SyncSphere (Collaborative App)

GP4

Group 6
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Problem

The shift to remote and hybrid work has transformed how people collaborate. Yet, many individuals still find themselves juggling multiple apps and calendars, leading to missed meetings, scheduling conflicts, and challenges in balancing professional tasks with personal commitments.

This prototype targets four key user groups: remote professionals, freelancers, hybrid workers, and students or academic researchers. Their primary tasks include scheduling meetings, communicating seamlessly with colleagues, arranging workspaces for in-person sessions, and collaboratively managing shared notes and ongoing discussions.The proposed solution integrates these tasks into a single application, aiming to streamline workflows and enhance productivity.

Design

Our design journey was shaped by continual feedback and iteration. While early evaluations highlighted several usability challenges, the critical outcome was how those insights influenced our design choices. Below, we outline the most impactful design decisions and the alternatives we considered.

1. Persistent Navigation Bar

- **Decision:** Added bottom navigation bar for core features.
- **Alternative:** Used only back buttons.
- **Why:** Improved quick access and multitasking across features.

2. Visible Critical Actions

- **Decision:** Made delete and collaborator options clearly visible.
- **Alternative:** Used hidden or gesture-based actions.
- **Why:** Improved discoverability for first-time users.

3. Streamlined Workflows

- **Decision:** Redirected users and added success feedback after actions.
- **Alternative:** Static confirmation messages only.
- **Why:** Reduced confusion and completed task flows.

4. Modular Screen Components

- **Decision:** Reused consistent UI components across screens.
- **Alternative:** Custom layouts for each screen.
- **Why:** Ensured consistency and faster design iteration.

5. Informative Yet Minimal Home Screen

- **Decision:** Added welcome message and feature highlights.
- **Alternative:** Blank minimalist home.
- **Why:** Gave users clearer context without clutter.

Paper Prototyping: What We Learned

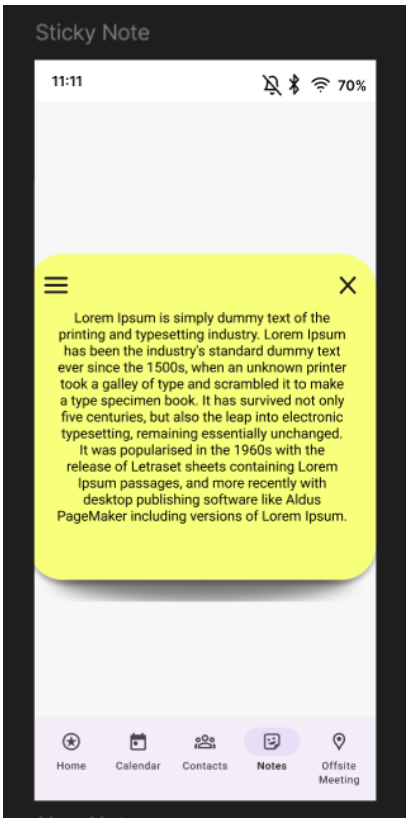
The paper prototyping process provided several valuable insights into the usability of our collaborative super app:

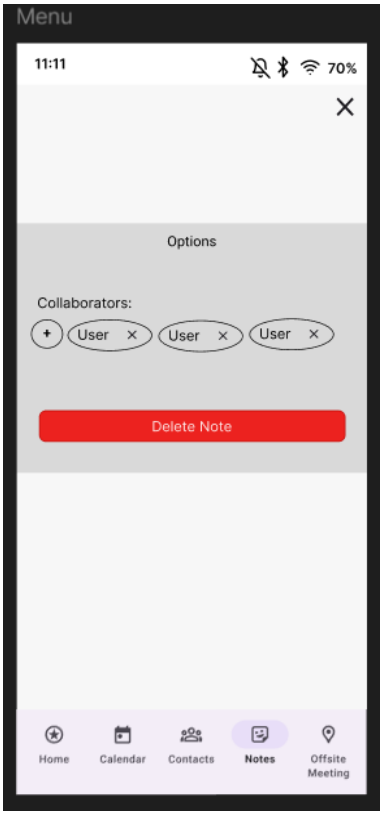
Navigation Challenges

Users needed clearer navigation paths, particularly a way to return to the Discover People widget after selecting a contact. This highlighted the importance of providing clear "navigation bar" functionality throughout the app.

Discoverability Issues

Important functions like deleting sticky notes or adding/removing collaborators were hidden, making them difficult to discover for first-time users. This taught us that critical functions should be more visible in the interface.





Workflow Completion

The booking confirmation window lacked a clear exit option, and users expected to be redirected to the calendar page after adding a meeting. This demonstrated how important it is to provide complete user flows with appropriate exit points and expected next steps.

User Behavior Observations

Despite these issues, users generally understood the scenarios and could perform tasks with minimal assistance, confirming that our minimalistic design approach with fewer on-screen components was effective in creating an intuitive interface.

Heuristic Evaluation: What We Learned

The heuristic evaluations from other student groups provided structured feedback that helped us prioritize improvements:

Evaluation Findings 1

Heuristic	Severity	Issue	Solution
Consistency and standards	Cosmetic	More content is needed on the first page	Added welcome content and feature highlights to the home screen
Aesthetic and minimalist design	Cosmetic	App marketing and logo missing	Designed and added app logo and brief tagline

Evaluation Findings 2

Heuristic	Severity	Issue	Solution
Visibility of system status	Cosmetic	Need for a clear main screen with a menu	Implemented a home screen with a bottom navigation bar and a menu for additional options
Consistency and standards	Cosmetic	Minor consistency issues	Standardized button styles, icons, and color scheme across all screens
Error prevention	Not yet implemented	Potential for user errors	Added confirmation dialogs for destructive actions and form validation

These updates have significantly improved our interface's usability while maintaining the clean, minimalist design that users responded positively to during initial testing. The systematic approach to evaluating and addressing issues based on severity has helped us prioritize changes effectively.

Implementation

Our implementation focused on creating an intuitive user interface that seamlessly integrates essential collaboration features. The application is organized around five primary screens—Home, Calendar, Contacts, Notes, and Offsite Meeting—all accessible through a persistent bottom navigation bar. We chose a minimalist design to prevent visual clutter, employing color-coding to clearly distinguish calendar events and tasks, and incorporating interactive elements such as icons and action buttons. This approach helps users easily navigate and interact with the app without feeling overwhelmed.

For instance, to implement these screens in Figma for the "Discover People" feature, a consistent mobile frame layout was first created. The main “Contacts” screen was designed with a search bar and a list of favorite contacts, where repeated frames were used for each contact entry, including icons and text elements for name, phone, and email. Upon selection of a contact, the “User Contact” screen was displayed, showing user details along with options for different communication methods such as Phone Call, Teams Message, Email, Slack Message, and Zoom Call, each of which was linked through prototyping to a corresponding screen that represented the ongoing interaction. Actions like “Add to Favorites” and “Delete Contact” were also included, which led to feedback or confirmation screens such as “Contact Deleted” or “Delete Contact” confirmation. Message interactions were shown progressively, simulating a real-time conversation flow. Navigation was implemented using Figma’s prototyping feature for navigating from one screen to another.

We emphasized modularity in our design, ensuring each feature operates independently yet fits seamlessly within the overall experience. For instance, the idea of incorporating a persistent navigation bar emerged later in the design process. Initially, based on user feedback from our paper prototype evaluations, we added a back button to navigate between screens. However, we noticed that this button limited users to navigate within task-specific screens, causing difficulties in switching between different features quickly. To address this, we introduced a consistent navigation bar across all screens, significantly improving ease of use by enabling quick transitions between tasks.

However, certain design choices still impacted usability. Actions such as deleting notes or navigating back after selecting a contact were initially hidden or not immediately obvious. User testing highlighted these issues, leading us to include explicit icons and visible action buttons.

Evaluation

To evaluate the prototype interface effectively, we conducted initial usability testing sessions using paper prototypes with users from a single demographic group. For the application to become accessible and effective for a more diverse set of users, further sessions with users from each identified persona group would be essential. Collecting feedback from these groups will help identify additional pain points and inform necessary improvements.

In addition to usability testing, we plan to use other evaluation techniques such as post-test interviews and surveys which can help us gather insights on user satisfaction and common errors encountered during interaction, allowing us to further refine the user experience.

One identified usability issue for future improvement is the complexity users face when managing multiple overlapping events from different calendars. To address this, future iterations could incorporate conflict detection and propose alternative time suggestions, simplifying the scheduling process and enhancing overall user experience.

Reflection

Looking back at our design process, there are a few things we'd do differently to make our work more effective and well-rounded.

1. We should've prioritized more complex scenarios.

Most of our early prototyping focused on the main user flows—like booking a meeting or viewing contacts—which worked well for testing general usability. But we didn't give enough attention to the messier, more realistic cases like overlapping meetings or managing shared content. These are often where users struggle most, and testing them earlier would've helped us catch issues before they became bigger design problems.

2. We stayed in the paper prototyping phase too long.

Paper prototyping was great for brainstorming and making fast changes, but once we had a solid direction, we should've moved to digital prototypes sooner. A digital version would've let us test more realistic interactions, catch layout inconsistencies, and better understand how users would actually move through the app.

3. We didn't test transitions between features enough.

We designed each feature in isolation—contacts, calendar, notes, etc.—but didn't spend enough time testing how users move between them. In real use, people often switch between features quickly, and we missed some of the friction that can happen when flows aren't well connected.

4. Iteration was too milestone-based.

We tended to wait until the next checkpoint to make changes, rather than improving things continuously. If we had adopted a more frequent test-and-update rhythm, we could've responded to feedback faster and evolved the design in a more agile way.

5. We didn't test edge cases early enough.

We focused on getting the main flows working smoothly, but that meant we didn't spend time testing what happens when things go wrong—like form errors or cancelled actions. Prototyping those cases earlier would've made the app feel more complete and better prepared for real-world use.

References

Heuristic evaluation 1:
https://docs.google.com/document/d/1C0QPSXyeLIWo_rAIsucoZl6sPb_N8TbjGHccowsr9B8/edit?usp=sharing
Heuristic evaluation 2:
https://docs.google.com/document/d/1cAEBii9p39f1bamXzcJZCcsBcV3z6lP_X56fuHPm7W8/edit?usp=sharing

Interface Instructions - Group 6

Prototype Version 1 (Pre Heuristic Eval)
Prototype Version 1

Prototype Version 2 (Post Heuristic Eval)
Prototype Version 2

Startup Instructions

We created our Prototype on Figma, which can be accessed from here. Log in to Figma. If access is denied, request to view the prototype.

Briefing

"We are designing a collaborative super app that simplifies teamwork while working from home. Our app includes four key features: a smart calendar, a tab for discovering people, a meeting space booking tab, and collaborative sticky notes. We would like to perform a heuristic evaluation of our app and gather your feedback through this prototype."

Task Descriptions

Task 1: View Calendar and View a Meeting

The user has a calendar interface displaying meeting invites, household tasks, and other work-related events. They are expected to utilize this interface to open and view event details, join the meeting (if online), or send invitations to others.

Task 2: Discover People

The user has a widget with options to search for contacts or select one from the favorites tab. Upon selecting a contact, the user is taken to the next screen where they choose a communication method, leading them to the appropriate application. Optionally, they can add a contact to favorites or remove a contact from this screen.

Task 3: Booking a Meeting Space

The user is prompted to fill out a form with details about the space they want to book. After confirming the booking, a pop-up appears displaying the booking details. From here, the user can verify the booking details, invite others to the meeting, or add the meeting details to the calendar.

Task 4: Collaborative Sticky Notes

The user interacts with a list of previously created sticky notes from which they can select and update the content of a note. Each note has a hamburger menu with options to add/remove collaborators or delete notes. If deleting a note, confirm the action via a pop-up message.