

Accessibility Challenge

1. Interaction and Accessibility Challenge:

Many mobile applications, particularly those that display a significant amount of text (e.g., news apps, e-readers, or even social media platforms), often lack the option to adjust font sizes. This presents a significant barrier for users with visual impairments or those in situations where reading small text is difficult (like in bright sunlight or while in motion).

Violated HCI Principles:

- **Flexibility and Efficiency of Use:** The application does not cater to diverse user preferences and abilities, lacking adaptability for users who need larger text.
- **User Control and Freedom:** Users with visual impairments are not given enough control to adjust the interface for comfortable reading.

2. Proposed Interface Changes:

- **Implementation of Adjustable Font Sizes:** Incorporate settings that allow users to adjust the font size across the application. This feature could include a simple slider in the settings menu for easy access and adjustment.
- **Automatic Text Resizing Based on Ambient Conditions:** Integrate an automatic text resizing feature that adapts to environmental conditions, such as increasing font size in bright light conditions.

3. Impact of Changes on User Interaction:

If either of these changes were implemented:

- Users would initially interact with the settings menu to adjust the font size to their preference. This interaction would follow a simple flow: open settings, select 'Font Size', and use a slider to adjust.
- In the case of automatic resizing, the app would detect ambient conditions using the device's sensors and adjust the text size accordingly, providing a seamless and intuitive user experience.

Supported Heuristics:

- **Visibility of System Status:** The app informs users when it's adjusting text size based on ambient conditions, keeping them informed about what's happening.

- **User Control and Freedom:** Users gain more control over their reading experience, as they can adjust the text size to suit their needs or rely on the app to do it automatically.
- **Flexibility and Efficiency of Use:** Both changes make the application more versatile and user-friendly, accommodating a wider range of users and usage contexts.

This approach, focusing on dynamic text resizing, addresses an often-overlooked aspect of accessibility, emphasizing the importance of flexible and adaptive UI design in meeting diverse user needs.