Instructor: James Landay

Heuristic Evaluation of Bottle

1. Problem/Prototype Description

Bottle is a smartphone application that lets you capture small moments throughout the day to exchange them at a set time with the people you value, overcoming the struggle for maintaining emotional intimacy due to busy schedules and time-zone differences.

2. Violations Found

1. H3: User Control and Freedom / Severity: 4 / Found by: A, B

- a. Description: No back buttons in account creation.
- b. Rationale: If a user messes up and misclicks "create account" but they meant to sign in, they aren't able to go back.
- c. Suggested Fix: Add a back button.
- d. Extra Violations

2. H2: Match b/w System & World / Severity: 1 / Found by: A, B, C

- a. Description: The bottle with plus button icon looks like a photo/graphic rather than a pressable button.
- b. Rationale: Because the "plus" button is crucial in completing the simple task, it should be clear that it is pressable. It doesn't fully resemble a button right now. I will note that there aren't many elements on the screen, so the user should still be able to figure out that it's pressable fairly quickly.
- c. Suggested Fix: Add text such as "add" or "add to bottle" to make it more clear what the button does. Alternatively, make the plus icon bolder or give it a more contrasted color to make it seem more pressable.
- d. Task 1

3. H6: Recognition Rather than Recall / Severity: 3 / Found by: A, B, C

- a. Description: Name of the bottle owner is not displayed in the "Select Media" or "Insert Moment" screen.
- b. Rationale: The absence of the recipient may confuse users because they are uncertain of whom the current message is for.
- c. Suggested Fix: Introduce an element that shows the name and profile picture of the current bottle owner.
- d. Task 1

4. H8: Aesthetic and Minimalist Design / Severity: 2 / Found by: A

a. Description: Photo selection modal is small and doesn't utilize the full screen.

- b. Rationale: All the other screen elements besides the modal are not necessary when the user is selecting a photo/video. Utilizing a full-screen modal would focus the user's attention solely on the task of choosing a photo/video and provide a larger area of interaction.
- c. Suggested Fix: Expand the photo selection modal to cover the entire screen. It would go away once the photo/video is selected.
- d. Task 1

5. H7: Flexibility & Efficiency of Use / Severity: 2 / Found by: A, B

- a. Description: Tagging only has four predefined options. There are no customizable tags and users are forced to choose a tag.
- b. Rationale: Users may have content that doesn't fit into a certain tag. It could also fit into multiple tags. Thus, the app should offer more flexibility in tagging content.
- c. Suggested Fix: Add an option to customize tags or select multiple tags.

6. H12 Value Alignment and Inclusion / Severity: 3 / Found by: A, B, C

- a. Description: For all forms of media, there is no ability to edit (i.e. crop a picture, cut a voice memo, edit a video).
- b. Rationale: Given the value of inclusion and authenticity, giving the user ownership over the way in which their spontaneous media is collected (similar to the options provided in most industry standard apps today) would create higher alignment with Bottle's values.
- c. Fix: Add an edit button for each type of media that lets you make the aforementioned changes.
- d. Task 1

7. H11: Accessible Design / Severity: 2 / Found by: A, B, C

- a. Description: Saved to bottle confirmation screen only lasts for 1 second.
- b. Rationale: Most users cannot read text that fast. It's important for the user to know that their content was sent or else they will be confused and potentially try sending the content again.
- c. Suggested Fix: Have the user click a button to make the screen disappear. This ensures that they have time to read the confirmation text without being rushed.
- d. Task 1

8. H3: User Control and Freedom / Severity: 1 / Found by: A

- a. Description: When you click the text, photo/video, or voice button in the select media page, the only way to exit the modal is to hit the back caret on the top left, or other media button.
- b. Rationale: Most users expect to be able to exit by clicking on a screen outside of modal. There also are usually close "x" buttons on modals. If a person clicks the wrong media button, it may take them a while to exit the modal.

c. Suggested Fix: Add functionality to exit modal when the user taps outside of the modal. Alternatively, add a close button on the top right or left corner of the modal.

d. Task 1

9. H3: User Control and Freedom / Severity: 2 / Found by A, C

- a. Description: When a user enters text or records audio and accidentally navigates back and exits input mode, the data is lost without the option to recover it.
- b. Rationale: Users may accidentally press the back button and lose the data they've inputted without any confirmation or ability to undo the action. This can lead to wasted type since they need to re-record or retype their data.
- c. Suggested Fix: Add a confirmation prompt before they exit an input screen with unsaved Changes. Alternatively, cache/save the drafts of text/recordings so progress is saved if they exit the modal.
- d. Task 1

10. H4 Consistency and Standards / Severity: 2 / Found by: A, B, C

- a. Description: When selecting media for the bottle, there are no icons until one of them is tapped.
- b. Rationale: Visual treatments are thus not consistent throughout the design as the icons only appear when tapped on, despite there being white space to include them before a selection is made.
- c. Fix: Add the icons so that the users do not only see it when a media type is selected. Keep them all unbolded until one is tapped, in which case that one should be bolded.
- d. Task 1

11. H7: Flexibility & Efficiency of Use / Severity: 3 / Found by: A, B

- a. Description: Time selection is only editable by arrows that increase or decrease each value by 1.
- b. Rationale: It takes a lot of clicks to get to certain times. Consider the initial time 12:00. If one wanted to make the time 6:55, it would take over 15 clicks to get there.
- c. Suggested Fix: Allow each numerical value to be edited by typing in the value. Alternatively, implement a scrolling wheel or other method of time selection that people are already accustomed to.
- d. Task 2

12. H7: Flexibility & Efficiency of Use / Severity: 4 / Found by: A, B, C

- a. Description: User must navigate through person-selection by pressing arrow buttons to more left or right one at a time.
- b. Rationale: Does not offer shortcuts for faster selection if the user has a specific person in mind.

c. Suggested Fix: Implement a swipe gesture for more rapid navigation between options. Additionally, add a search bar where users enter in the name of the person's bottle they want to add to.

13. H1: Visibility of System Status / Severity: 2 / Found by: A

- a. Description: There is no clear indication that time has been successfully changed when the user hits "save changes".
- b. Rationale: Users may be confused if their changes went through. This could lead to them changing the time again or unnecessary navigation to confirm if their changes went through, making task-completion less efficient.
- c. Suggested Fix: Add a confirmation popup or screen to show that the time change went through.
- d. Task 2

14. H5: Error Prevention / Severity: 2 / Found by: A, C

- a. Description: In the bottle selection screen, only the name and profile picture are displayed.
- Rationale: If there are multiple friends with the same name, the user cannot easily recognize the individual (especially if their profile doesn't have a profile picture).
 This can lead to people guessing which profile is the correct one, causing misclicks.
- c. Suggested Fix: Add an additional form of identification such as username (which is unique), guaranteeing each person is distinguished from one another.
- d. Task 2 and 3

15. H4: Consistency & Standards / Severity: 2 / Found by: A

- a. Description: There is no placeholder text in the "Name" input in the "Create Account" screen.
- b. Rationale: Users have no guidance for what to input. Users may put their full name or first name which can lead to inconsistent profile information across users.
- c. Suggested Fix: Choose which type of name you want the user to store and write it in the placeholder text (ex: "First name").
- d. Extra Violations

16. H4: Consistency and Standards / Severity: 1 / Found by: A

- a. Description: Save changes button in the time-selection screen has smaller text compared to other buttons in that style.
- b. Rationale: Inconsistent button designs can be distracting to the user's experience.
- c. Suggestd Fix: Increase the font size.
- d. Task 2

17. H7: Flexibility and Efficiency of Use / Severity: 3 / Found by: A

a. Description: There is no apparent order that users' bottles are sorted in.

- b. Rationale: Some of the bottles may have delivery times that are imminent, so it's important that the user is able to navigate to those quickly. Sorting also gives the user a little more understanding of ordering of users and will lead to them finding their user faster.
- c. Suggested Fix: Sort the user's bottles in order of time until delivery. Shortest time should be put first.
- d. Task 2

18. H5: Error Prevention / Severity: 3 / Found by: A

- a. Description: There is no way to see what has been sent previously in the bottle.
- b. Rationale: In some situations, the user may not remember if they have sent something to a friend already. Showing the contents currently in the bottle can allow them to check if what they are planning to add is redundant or not, rather than guessing.
- c. Suggested Fix: Add a modal or screen where the user can browse through the content currently in the bottle.
- d. Task 2

19. H1: Visibility of System Status / Severity: 3 / Found by: A

- a. Description: Navbar does not visually indicate which screen is focused/active.
- b. Rationale: Lack of visual cues can make users feel lost and uncertain about their current location. This can hinder efficient navigation to the correct screen and task completion.
- c. Suggested Fix: Make the icons to outlines and fill them in when the screen is focused. Optionally add text labels below the focused icon to further help communicate what each screen does.
- d. All Tasks

20. H5: Error Prevention / Severity: 3 / Found by: A

- a. Description: There is no way to see what has been sent previously in the bottle.
- b. Rationale: In some situations, the user may not remember if they have sent something to a friend already. Showing the contents currently in the bottle can allow them to check if what they are planning to add is redundant or not, rather than guessing.
- c. Suggested Fix: Add a modal or screen where the user can browse through the content currently in the bottle.
- d. Task 2

21. H1: Visibility of System Status / Severity: 3 / Found by: A

- a. Description: Navbar does not visually indicate which screen is focused/active.
- b. Rationale: Lack of visual cues can make users feel lost and uncertain about their current location. This can hinder efficient navigation to the correct screen and task completion.

- c. Suggested Fix: Make the icons to outlines and fill them in when the screen is focused. Optionally add text labels below the focused icon to further help communicate what each screen does.
- d. All Tasks

22. H7: Flexibility and Efficiency of Use / Severity: 4 / Found by: A, B

- a. Description: The bottles are unclickable. More broadly, I can't figure out how to open a bottle.
- b. Rationale: When a primary function of the app opening a bottle is not immediately obvious, it greatly impedes user experience and efficiency. Clicking the bottle was the intuitive way to open a bottle, but that didn't work.
- c. Suggested Fix: Make the bottle clickable, sending the user to a page where they can view the contents of the bottle.
- d. Task 3

23. H11: Accessible Design / Severity: 2 / Found by: A, B

- **a.** Description: Date text underneath bottles in "Bottle Archive" screen are **really** small (borderline unreadable).
- b. Rationale: Date is difficult to read from an accessibility standpoint. This is the smallest text in the app and I have to squint to read it.
- c. Suggestd Fix: Make font size larger.
- d. Task 3

24. H10: Help and Documentation / Severity: 2 / Found by: A, C

- a. Description: The terms "sent bottles" and "saved bottles" are used without any explanation.
- b. Rationale: New users may not intuitively understand the distinction between 'sent' and 'saved bottles'.
- c. Suggested fix: Include an info (i) icon to the right of "sent Bottles" and "saved bottles" so that when a user clicks on it, there's a popup of information that describes what each category is.

25. H4: Consistency and Standards / Severity: 2 / Found by: A, C

- a. Description: The difference in color and how filled each bottle is could imply different status of bottles, but this isn't clearly explained.
- b. Rationale: There is visual inconsistency in the bottle designs (how much its filled and its color), leading to confusion.
- c. Suggested Fix: Standardize the bottle designs if each bottle is of the same "type". Otherwise, provide a legend/key to explain the differences in design.
- d. Task 3

26. H2: Match Between System and the Real World / Severity: 3 / Found by: A, B

a. Description: The "sort by date" text/button opens up a calendar view.

- b. Rationale: "Sort by Date" text suggests that it will record the list of bottles chronologically. Instead it opens a calendar view which is unexpected behavior for the user. Users may anticipate a simple sorting of the list rather than a change in interface.
- c. Suggested Fix: Change the text from "sort by date" to "view in calendar" or "open calendar view" which describes the resulting action more accurately.
- d. Extra Violations

27. H4 Consistency and Standards / Severity: 1 / Found by: B

- **a.** Description: Bottle UI slightly shifts left and right when looking at recipients on the Home Page.
- **b.** Rationale: For the sake of using consistent visual treatments throughout the design, users are likely not expecting the bottle UI to shift when looking at their recipients on the Home Page.
- **c.** Fix: Keep the bottle component in a fixed position and only keep the add/fill button and design part dynamic.
- d. Task 2

28. H11 Accessible Design / Severity: 1 / Found by: B

- **a.** Description: The colon component for separating the hours and minutes in the time is extremely faint in color.
- **b.** Rationale: For those with visual impairments, it is very hard to see the colon as it nearly entirely blends into the light colored background behind it.
- **c.** Fix: Darken the border around the circles in the colon or change the color of the time selecting component to make it stand out more.
- d. Task 2

29. H4 Consistency and Standards / Severity: 0 / Found by: B

- a. Description: All emotion tags upon selection are a uniform color (orange).
- **b.** Rationale: Given that different tags represent different emotions, it could be good to draw an association between the selected tag and the color behind it.
- **c.** Fix: Depending on the tag, have the fill colors be different, each one consistent with the emotion behind the tag.
- d. Task 1

30. H8 Aesthetic and Minimalist Design / Severity: 1 / Found by: B

- **a.** Description: The user's own phone number is displayed on the profile screen, which seems irrelevant.
- **b.** Rationale: Since users know their own phone number and it is not really a salient piece of data for the app, this element may be extraneous and distracting to the user.
- **c.** Fix: Remove the phone number component under the user's name on the profile screen.

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d. Extra violations

31. H2 Match Between System and the Real World / Severity: 1 / Found by: B

- a. Description: On the profile page, the text displays "My People" and "Add Person."
- **b.** Rationale: In the context of social apps, this is usually not the semantic phrasing used for friends/contacts on the app. Using familiar language could better specify the relationship between these added people and the user.
- **c.** Fix: Change the text to "My Friends" or "My Connections" and maybe "Add Contact" or "Add Friend" to better signify the social aspect to Bottle.
- **d.** Extra violations

32. H10 Help and Documentation / Severity: 2 / Found by: B, C

- a. Description: There is no clear guidance on how the app works.
- Rationale: I had prior context from what to expect but when considering the app in a standalone fashion, it was not apparent how to complete the tasks.
 Documentation could aid this issue, especially getting to the add media component of the app which is so central to its functionality and usability.
- **c.** Fix: Either add a set of instruction screens during onboarding or add text below the + button to indicate that you are adding media to the bottle.
- **d.** Extra violations

33. H9 Help Users With Errors / Severity: 2 / Found by: B

- a. Description: The error page is minimalist, with gray background and gray text.
- **b.** Rationale: To signify an error in the user flow, there should be a more robust and noticeable handler to help the user realize when this happens immediately.
- **c.** Fix: Use large, bold, and perhaps even red colored text to signify an error as it is traditionally done.
- d. Task 3

34. H3 User Control and Freedom / Severity: 1 / Found by B

- a. Task 3
- **b.** Description: When filtering bottles by date, and selecting one specifically, pressing back on the "Under Construction" page takes you two steps back in the flow instead of one.
- **c.** Rationale: This can be confusing for the user who was expecting to go back a single action rather than back two actions.
- **d.** Fix: Change the navigation logic to only take one step back rather than two.

35. H5 Error Prevention / Severity: 3 / Found by: B

- **a.** Description: There should be a displayed limit to size of data that can be added to the bottle.
- **b.** Rationale: Adding very large/long videos or data intensive media to the bottles could severely impact application performance or result in a crash.

- **c.** Fix: Warn the users of the data maximum and use explicit error handling if this were to be violated.
- d. Task 1

36. H11 Accessible Design / Severity: 1 / Found by: B

- **a.** Description: When uploading a photo or text to the bottle, you cannot add a caption or listen to the text. When uploading a voice recording, there is no ability to read a transcript of the recording.
- **b.** Rationale: For visually impaired users, it would greatly increase accessibility to be able to describe the photo or use text to speech for the written text. For auditory impaired users, it would greatly increase accessibility to have a transcript of the voice recording to realize what was put into the bottle.
- **c.** Fix: Add captions, text to speech, and speech to text where needed.
- **d.** Task 1

37. H1: Visibility of Status / Severity: 2 / Found by: C

- a. Task 1
- **b.** Problem Description: At the opening screen, there is no visual grouping of upload options + bottle
- **c**. Rationale: It feels confusing to ask the user to upload some form of media, when the media doesn't feel visually relevant to the bottle. It feels like the user uploads their media into a void, and the bottle is a separate entity on the page.
- **d.** Suggested fix: Add a text box to the bottle, or make interacting with the bottle the way to upload media

38. H2: / Severity: 3 / Found by: C

- a. Task 1
- b. Problem Description: Use of the phrase "insert moment" as opposed to submit
- **c.** Rationale: The use of the phrase insert moment definitely makes sense in terms of the context of the app, but can feel a little confusing in terms of what step a user is at in actually finalizing their moment
- **d.** Suggested fix: Incorporate a visual of a moment getting inserted into the bottle after hitting submit to keep the same app relevant feel

39. H4: Consistency and Standards / Severity: 2 / Found by: C

- a. Task 1
- **b.** Problem Description: There is a trash button to get rid of the audio/visual uploads, but no trash button to restart a text upload
- **c.** Rationale: This is a small issue of consistency. If users want to get rid of a post, the process of restarting should feel the same for each type of media.
- **d.** Suggested fix: Simply add the trash button to the text uploads

40. H11: Accessible / Severity: 3 / Found by: C

a. Task 1

- **b.** Problem Description: The text box does not expand when a user begins to type, so I assume the text will get smaller to accommodate for longer posts.
- c. Rationale: This can quickly become a visual issue when people want to tell longer stories in the format of the bottle, and the UI gets crowded because the text box does not expand
- d. Suggested fix: Make text box expand to take up the majority of the screen

41. H10: Help & Documentation / Severity: 2 / Found by: C

- a. Task 2
- b. Problem Description: No indication of what the icons mean
- c. Rationale: Again, this is an issue with the heart icon itself. It is unclear what this icon means or why a user might navigate to it, so it might be necessary to add a description of what the tab is for
- d. Suggested fix: Labels with the icons

42. H8: Minimialist Design / Severity: 2 / Found by: C

- a. Task 3
- b. Problem Description: Option of viewing images against a gradient background
- c. Rationale: From a visual perspective, having an intense gradient with a full colored image against it might not be the best aesthetic option
- d. Suggested fix: Consider altering the page when there is an image upload to a non-gradient, solid blue background

43. H2: Match Sys & World / Severity: 2 / Found by: C

- a. Task 3
- b. Problem Description: The icon of the filter feels confusing and not well placed when considering the actual function of the filter.
- c. Rationale: If there is the option to filter at all, it feels unnecessary to have an extra confusing icon that the user must navigate to to find said filter
- d. Suggested fix: Opt for always having the filter by tag option visible, and if the user does not want to filter by tag, they don't have to select an icon

44. H8: Minimalist Design / Severity: 1 / Found by: C

- a. Task 3
- **b.** Problem Description: The bottle visual on the opening bottle page looks clipped at the end.
- **c.** Rationale: To maintain a polished appearance throughout the app, it's important to keep icons, especially one as important as the bottle, consistent
- **d.** Suggested fix: Have one component that is the bottle, and reuse whenever needed to avoid inconsistency.

45. H11: Accessible / Severity: 1 / Found by: C

a. Task 3

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- **b.** Problem Description: The consistent use of gradients against gradients can make the app feel visually cluttered
- **c.** Rationale: Gradients against gradients can be visually straining, which can alienate a portion of the population that want a more high contrast background/icon experience
- **d.** Suggested fix: Consider not using gradients within the bottle itself to allow for high contrast between the bottle and the background

46. H8: Minimalist Design / Severity: 2 / Found by: C

- a. Task 3
- **b.** Problem Description: The image corners feel too rounded, especially against the background of the image box
- **c.** Rationale: The image itself has very rounded corners, that don't necessarily feel visually cohesive or appealing with the box the image is against
- **d.** Suggested fix: Consider less rounded corners for displaying the images

47. H11: Accessible / Severity: 3 / Found by: C

- a. Task 3
- b. Problem Description: Text is generally very thin on buttons/on captions
- **c.** Rationale: The text often used is white on a medium blue background. This can be difficult to see, especially for those who want high contrasts. To compensate, a thicker font may be needed
- d. Suggested fix: Thicken the white text

3. Summary of Violations

A Google Sheet Template is provided <u>here</u> to help you calculate numbers.

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status			2	2		4
H2: Match Sys & World		2	1	2		5
H3: User Control		2	1		1	4
H4: Consistency & Standards	1	2	4			7
H5: Error Prevention			1	3		4
H6: Recognition not Recall				1		1
H7: Efficiency of Use			1	2	2	5
H8: Minimalist Design		2	3			5
H9: Help Users with Errors			1			1
H10: Help & Documentation			3			3
H11: Accessible		4	1	2		7
H12: Value Alignment & Inclusion				1		1
Total Violations by Severity	1	12	18	13	3	47

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Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)

4. Evaluation Statistics (in %)

Severity /	Evaluator A	Evaluator B	Evaluator C
Evaluator			
Sev. 0	0%	100%	0%
Ex: Eval A count / total			
sevs 0 in table #3			
Sev. 1	25%	58.3%	25%
Ex: Eval A count / total			
sevs 1 in table #3			
Sev. 2	61%	33.3%	72%
Ex: Eval A count / total			
sevs 2 in table #3			
Sev. 3	69%	38.5%	23%
Ex: Eval A count / total			
sevs 3 in table #3			
Sev. 4	100%	100%	33%
Ex: Eval A count / total			
sevs 4 in table #3			
Total (sevs. 3 & 4)	75%	50%	25%
Ex: Eval A = sum(sev 3:			
sev 4 counts) / sum(sev			
3: sev 4 in table #3)			
Total	81%	61.7%	51%
(all severity levels)			
Ex: Eval A total sev			
count / total sevs (green			
cell) in table #3			

^{*}Note that the bottom rows are not calculated by adding the numbers above it.

5. Summary Recommendations

[merge the general recommendations you made here]

We enjoyed using the Medium Fidelity Prototype. I appreciated the design and incorporation of functionality, and generally really like the central idea behind the app. Some additional strengths were its color scheme and simplicity. I am looking forward to seeing how this transitions into the hi-fidelity prototype.

From a higher level view, there was not a specific category that was very dominant in driving the heuristic violations. There were a few points made about some design components that are easily changeable and will greatly aid accessibility. User

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control is another thing that could use a few more improvements but all in all the severity of the violations were clustered around the more minor side and thus attention to smaller detail will go a long way, but I think the big ticket items were done quite well. We believe that there is a lot of potential to increase efficiency of task completion. One specific example is in the time selection screen, as it is a custom-built component that is a lot less efficient than the widely-used time picker. Switching some of these custom selection components can lead to more efficient completion of tasks. There are a few things within the Consistency and Standards bucket that I think will be easy to change and make a high impact on app usability and making interactions seem more natural, likewise with Flexibility and Efficiency of Use.

Aside from the heuristic violations, we had a little bit of trouble envisioning how the bottle itself would work, despite that being the central part of your app. We were confused about how it would be measured in terms of fullness and also why the bottle itself was not a clickable component anywhere.

One very major thing here was that there was no way to test the third task. This made it hard to provide feedback or conceptualize how this would play out in the scope of your application. Hopefully some of the feedback provided on other parts of the app will carry over to the implementation of the complex task.

All in all, great job!

Severity Ratings

- 0 not a usability problem
- 1 cosmetic problem
- 2 minor usability problem
- 3 major usability problem; important to fix
- 4 usability catastrophe; imperative to fix

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Heuristics

H1: Visibility of System Status

• Keep users informed about what is going on

H2: Match Between System & Real World

- Speak the users' language
- Follow real world conventions

H3: User Control & Freedom

- "Exits" for mistaken choices, undo, redo
- Don't force down fixed paths

H4: Consistency & Standards

- Words, actions, and UI elements should be consistent across the entire platform
- Follow platform and industry conventions

H5: Error Prevention

- Minimize error-prone conditions
- Remove memory burdens, support undoing, and warn your users when necessary

H6: Recognition Rather Than Recall

• Make objects, actions, options, & directions visible or easily retrievable

H7: Flexibility & Efficiency of Use

- Accelerators for experts (e.g., gestures, keyboard shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design

• No irrelevant information. Focus on the essentials.

H9: Help Users Recognize, Diagnose, & Recover from Errors

- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

H10: Help & Documentation

- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large

H11: Accessible

- Users can interact with the system using alternative input methods.
- Content is legible with distinguishable contrast and text size.
- Key information is upfront and not nested for screen readers.

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• Purely visual or auditory content has text-based alternatives for users with low vision and low hearing.

H12: Value Alignment and Inclusion

- The design should encode values that users can understand and relate to.
- It should make a diverse group of users feel included and respected.
- The design should prevent the reproduction of pre-existing inequities and not create additional burdens for members of disadvantaged populations.