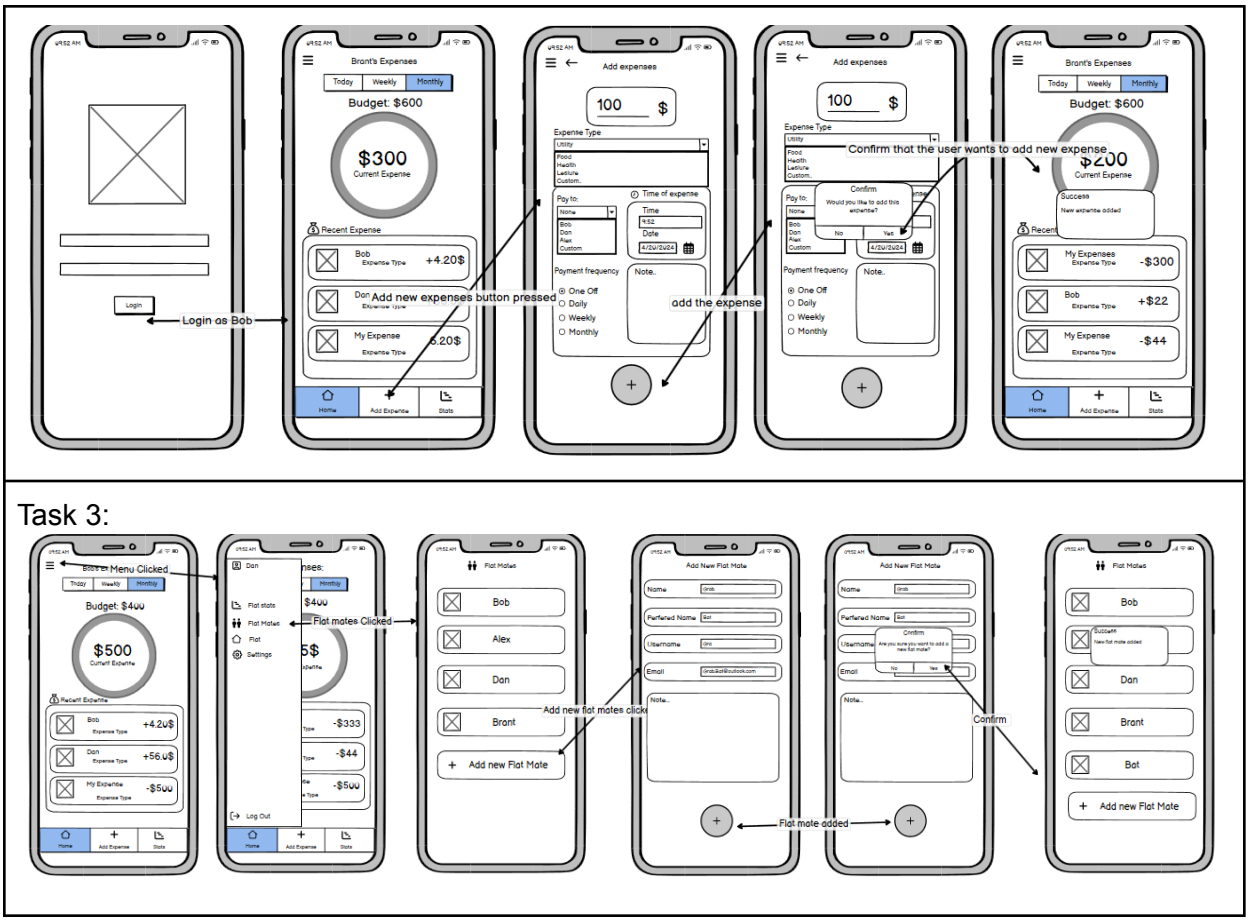
SWEN 303
Assignment 2
Salvadalvi

Personas	Tasks
Alex Signh	User Task 1:Alex Is on a run, and wants to look at his weekly expenses, which promotes him to look more into his stats.
Brant Betterson	User Task 2: Brant just went to pay for the flat's electricity bill, and wants to log this into the system.
Bob Dylan	User Task 3: Bob recently invited another person to live with them in the flat. He wants to add this person to the expense app

Task 1

Task 2



I have used the UX guidelines and design principles to create a structure and pleasing UX that my users will find intuitive to use. Below is my explanation on the strengths and weaknesses of my wireframes:

Strengths of The Wireframe:

Consistent Design

- Throughout the wireframes I have used the design guidelines of “consistency and standards”, so that the users are greeted with familiar designs as they navigate through the different screens. For example The button bar on the bottom, and the labeling of different screens on the top, are consistently placed in the same position. The predictability of my design lessens the time for the users to try and find certain objects and as argued in [1], consistency promotes predictability which “ is important for trust” and helps to “avoid making users learn something new”. Therefore the consistency overall helps to improve the time by which they learn the system, and can better focus on the task in hand. The wireframes also utilizes a number of consistent visual elements,

like the use of rounded rectangles to group up related information. This, as argued in [2] creates " this comfortable and familiar environment" that "promotes continuous usage of the system". By employing the "consistency and standard" guidelines, I aim to promote a familiar environment that efficiently shows the UX to the user.

User mapping

- My wireframes aim to utilize the UX guideline of "natural mapping"[1], to improve the rate at which they are able to familiarize themselves with the UX. For instance the layout of the wireframes aims to mimic most of the modern day app, such as having the information at the header, (i.e menu bar, location, back button), and popular actions at the footer (home button, add expense button, stats button). As illustrated in [3], by having certain action in a place where the user expects it to be, their ease of use in the system increases. Additionally The placement of the button bar(at the bottom) aims to mimic the navigation buttons as seen throughout most modern smartphones. This follows the spatial similarities aspect of the "natural mapping" guideline, as [3] states, arranging controls in the same layout as the "overall design layout(the phone in this context), users can understand the system faster". This makes it so that the users have less time to get acclimated to the system, and are able to use focus on the given task, improving user flow through the system.

Visual Icons (metaphors)

- The wireframes utilize a lot of visual metaphors, such as commonly used icons in most apps. For example the 3 bar icon to show the side menu, the plus to add new items, home icon to get back to home etc. These metaphors are aimed to abide by the " recognition rather than recall" guidelines, which as argued in [4], visual cues acts as a way for users to remember related information. For instance, when opening the side menu, by clicking the 3 bars (task 3, wireframe 2), the user is greeted with a number of possible screens to go to. It may take some time for the users to scan and read these options, but since they are accompanied by icons, the users are able to infer what the icons mean, and their associated action. By using icons, the users of my wireframes are able to easily recognise possible actions, making it recognise and navigate through the system.

System to User Responses (Accessibility)

- Users are prone to errors, and are known to accidently perform unconscious and non-conscious actions[1, 3]. To alleviate this my wireframe follows the guidelines of "error prevention". This is seen in my wireframes when users are performing any action that requires input, i.e logging expenses or adding a new flatmate (task 1 and 2), before they are able to finish their action they are prompted to confirm their choice. This is done to ensure that the users perform actions they want to, avoiding any errors. When they finish this action, they are also booted back to the previous screen, and a notification that shows that their task is successful. This is done to follow the guideline of "visibility of system", making the interface feel responsive, which ultimately tries to make the users feel in control of the app . Additionally back arrows are utilized throughout the

wireframes so that users are able to go back to previous screens. This not only ensures that the users are able to undo errors (by clicking on the wrong screen), but also to promote a form of freedom when navigating through the system. These guidelines are used in conjunction with one another to aid the users while they navigate through the system and perform their intended actions [5]. This also promotes a level of freedom and responsiveness in the system, making the users feel the system is trying to help them, and not hinder them. This has the overall effect of improving their time with the system making them more inclined to use the system.

Design Principles

- The Visual design of my wireframe utilizes a number of design principles that make it pleasing to use, and to effectively convey information:

    - **Principle of Proximity:**

Throughout my wireframe I've used proximity to group up related information. For example, in the home screen, I grouped up the recent expenses in a single area, and in the personal statistics I've grouped up the total expense types, and their costs for a given time. This makes the overall system easier to follow, as users can easily find related information without having to wander through the system, improving the intake of user information. In addition to this, the use of proximity in the wire frame also creates a level of visual harmony, as for instance in the flatmate screen (task 3, screen 3), they are equally spaced out, this was done to make this visually appealing to the users.

    - **Principal of Scale:**

The principle of scale is utilized in the wireframe to draw users into certain visual elements in the system, which helps to emphasize the importance of certain information. For example This being an expense app, it is very important for the user to know how much they've spent for a given time. I've emphasized this by having the total expenses right in the middle of the home screen, encompassed by a circle. Another example is the user's personal stat screen where the "monthly - expense" is large at the top.This helps to draw the eyes of the users when they first encounter the screens. This also helps to provide a form of hierarchy, as it draws them into the top, and then ushers them into the other smaller (less important) information. This point is further emphasized by Apple UI guidelines [6], which state "people want to view the most important information right away", therefore by making these visual components large we draw their eyes to the information they want to see. This makes the intake of information in the system more efficient, we draw their eyes on aspects they want to see. This improves the user flow, and the efficiency in which the users perform their tasks.

    - **Principal of Balance:**

The wireframe utilizes the principle of balance to create a sense of structure, and visual pleasure. For instance in Alex's personal stats, I used symmetrical balance, to create good structure to the screen, making it less daunting to look at. The principle of balance is effectively used in my wireframes to enchants the structure of my design.

Weakness of The Wireframe:

Overcrowded Designs

- When discussing “aesthetic and minimalist design” in [1], they argue that, “minimalist designs dominate user interfaces” as they provide a streamlined interface. Some screens in my wireframe violate this design guideline, as they are crowded with information. For instance in the home and stats screen, there is a lot of visual information that is being thrown to the user. This might lead to the users being more susceptible to information overload, greatly decreasing their time to learn the system. Additionally when users are adding new expenses, all the inputs are crowded in the middle of the screen. This may again lead to the user getting confused.

Not Accessible to First Time App Users

- The wireframes rely heavily on visual metaphors to make the system easier to navigate. A big downside to this, is I may have a number of users that do not or have never seen any of these icons. Despite having labels that say where it may go, the wireframes do not cater to this crowd, which makes it harder for them to navigate through the system.

References

[1]L. Bruton, “User interface guidelines: 10 essential rules to follow - UX Design Institute,” *www.uxdesigninstitute.com*, Jul. 27, 2022. https://www.uxdesigninstitute.com/blog/10-user-interface-guidelines/

[2]“A Deeper Look at Design Consistency and its Influence on User Experience - Radiant Digital,” Jul. 31, 2020. https://www.radiant.digital/a-deeper-look-at-design-consistency-and-its-influence-on-user-experience/#:~:text=Design%20consistency%20drives%20coherence%20and,with%20your%20brand%20or%20product.

[3]K. Sherwin, “Natural Mappings and Stimulus-Response Compatibility in User Interface Design,” *Nielsen Norman Group*, Oct. 14, 2018. https://www.nngroup.com/articles/natural-mappings/

[4]R. Budiu, “Memory Recognition and Recall in User Interfaces,” *Nielsen Norman Group*, Jul. 06, 2014. https://www.nngroup.com/articles/recognition-and-recall/

[5]P. Laubheimer, “Preventing User Errors: Avoiding Unconscious Slips,” *Nielsen Norman Group*, Aug. 23, 2015. https://www.nngroup.com/articles/slips/

[6] “Layout,” *Apple Developer Documentation*. https://developer.apple.com/design/human-interface-guidelines/layout