

## **Project 1: Digital Wireframe**

In my earlier design, I did not add a "Login" screen. After examining the material and reading the feedback, I decided that adding a "login" screen was essential because it allows the software to provide each user with a unique and personalized experience. It will tailor messages, reminders, and alerts to the needs of each patient, as well as allow caregivers to specify precise limits. I want my app to be used by both the patient and their family members/caregivers, so the login screen will allow each caregiver to create their own account, where they may track specific patient data, receive notifications, and communicate with other carers. It would also enable them to remotely enter into the app and monitor the individual with dementia from various devices. They can track the patient's whereabouts, receive medication notifications, and remind them to turn off stoves and water taps, and manage situations even when they are not physically present with the individual they care for. Furthermore, the data submitted to the app may be restored and will not be easily destroyed or lost. My login screen has two buttons that are clickable: the "login" and "Sign- up" words. It contains the name of the app "StayInformed" in clear and bold font.

As for the other screens I've created five detailed wireframe screens: the Home screen, the Event screen, the Panic screen, Media and GPS screen. In terms of design consistency, the bottom navigation bar is consistent across all displays and includes icons for Home, Events, Panic, GPS, and Media. This improves ease of use, as users can always find their way back to any screen. To make it more simple and understandable for caregivers, clear labels and buttons have been defined.

I've chosen muted and soft tones as the color scheme to avoid overstimulation for dementia patients while still providing sufficient contrast for readability. From my previous research I have also learned that apps for dementia patients must prioritize cognitive accessibility. Muted and soft tones create a cleaner and more understandable interface, which is beneficial for users experiencing cognitive decline. Cool, soft and muted tones minimize distractions and help patients focus on completing tasks, such as taking medication or staying on track with reminders.

The **Home screen** serves as the central hub of the app, giving caregivers an immediate overview of critical information. It displays the **daily schedule** (such as meal times and medication), **current location**, and **emergency contact details**. It also features a family photo that personalizes the app and engages dementia patients emotionally.

Navigation buttons (home, events, panic, GPS, media) are clickable elements and they allow users to switch between screens easily. The rationale design behind making the home screen was to keep it simple and functional, with quick access to critical information like location and contacts. The photo helps caregivers and patients feel more connected, and it helps keep dementia patients engaged.

As a benefit to users it provides an **at-a-glance summary** of essential information like the daily routine and current location, which helps caregivers monitor their loved ones. It also includes a **quick emergency contact section**, ensuring safety in urgent situations.

Next is the **Events screen**. It focuses on managing a patient's daily schedule and appointments. Caregivers can **add events** like doctor's appointments, medication reminders, or social engagements.

Clickable elements are The “Add Event” button allows users to create new entries. The **rationale is that this** screen is organized to prioritize events by time, making it easy for caregivers to track schedules. As a benefit to users it helps caregivers manage the patient's day-to-day activities efficiently and ensures that important tasks (like medication) are not missed. As an upgrade from the previous prototype design, I have also added an option to “star” an activity in the schedules page after completing the task. On the wireframe app, a golden star is seen beside “10 AM-Medication ” It confirms that the user has finished the activity. If they forget to complete the exercise, which is the fundamental issue with dementia patients, and do not "star," a notification will be sent to their caregivers' phones to inform them.

The **Panic screen** is an emergency contact screen designed to **alert emergency contacts** and **send the patient’s current location**. Users can also **dial 911** directly from the app. The Panic icon at the bottom of the screen is designed in bold and bright red. In contrast to the soft and muted tones in the background, the Panic icon signifies emergency.

The **clickable elements** are the buttons to add/change contacts and dial 911. The red panic icon immediately contacts the registered emergency contact and sends them the current location. This function can be operated through any screen. The **rationale** behind this screen’s design is that it's for urgent situations, with large buttons for quick access to help. It’s simple, intuitive, and focused on safety.

To the users it provides a **direct line of emergency communication**, enhancing patient safety and offering peace of mind to caregivers.

The **GPS screen** shows the patient's current location on a map. The user can send their location to other people directly through the app. Caregivers can track the user and also share the location or set **safe zone boundaries** to alert them if the patient leaves a designated area.

The **clickable elements** are the buttons to share the location and set safe zones. The purpose behind its design is that this screen focuses on **location monitoring** as it is crucial for dementia patients who may wander. Additionally, it offers real-time tracking and alerts to help ensure the patient remains in a safe environment.

The **Media screen** allows caregivers to add **photos, videos, or music** for the patient. This media screen serves as a **memory aid** or emotional support for dementia patients. The feedback I had received from my previous interview strongly suggested that I include a means for the patient to emotionally connect with their family members. They often feel isolated and depressed so reminding them of their families through photos, music and recordings is extremely beneficial for their emotional and mental well being.

The buttons to add photos, videos, or music are interactive and clickable. This screen is designed to enhance **emotional and social engagement** by providing media that can evoke memories or offer calming entertainment. It also helps patients remain emotionally connected, improving their well-being by offering **reminiscence therapy** through familiar media.

For a **digital watch**, the goal is to focus on delivering **critical, glanceable information** without overwhelming the user. The priority features that need to be adapted include: **Emergency Alerts (Panic Button), GPS Location and Safe Zone Alerts, Event Reminders** (e.g., medication or appointments)

The wearable interface must offer **quick, at-a-glance actions** for caregivers who have full time jobs and are not tech-savvy, who need to stay informed about their loved ones' safety without being distracted by a complicated interface. The home screen should display the most crucial information such as the current location of the dementia patient and any urgent alerts (e.g., if the patient has left a safe zone). The screen would show a map with the patient's current location, and an icon-based alert system would indicate if anything concerning has occurred (i.e., "outside safe zone" or "emergency contact needed").

The panic button needs to be accessible directly from the home screen or through a swipe gesture. It should be prominent and easy to trigger in case of emergencies. A red panic icon, always visible at the top or bottom should be implemented so that users can easily tap to notify emergency contacts and share the patient's location. For users who are not tech savvy, they emphasized the need for simplicity. In a critical situation, they should be able to tap the panic button without navigating through multiple menus.

The GPS screen on a wearable would show a simplified map with a clear indicator of the patient's location. Notifications should also include a **vibration** or **haptic alert** when the patient leaves the safe zone. The design would be a clean map display with a marker for the patient's location and simple text like "Inside safe zone" or "Outside safe zone" to offer critical insights at a glance.

The event reminder should pop up on the watch with a simple notification like "Time for medication" or "Doctor's appointment in 30 minutes." Users should be able to **dismiss** or **snooze** these reminders with a single tap. Simple text-based notifications with large, tappable options for "Dismiss" or "Snooze" will help.

To meet the OS guidelines, the design should focus on key interactions, such as monitoring location and receiving alerts. All screens must be **single-task-focused**, reducing cognitive load on the user, especially since dementia caregivers are often under pressure. Wear OS emphasizes designs that require minimal input. In this case, buttons and gestures should be reduced to **one-tap actions** (e.g., triggering the panic button, sharing location). Most functions will be activated or dismissed with a tap or swipe, limiting complex navigation. Utilizing **vibrations or haptic alerts** for notifications, especially for critical issues like when a patient leaves a safe zone, ensures that caregivers can quickly react without needing to check their watches constantly.

**The kiosk** should offer **priority content** upfront, with an intuitive flow from critical tasks (emergency actions, GPS location) to secondary tasks (media, reminders). Each screen should focus on one core function, with logical transitions between them. The kiosk should be designed for a **vertical orientation** (portrait mode), matching natural human interaction with larger touchscreens. Large screens should have **bigger touch targets** to ensure ease of use, particularly for elderly or less tech-savvy caregivers. The layout should be **spacious**, with **easy-to-press buttons** and a clear hierarchical structure that guides the user's attention naturally from top to bottom or left to right.

**Large, easy-to-touch icons** should be used for key actions (such as starting navigation, activating the panic button, or adding a reminder). Buttons should be at least **9mm wide** as recommended by the **Android/Apple Human Interface Guidelines** to accommodate different finger sizes and ensure usability. **High contrast and muted tones** are vital to make text readable

without overwhelming users visually, especially since dementia caregivers and elderly patients may have varying levels of eyesight clarity.

The **Home** screen will include a **large, centralized area for the daily schedule**, with quick visual access to patient location and emergency contacts. The schedule will appear as a column on the left, showing the full daily routine in more detail than a mobile screen could display. The patient's **current location** can be shown on a live map on the right side of the screen, with the ability to zoom in or out using touch gestures. On a kiosk, caregivers or healthcare workers can stand together to view and adjust the patient's schedule and check their whereabouts. The large map offers clearer detail for users who need a comprehensive view of the patient's location.

The **Event screen** would show upcoming events in a **scrollable list format** on one side of the screen, with large touch buttons for creating new events, editing existing ones, and marking tasks complete. Users can add or remove events with a **drag-and-drop** interface for easy scheduling on large screens. A caregiver, can schedule Their loved one's appointments collaboratively with a healthcare worker at a kiosk, making the interaction more user-friendly. It encourages multi-person interaction while giving detailed oversight of the patient's routine.

The **GPS** screen on a kiosk can display a **full map view** of the safe zone or current location, with the ability to zoom and navigate using large, touch-based controls. Users can **drag a slider** to adjust safe zone boundaries or see past movement history. Caregivers can explore more detailed location data on the kiosk, which would be useful in care facilities or large homes where tracking movement is critical. The larger screen allows for more precise adjustments of safe zones and locations

The **Panic** button will be **prominently displayed** in the bottom center or bottom right, where it can be accessed immediately in an emergency. In a care facility setting, multiple contacts and options can be displayed side by side for quick access. A kiosk can also serve as a central hub for caregivers or family members to communicate with emergency contacts quickly. The interface can include **multiple emergency contacts** and an option to notify nearby healthcare staff.

The **Media** screen could display **larger photos or videos** and support more interactive engagement, such as **adding or removing media content** through simple touch gestures. It can feature a **gallery layout**, enabling multiple media files to be viewed at once, and users can add notes or context to each image. For emotional and social engagement, caregivers could use the kiosk to show family members' photos or play soothing music/videos for dementia patients. The larger screen size makes it more immersive.



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