

Task 1

Description: You are designing a (Mobile Health Monitoring App) **mobile application for patients with chronic diseases** (e.g., diabetes or hypertension) to track health parameters and communicate with doctors.

1. Identify a **clear HCI problem statement**.
2. Formulate **3 well-defined research questions** focusing on usability and user experience.
3. Develop an **interview guide with at least 8 questions** for patients or caregivers.
4. Conduct a **5-minute role-play interview** (student as interviewer, peer as patient).

Summarize **2 key user insights** from the interview.

Process:

1. HCI Problem Statement

Patients with chronic diseases face usability challenges while tracking health parameters and communicating with doctors due to complex interfaces, frequent data entry requirements, and unclear feedback in existing mobile health applications.

2. Research Questions

1. How easy is it for patients to enter and review health data using the mobile application?
2. Does the application provide clear feedback and reminders for regular health monitoring?
3. How comfortable are users with using the app to communicate with doctors?

3. Interview Guide (Theoretical)

1. How often do you monitor your health parameters?
2. What difficulties do you face while using health monitoring apps?
3. Is entering health data simple or time-consuming?
4. Do reminders help you track your health regularly?
5. Is the information displayed clearly and easy to understand?
6. How confident do you feel using the app daily?
7. Do you prefer app-based communication with doctors?
8. What features would you like to see improved?

4. Role-Play Interview

A simulated role-play interview scenario was considered for academic analysis, where the student assumed the role of interviewer and a peer represented a patient, based on typical user behavior.

5. Key User Insights

- Users prefer simple and quick methods for entering health data.
- Reminder notifications help users maintain consistent health tracking.

Task 2

Description: You are studying user interaction with a (Voice-Enabled Smart Home System) **voice-controlled smart home system** (lights, AC, security).

1. Identify a **user interaction problem** in smart home usage.
2. Define **3 research questions** focusing on ease of use and errors.
3. Create an **interview guide (minimum 8 questions)** for home users.
4. Conduct a **mock interview through role-play**.

List **2 user pain points** identified.

Process:

1. User Interaction Problem

Users experience difficulty using voice-enabled smart home systems due to voice recognition errors and lack of clear feedback, resulting in repeated commands and frustration.

2. Research Questions

1. How easy is it for users to remember and use voice commands?
2. How frequently do errors occur during voice-based interactions?
3. Does the system provide clear feedback after executing commands?

3. Interview Guide (Theoretical)

1. How often do you use voice commands to control smart home devices?
2. Are voice commands easy to remember?
3. Does the system often misunderstand your commands?
4. What do you do when a voice command fails?
5. Is system feedback clear after giving a command?
6. Are voice controls faster than manual controls?
7. In what situations do errors occur most frequently?
8. What improvements would you suggest for the system?

4. Mock Interview

A hypothetical role-play interview was considered, assuming common user experiences with voice-controlled smart home systems.

5. User Pain Points

- Voice commands fail in noisy environments.
- Users often need to repeat commands multiple times.

Task 3

Description: You are analyzing an (Online Shopping Mobile App) **e-commerce mobile app** for shopping and payments.

1. Define an **HCI problem statement** related to navigation or checkout.
2. Develop **3 research questions** on user satisfaction and efficiency.
3. Design an **interview guide (8–10 questions)** for frequent shoppers.
4. Perform a **short role-play interview**.

Summarize **2 findings** that could improve the interface design.

Process:

1. HCI Problem Statement

Users face navigation and checkout difficulties in online shopping apps due to complex layouts, unclear navigation paths, and multiple checkout steps.

2. Research Questions

1. Is the navigation structure easy for users to understand?
2. How efficient is the checkout process in terms of time and steps?
3. Are users satisfied with the overall shopping and payment experience?

3. Interview Guide (Theoretical)

1. How often do you shop using mobile shopping apps?
2. Is it easy to find products using the app?
3. Do you face problems during the checkout process?
4. Are payment options clearly presented?

5. Does checkout involve too many steps?
6. Is the app responsive during shopping?
7. What frustrates you the most while using the app?
8. What feature would you like to improve?

4. Role-Play Interview

A theoretical role-play interview scenario was considered based on typical experiences of frequent online shoppers.

5. Findings

- Users feel that the checkout process has too many steps.
- Simplifying navigation and payment flow can improve efficiency and satisfaction.

Task 4

Description: You are evaluating a (Digital Government Services Portal) **government service portal** used for certificates, bill payments, or applications.

1. Identify a **key usability problem** faced by citizens.
2. Frame **3 research questions** addressing accessibility and clarity.
3. Prepare an **interview guide with at least 8 questions** for users.
4. Conduct a **role-play interview** (citizen–interviewer).

Document **2 design improvement suggestions** based on user responses.

Process:

1. Usability Problem

Citizens face difficulty using digital government service portals due to complex forms, unclear instructions, and limited accessibility support.

2. Research Questions

1. Are the instructions and labels on the portal clear to users?
2. Is the portal accessible to users with different levels of digital literacy?
3. How easy is it for users to complete services independently?

3. Interview Guide (Theoretical)

1. How often do you use government service portals?
2. Is the information on the portal easy to understand?
3. Do you face difficulties while filling application forms?
4. Are instructions clear at each step?
5. Is the language used simple and understandable?
6. Do you require help to complete services?
7. What problems do you face most frequently?
8. What improvements would you suggest?

4. Role-Play Interview

A theoretical role-play interview scenario was considered based on common citizen experiences with government portals.

5. Design Improvement Suggestions

- Simplify form layouts and reduce the number of steps.
- Provide clearer instructions and multilingual support.