TA5 Assignment

Design Process for the Interactive Hospital Visitor Scheduling App

1. Introduction

The hospital visitor scheduling app was designed to streamline the process of arranging visits between patients and visitors within a hospital setting. Its design prioritizes inclusivity, accessibility, and security to accommodate a diverse range of users, from individuals without impairments to those with disabilities. This report details each step of the design process, from initial concept to final design choices.

2. Goals

The goal was to develop a conceptual app and device that would :

- Facilitate scheduling of hospital visits
- Provide an inclusive interface for all type of users
- Ensure security for hospitals, patients and staff with strong identify verification

3. Principles

Our objective was to respect some principles. We talk about a devices that will be use in a hospital that welcome a lot of different user with sometimes with disabilities so our device have to be :

- Inclusive : Ensuring that users of all abilities can successfully schedule visits easily
- Simple : Reducing steps to make interactions more straightforward
- Secure: Verifying identities to protect patient privacy and ensure authorized visitor access

4. Design Process

Step 1 : First we think about the device design. We began with a conceptual model that involved a booth with a large tablet as the main interface. This choice was based on creating an accessible interface in a public hospital setting.

Step 2 : We think about common disabilities which could make difficult the use of this kind of tablet to add features to make this tablet easier to use for as many people as possible.

Step 3 : Design those features :

- Height-adjustable tablet : The booth was designed to be adaptable, with a height-adjustable tablet and a folding seat to support elderly or mobility-challenged visitors
- Text-to-Speech and Speech-to-Text : For users who prefer or require verbal interaction
- Virtual Sign Language Interpreter : A holographic avatar that can communicate instructions in sign language for users with hearing impairments

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Step 4 : How to ensure security of everyone ?

Security and privacy were vital aspects of the design process. The system incorporated image recognition to capture the visitor's ID card for verification, ensuring that only authorized individuals could access patient scheduling information. Also visitors can't see the entire patient list, they only can type there name to see if there are in the database or not. Last thing we think of is to permit the patient to refuse the visit with a little version of the tablet in his room.

Step 5 : Scenario-Based Testing and Prototyping

We tested our design through various scenarios:

- Standard User (Scenario 1): A visitor without specific accessibility needs navigates through the scheduling system
- Visitor with Disabilities (Scenario 2): We assessed how a user with disabilities, such as a hearing or visual impairment, interacts with the system. For instance, the visitor in Scenario 2 could choose between sign language to text-to-speech for interaction depending on their disability.

These scenarios helped us refine the app's adaptive features and ensure it met real-world needs.

Step 6 : User Flow and Final Touches

The final user flow focused on making each step as intuitive as possible:

- Patient Selection : Users search for the patient using a search bar
- Identity Verification : Users place their ID next to their face, where a camera system captures and verifies the ID
- Appointment Scheduling : Once verified, the user sees available time slots and confirms the appointment with fancy interactions techniques (pinch, touch, drag and drop)

Additional elements, such as a "call for assistance" button, were included to allow visitors to request help from hospital staff if needed.

6. Conclusion

The design process for this app used user-focused accessibility features to create an inclusive, secure hospital visitor scheduling solution. By integrating features such as sign language, and voice interaction, we created a system that serves a broad range of users and meets hospital requirements for security and privacy. This app will not only streamline the scheduling process but also ensure that every visitor can access and navigate the system with ease.