). In this prototype, the camera is indicated by the black borders and a camera icon. The coral button is round, the same as camera buttons on phones, which helps activate user recall since many users are familiar and comfortable with this design choice. Additionally, this separates the typical button functions, as the other buttons on the screens are long and mostly rectangular which are used for mostly navigation.

After the user takes a photo, they are directed to the next page, where they can view the image and choose whether to retake the photo or submit it (Figure 8.B). This design is also used as part of error handling: if the user wishes to retake the picture, the navigation remains comfortable because both buttons are located at the bottom of the page. The top button is filled, and the bottom button is outlined to avoid overwhelming the user with too much colour on one page, making it easier to distinguish different elements through colour fill and outline. Once the user is satisfied with the image and presses the “SUBMIT PHOTO” a pop-up (Figure 8.C) slides into the screen, notifying the user of the successful procedure, and they can return to the Dashboard.

(Figure 8.A)



(Figure 8.B)

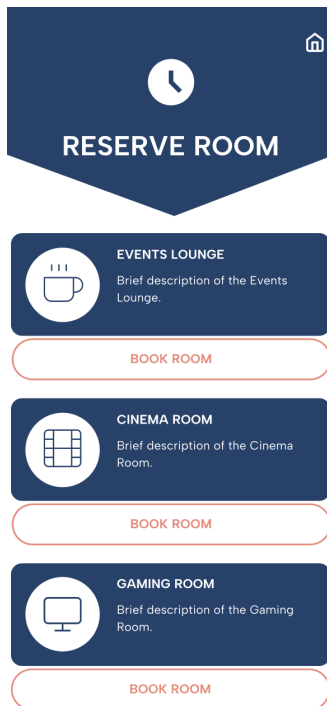


(Figure 8.C)

Reserve Room: (Figure 9: Reserve Room Section)

The “Reserve Room” section lets users book a room for a specified period of time. This structure of this section goes as follows:

Reserve Room (Figure 9.A) → Date and Time (Figure 9.B) → View timetable (Figure 9.C)



The Reserve Room (Figure 9.A) features a clear menu display structure, again highlighting the main menus with contrasting colours: dark blue for the “Reserve Room” section of the app, as shown on the Dashboard page. The menu text is paired with a unique icon for easier recognition and familiarity during app use. In addition, the buttons are outlined in coral, pricing a contrasting colour to subtly attract attention to the buttons without distracting the user from their main goal, which is to select their room type.

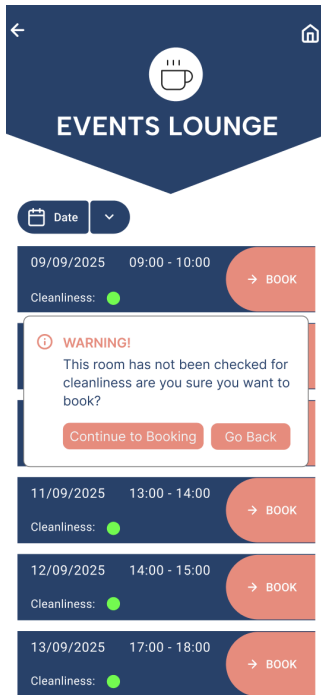
Once the user has selected a room type, they are directed to the timetable screen, which displays options by date, time and cleanliness status. The timetable follows the familiar app structure, using menus for ease of navigation. Additionally, different shapes are used for the buttons, along with the coral colour outline, to subtly draw attention to the booking button after the user has viewed the fields. The cleanliness status of the rooms is indicated by vibrant red or green colours: red signifying an unclean space or unchecked and green indicating clean.

If the cleanliness status is shown as red and the user wishes to book the room, pressing the “BOOK” button will trigger a pop-up notification (Figure 9.D) informing the user that the room has not

(Figure 9.A)

been checked for cleanliness, and asking whether they wish to continue or return to the timetable. This feature serves as error handling, ensuring the user is fully aware of their booking options.

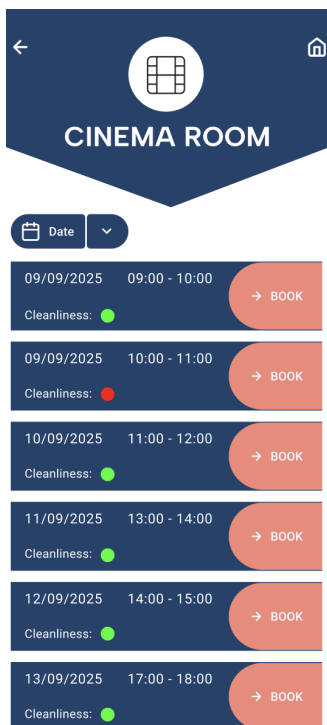
The date options are displayed below the banner, accompanied by a calendar icon. Clicking the arrow down reveals the timetable page pop-up shown in Figure 9.B. The user can customize the month, year, and date range after selecting their room type. In this prototype, the dates are fixed for demonstration purposes.



(Figure 9.D)



(Figure9.B)



(Figure 9.C)



EVENTS LOUNGE

Date:

Time:

Participants:

☒ Public Event

BOOK ROOM

By confirming your booking you agree to respect and maintain the space while using.
By booking this room you are responsible for all members of the party that are present.
You must submit a cleanliness photo 5-10 minutes post booking time.



CINEMA ROOM

Date:

Time:

Participants:

☒ Public Event

BOOK ROOM

By confirming your booking you agree to respect and maintain the space while using.
By booking this room you are responsible for all members of the party that are present.
You must submit a cleanliness photo 5-10 minutes post booking time.



GAMING ROOM

Date:

Time:

Participants:

☒ Public Event

BOOK ROOM

By confirming your booking you agree to respect and maintain the space while using.
By booking this room you are responsible for all members of the party that are present.
You must submit a cleanliness photo 5-10 minutes post booking time.

(Figure 10.A)

(Figure 10.B)

(Figure 10.C)

Once the user selects their reservation, they are directed to the “CONFIRM BOOKING” screen (Figure 10.A.B.C). This is where the user can view and finalise booking details. In this section, the user can see an image of the room they are booking, which draws attention because the element covers a large portion of the screen. Below the image, the room type is written in bold text to link it to the image. The lower part of the screen displays information such as date, time, participants, and an interactive checkbox: if the box is unchecked, the event remains private, while checking it makes the event public. Since most of the screen is coloured blue, the coral button is filled rather than outlines, adding colour and contrast to the page. This also guides the user on where to press to book the room. Grey text appears below the button, reminding users to respect and maintain the room. Grey text appears below the button, reminding users to respect and maintain the spaces and to upload a cleanliness photo. The grey colour ensures this information does not draw too much attention, as users are expected to be familiar with these residential rules.

Finally once the user presses “BOOK ROOM” they are taken to the final thank you page (Figure 10.D) with a similar structure to the login screen to represent familiarity and recall as these structures will be used as all “final” pages of each section.

(Figure 10.D)

