Heuristic Evaluation of Sprout

1. Problem/Prototype Description

We evaluated the medium-fidelity prototype of Sprout. A music creator connection app that allows people to post soundbites, add to other people's soundbites, and connect with other creators to foster collaboration in the industry.

2. Violations Found
Violations

1. **H4: Consistency and Standards and H2: Match Between System and the Real World**
   Page: Select Genres (2)
   Task: 2
   Found by: A
   Severity: 2
   When a user is selecting their preferred genres for onboarding/on the explore page, the genre buttons darken instead of light up. For example, users can click on the EDM button to 'select it', causing it to become black with pink text. The logic here does not match platform conventions or context of the real world. When things are being turned on, they typically light up/get filled in. Darkening the EDM tag makes it seem as though you are turning off that tag and don't want to see any soundbites with that genre.

   Fix: Reverse the color scheme of the genre selection overlay. If users want to turn on clips, make them light up. If the default is that all genres will be displayed, then leave all of them lit up, and allow users to remove genres they don't want to see by clicking on them. Then the darkening mechanism will make more sense.

   2. H6: Recognition Rather than Recall
   Page: Main Explore Page (6)
   Task: 2 - Adding to a Sound
   Found by: A, B
   Severity: 2
   The user has to memorize which colors are associated with each genre on the explore page. Although I do enjoy the simplicity of the page, users may get frustrated by having to switch back and forth between the filter page and explore page in order to find out which genre corresponds with each color.

   Fix: Add a list of activated genre tags at the top of the screen for easy reference. Another choice would be to directly label all of the stories with their genre.

3. H4: Consistency and Standards

Page: Upload Cover Photo Page (23)

Task: 1

Found By: A

Severity: 4

When recording an original soundbite, if a user clicks the back button on the page that allows you to upload a cover photo, they are not transported to the previous page. Instead it suggests that the user was adding to an existing soundbite. The task flows are being mixed up in this case.

Fix: On the upload a photo page, ensure that you are being redirected to the previous screen and not making jumps to other task flows.

4. H1: Visibility of system status

Page: All pages where you are uploading/creating a soundbite.

Task: 1 & 2

Found by: A, B

Severity: 2

When recording your own soundbite, it is unclear how much progress you have made in the process or how many more steps there are. Since the process is spread across multiple pages, users may feel like the process is a lot longer and simply exit the task before completion.

Fix: Add a status/progress bar when recording your story.

5. H5: Error Prevention

Page: Upload Cover Photo (23)

Task: 1 & 2

Found by: A

Severity: 2

If a user has a photo uploaded, clicking on the photo removes the photo completely rather than giving them the option to select a new one. This makes it seem as though the photo is optional. However, the user cannot submit a sound bite without a photo, making it easy to run into an error.

Fix: On tap photo, give users the option to change photos rather than completely removing a photo.

6. H8: Aesthetic and minimalist design

Page: Explore page after soundbite has been added. (28)

Task: 1 & 2

Found by: A

Severity: 0
After uploading a clip, the "uploaded" text is persistent. However, there is no text elsewhere on the screen. The text is no longer necessary after a short period of time or after something is clicked.

Fix: Make the "uploaded" text fade out after a certain amount of time to match the aesthetic of the rest of the screen. Another option is creating a separate confirmation screen that the user can then exit out of.

7. H5: Error Prevention
Page: explore page after soundbite is uploaded (28)
Task: 1 & 2

It is unclear whether the undo button on the explore page will undo any posts that you've uploaded, or undo the filters that you have placed. As of right now, it undoes the upload functionality, which is not expected. Deleting a clip should be associated with the sound bite itself (the 'x' during the upload is a good example), rather than being very distant from the sound bite.

Fix: Provide a warning alert if the undo button is meant to remove recently uploaded stories. If it is not, make sure it is clear that the undo button removes the filter on the tags.

**This was due to a misunderstanding in what the refresh button does. No severity ranking is applied.

8. H8: Aesthetic and minimalist design
Page: all pages
Task: 1, 2, & 3
Found by: A, C
Severity: 1
On the navigation bar, there is a small blue half circle that indicates which page you are on. However, the icons are also filled in when you select that part of the tab navigator. The two pieces are redundant. Adding the color seems a little misplaced as color is used to indicate genres in other locations.

Fix: Remove blue shape on the navigation bar.

9. H5: Error Prevention
Page: explore page after soundbite is uploaded (28)
Task: 1 & 2
Found by: A
Severity: 3

There is no confirmation page when clicking on the 'x' to undo an upload. However, it may be accidentally clicked and reduces efficiency if the upload must be restarted.

Fix: Add a confirmation page before a soundbite is posted or add a warning alert prior to deleting a soundbite.

10. H4: Consistency and Standards
Page: Explore pages
Task: 2 & 3
Found by: A
Severity: 3 - may be more of an issue with the prototype
When filtering the soundbites in the explore page, DJ Cobra's sound bite moves. However, clicking on a different sound bite brings up that same preview. Confusion may arise about whether pictures are associated with sound clips or not. This problem also translates across different areas of the app, such as the profile and notifications page. The pictures and the soundbites that are available to tap on are not consistent.

Fix: Make sure that soundbites are properly associated with one picture.

11. H6: Recognition rather than recall
Page: Explore pages
Task: 1, 2, & 3
Found by: A, B
Severity: 4
Users do not have a way of labeling sound clips other than with a picture. Users can easily upload the same picture for different soundbites, making soundbites hard to distinguish on the explore page, especially if you are just searching for one.

Fix: Provide names/titles to sound clips to allow for easy distinguishing. I suggest this over pictures because titles allow you to implement searching functionality.

12. H7: Flexibility and Efficiency of Use
Page: Explore pages
Task: 2 & 3
Found by: A, B
Severity: 4
Users do not have a way of searching for a specific soundbite (such as by title) via a search bar. If a user is looking for something that they have previously looked at, or if they receive a recommendation from a friend, they will need an easy way to search for specific soundbites.

Fix: Add a search bar to the explore page to allow for specific searches of soundbites.

13. H2: Match Between System and the Real World
Page: "Sounds good?" (15)
Task: 1 & 2
Found by: A, B
Severity: 3
Users are asked if their creation sounds good, but they only have a "Yes! Continue!" button. A sounds good page would imply that there is some sort of editing that is available to users to make their sound bite sound good. However, this page does not provide any editing, or any additional functionality compared to the previous screen (where you can listen to what you recorded). This could also be an H8: Aesthetic and Minimalist error, if there is no intended functionality. This page would then be seen as extraneous or unnecessary.

Fix: You could remove the "Sounds good?" page if there is no additional functionality of it. The other option would be to add some editing options for the user that would make the screen necessary, such as clipping, overlaying sounds, etc.

14. H7: Flexibility and Efficiency of Use
Page: Soundbite preview page (12)
Task: 2 & 3
Found by: A, B, C
Severity: 0 - not usability but an important defect
When viewing a soundbite's preview, the user has the option to include the last two sounds. However, only one user's profile pops up when both sounds are being listened to. It is a standard convention in the music industry to give credit to all artists who have collaborated on the current piece of work. The current convention does not give credit to the second artist. It also makes it inefficient to connect with the second artist because they must first go to the evolution tree and then find their soundbite within an extensive tree.

Fix: Add all relevant user profiles to a sounds preview page. I would not include the profiles of everyone on the tree. I would only include the profiles of the specific soundbites that are being listened to.

15. **H4: Consistency and Standards**
Page: Soundbite preview page (12)
Task: 2 & 3
Found by: A
Severity: 3
Prior to adding to a soundbite, the current length of the train (number of sound bites and time) is unclear. For example, a user may not want to add to a song that is already 5 minutes long. When adding to DJ Cobra's clip, it says that you can include the last two sounds, implying that the train is only two clips long. However, the evolution tree

suggests that there are more sounds that come before that. The user needs to see where their soundbite falls within the tree as they are uploading.

Fix: Make it clear how long the total song is prior to/after the addition of the clip (rather than just the last two clips). Include the figure of the evolution tree when uploading a clip to make it clear where their song is in the context of the entire song. Add the total length of the train on the preview page.

15. H10: Help and Documentation
Page: Adding to a soundbite pages
Task: 2
Found by: A
Severity: 3
It is unclear whether including the last 1-2 sounds is only for listening purposes, or if that determines the number soundbites that you want to include in your new post. The evolution tree suggests that there are more songs that come before it. Does selecting the number of sounds create a new branch with just those sounds?

Fix: Provide additional documentation or clarity as to whether including more than the last sound determines the tree size or if it is only for preview purposes.

16. H7: Flexibility and Efficiency of Use
Page: Upload photo and select genre for clip page (24)
Task: 2
Found by: A
Severity: 1
The user must enter in a genre when adding to a sound bite. However, they are most likely going to continue the same genre of the previous sound bite, instead of completely diverging. Entering in the genre seems like an extra step for many users.

Fix: Set the default genre to the genre of the previous sound bite to allow for an efficient uploading process.

17. H2: Match between system and the real world
Page: Upload photo and select genre for clip page (24)
Task: 1 & 2
Found by: A
Severity: 3
Users do not have the ability to add multiple genres/tags to their sound clips. However, the music industry is riddled with cross-genre music. Limiting to one genre restricts user control and does not accurately represent the music that the industry produces.

Fix: Allow users to select multiple genres that represent their sound bites.

18. H8: Aesthetic and Minimalist Design.
Page: Profile page (29)
Task: 3
Found by: A, B
Severity: 2
When on a profile page, it isn't clear what is classified as a featured soundbite compared to a general soundbite. There is no button that would indicate a way to add to the featured list. It may also be determined by some algorithm that we don't know about. It is debatable whether the separation is necessary if there is no clear way of adding or removing from the featured list.

Fix: Combine soundbites into a single list or make it distinguished what is classified as a featured soundbite compared to a general one.

19. H5: Error Prevention
Page: evolution tree page (45)
Task: 3
Found by: A
Severity: 2
On the evolution page, there is a "Go to me" button. However, a user may upload multiple clips to the same sound bite. It is unclear what the functionality would do in that case. The user may also not have a sound bite associated with that sound tree.

Fix: Remove the 'go to me' button and make your own sound bites distinguished by making them bigger or a different color

20. H4: Consistency and Standards
Page: Selecting genres page
Task: 1, 2, & 3
Found by: A
Severity: 1
The hip hop genre is paired with the color grey. However, this makes it stick out in comparison to the other colors. The grey shade makes it seem as though it is genreless or still waiting to be filled in.

Fix: Change the grey color to a color that matches the aesthetic of the other genres.

21. H8: Aesthetic and Minimalist Design
Page: evolution tree page (45) and explore pages
Task: 2 & 3
Found by: A
Severity: 1

It is hard to distinguish between the pink (EDM) and purple (R&B) rings when they are close together.
Fix: Choose more distinguished colors or place them further apart for easier color recognition.

23. H7: Flexibility and Efficiency of Use
Page: Story preview pages (40)
Task: 2 & 3
Found by: A, C
Severity: 3
Users have the option to listen to up to the last two sounds when clicking on a soundbite preview. However, the evolution tree suggests that there are a lot more sound bites that come before this.

Fix: Allow users to listen to the entire tree when clicking a sound preview or when listening to a sound, rather than just the last two.

24. H7: Flexibility and Efficiency of Use
Page: Evolution Tree
Task: 3
Found by: A
Severity: 2
On the evolution tree, it is unclear how to play the sounds, or if you are even allowed to play the sound starting from the root of the tree. If a user wants to listen to the evolution of the sound, then they would have to click on each preview one after the other, which is a bit repetitive.

Fix: Add a play button on the evolution page. When it comes to a fork, allow users to choose a path.

25. H3: User Control and Freedom
Page: Profile page and notifications/connections page
Task: 3
Found by: A
Severity: 3
There is no way to undo a follow request. Users may accidentally click the follow button and need an exit route.

Fix: Clicking on the connect button multiple times should toggle between following a user and unfollowing a user.

26. H7: Flexibility and Efficiency of Use

Page: Profile page
Task: 3
Found by: A
Severity: 4, if this is intended functionality
Although users are able to add friends/make connections, there is no way to view a list
of the connections that you have, making it harder to find specific artists that you want to
collaborate with

Fix: Add a friends/connections list on the profile page

27. H1: Visibility of system status
Page: Notifications
Task: 3
Found by: A, C
Severity: 2
It is unclear why a sound has a notification. Clicking on the bubble does not give any
information about the update that has been made.

Fix: Provide a notification message with the sound clips that are present on the
notification pages. It should be clear what changes have been made and why it is
important for the user to see.

28. H1: Visibility of system status
Page: Notification/Connections
Task: 3
Found by: A
Severity: 1
The connections page does not give the current status if there are no new connections.
It could be confused for a page that is still loading or undefined.

Fix: Provide a message to users if there are no new connections.

29. H3: User Control and Freedom
Page: Notifications/Connections
Task: 3
Found by: A
Severity: 2
The connections disappear when you choose to add or delete them. However, there is
no clear way of undoing a decision. Since the buttons are close together it would be
easy to accidentally tap the wrong one.

Fix: Allow the connection notifications to persist with the updated status. Then provide an
undo button for flexibility.

30. H4: Consistency and Standards
Page: Profile page of Honest Ocean
Task: 3
Found by: A
Severity: 0
When connecting with Honest Ocean, a picture on their featured list changes, but the rest don't. It is unclear if this is intentional. Is it a private soundbite that you have unlocked by connecting with the user?

Fix: Make sure pictures of soundbites are consistent or changes in pictures are explained

31. H10: Help and Documentation
Page: All
Task: 1, 2 & 3
Found by: A, C
Severity: 2
There is no onboarding process or place to get information about how to use the app. Users may need some clarity on the functionality and purpose.

Fix: Add a help screen that allows users to see how the app functions. This would be a good place to have an FAQ section, which may address some of the violations I have listed here.

32. H4: Consistency and Standards
Page: Uploading a soundbite pages
Task: 1 & 2
Found by: A
Severity: 0
On all pages, the headers are centered. However, when uploading a clip, the headers are no longer centered. Choosing a more consistent format will make it less distracting for users.

Fix: Center headers when recording/uploading a story.

33. H1: Visibility of System Status
Page: Evolution tree
Task: 3
Found by: A
Severity: 3

When on the evolution page, it is unclear what page you are actually on because there is no header. Furthermore, different evolution trees will look pretty similar. There currently is no way of distinguishing between the evolution trees, such as a title.

Fix: Provide a header and title to evolution trees to easily distinguish between them.

34. H4: Consistency and Standards
Task: 3
Found by: A
Severity: 2
The notifications for soundbites do not disappear after they have been interacted with. However the connections disappear after you decide if you want to accept or reject the invitation. This leads to some inconsistency across the two pages. According to this current convention, the notifications page will become cluttered with old notifications.

Fix: Put old notifications in a running list that is still accessible to users. Allow the notifications page to only involve new notifications that haven't been seen.

35. H1: Visibility of System Status
Found by: B
Severity: 3
When uploading your own soundbite, the navigation bar disappears. This makes it hard to see the current status of the system via the notifications button.

Fix: Add the navigation bar to the screens where you are uploading a sound bite to allow for easy navigation and access to system updates.

36. H2: Match between System and the Real World
Found by: B
Severity: 1
The profile is at the bottom when viewing a sound and is the same size as the actual audio. However, most systems have profile information at the top of previews.

Fix: Put profile at the top of the sound bite preview and make it smaller.

37. H2: Match between System and the Real World
Found by: B
Severity: 2
On the "Sounds good?" page, there is only a "yes continue button." However, yes buttons are typically associated with no buttons to indicate. Currently it seems as though the user only has one option and must continue regardless

Fix: Give button for option (no, etc.)

38. H2: Match between System and the Real World

Found by: B

Severity: 0

Users have the option to add to their own sounds. It is unclear why this functionality is necessary since collaboration means working with others and not yourself. It seems slightly unnecessary.

Fix: Remove the option to add to your own soundbites, perhaps make it editable instead.

39. H2: Match between System and the Real World

Found by: B

Severity: 3

Unclear how to communicate with creators that you have connected with on the app. Is there a messaging feature, or can you only link to their instagram and spotify?

Fix: Add dming feature from profile or newly added friends list

40. H4: Consistency & Standards

Found by: B

Severity: 0

Confused why the sound you upload goes into the explore tab which is a sampling of sounds from others?

Fix: Have the soundbite get uploaded to the user's profile section.

41. **H4: Consistency & Standards**

Found by: B

Severity: 2

On the Honest Ocean and DJ Cobra profiles, the buttons used to connect with the user are not consistent. One says connect and the other says request. It is not clear why there is a distinction.

Fix: Standardize the connection buttons to have a single message (requested is preferred if there are privacy options).

42. **H4: Consistency & Standards**

Found by: B

Severity: 2

When there are more songs than the 5 sample songs on the explore page, it is unclear how the view would scale (map, scroll, etc). If not implemented properly, it could make it difficult to explore songs effectively.

43. H7: Flexibility & Efficiency of Use

Found by: B

Severity: 2

On the explore page, there is no way to change the view from the bubble to something else (graph, feed, table, etc). The graph bubbles make it inefficient to search for a specific sound and could be distracting for some users.

Fix: Implement different ways to view the songs

44. H4: Consistency & Standards

Found by: B

Severity: 2

When viewing a profile (your own or someone else's), you can't filter by genre, but you can do this on the explore page.

Fix: add a genre filter functionality for the profile page.

45: H8: Aesthetic & Minimalist Design

Found by: B

Severity: 1

When uploading, the option to select genre for your upload has very bright, jarring, colors next to each other that are very distracting.

Fix: Remove colors from this section, or make the color appear only on hover/tap.

46. H8: Aesthetic & Minimalist Design

Found by: B

Severity: 0

On the upload screen, when you are being asked to confirm if this sound byte is good to proceed with, the phrase "Yes! Continue" is redundant.

Fix: The button should say "yes" or "continue", not both.

47. H3: User Control & Freedom

Found by: C

Severity: 2

When you upload a snippet you can delete it when it's uploading, but I can't see how I would delete it after I posted it, including from my profile.

Fix: add an "x" (delete) button to the circles the user uploaded, or a delete button on the sounds page when it is clicked.

48. H6: Recognition not Recall

Found by: C
Severity: 1
Even though the soundbite I posted has an uploaded tag beneath it, beyond that I am unsure how I would know which soundbites on my explore page I have uploaded besides remembering the cover photos or cross-referencing with the photos on my profile.

Fix: Add some sort of indicating icon for the feature page specifically to signify if a soundbite is yours.

49. H9: Help Users with Errors
Found by: B, C
Severity: 2
I see that I can undo or delete a soundbite I have uploaded or recorded, but can I edit out a certain part? For instance if there is a few seconds on dead air at the end of a recording when I went to stop recording

Fix: Add clip trimming feature, mostly just for beginnings and ends of clips

50. H10: Help & Documentation
Found by: B, C
Severity: 3
Maybe because the uploaded or recorded files for the soundbite are hardcoded in and it would be explained in the high-fi, but there is nothing indicating whether or not there is a max time amount for a soundbite or specific file types needed.

Fix: In high-fi indicate allowed file types and min/max lengths when recording or uploading

51. H2: Match b/w System & World
Found by: C
Severity: 0
Delete icon on the recording sound bite feature is confusing. I am assuming it is to delete the whole recording, but in the real world delete is usually just one letter or one portion of something, where I think this means its undo the recording

Fix: use an undo icon, or a single x positioned surrounding the whole recording

52. H4: Consistency & Standards
Found by: C
Severity: 0

This could be just because of the med-fi prototype but when I clicked to add a sound, I was just using the 1st sound, and when I uploaded, it said I was including 2 sounds, so unclear when that decision is made or can be made

Fix: force decision when uploading a sound

53. H10: Help & Documentation
Found by: C
Severity: 4, there is a fundamental misunderstanding of how to use the app
I don't understand how you add to a sound. Is the recording function, recording over the sound you are mixing? And if you are uploading, do I download the original sound to mix off of, and if so how?

Fix: more documentation on sound pages

54. H4: Consistency & Standards
Found by: B, C
Severity: 3
When tracking the evolution of a soundbite, I can see that there are many iterations, but just on the sound page I can only see 1-2 sounds, so I am unclear which of the iterations these correspond to

Fix: get rid of iterations on the soundbite page, unless you have a way to decide which iteration the user would like the best, because otherwise they could access the mixed version from the evolution tree.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status		1	2	2		**5**
H2: Match Sys & World	2	1	1	3		**7**
H3: User Control			2	1		**3**
H4: Consistency & Standards	4	1	5	3	1	**14**
H5: Error Prevention			2	1		**3**
H6: Recognition not Recall		1	1		1	**3**
H7: Efficiency of Use	1	1	2	1	2	**7**
H8: Minimalist Design	2	3	1			**6**
H9: Help Users with Errors			1			**1**
H10: Help & Documentation			1	2	1	**4**
Total Violations by Severity	**9**	**8**	**18**	**13**	**5**	**53**

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

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D	Evaluator E
Sev. 0	44%	44%	33%		
Sev. 1	75%	25%	25%		
Sev. 2	56%	50%	22%		
Sev. 3	69%	38%	23%		
Sev. 4	80%	40%	20%		
Total (sevs. 3 & 4)	72%	39%	22%		
Total (all severity levels)	64%	42%	25%		

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

5. Summary Recommendations

Sprout team, you all continue to amaze us with every product you produce. This medium-fidelity prototype is phenomenal. We first want to emphasize that this list of heuristic violations does not define the quality of your product. For every heuristic violation, we could easily find five qualities that were perfectly executed.

One of the main aspects of the product that can be improved is the clarity. There is no help feature or onboarding, which proves to be confusing throughout the process of using the app. There can definitely be more clarity on what certain terms mean, like connect/requested, featured tab, etc. We also think you should be a lot clearer with the intention of the app. Our heuristic evaluations completely diverged because we each had a different understanding of the app. One of us thought you would be overlaying a soundbite via a remix. Another thought you were choosing which sounds to remix via the inclusion options on the sound preview. If this is a networking app, how can you interact with other artists? Can you see who you follow? Can you message them? These are essential for networking apps. If we were shown this app without the context of what it does, we'd be super lost. Our advice is to revisit your mission statement as you think about the design and functionality of the app.

Another aspect that can generally be improved is the ease of navigation. In the explore function, it's hard to tell what all the bubbles actually mean, as there is no song description/artist/etc. There is just a cover photo and genre, which don't give much information about the sound bite. The tree structure for seeing the origin of a song is also confusing without labels and specificity.

Outside of these heuristics, one thing to consider is that musicians may only be specialized in a single area. For example, a guitarist may not be confident in singing, while a singer may not be comfortable playing the music to continue to a soundbite. The current layout of the app does not suggest that there is a way for a musician to put down the entire beat or melody, and have users produce lyrics, or vice versa. A large part of musical collaboration is bringing together experts in different areas to make one cohesive piece. The current format suggests that you must be an expert in multiple areas (music, lyrics, singing, editing, etc.). The reason we emphasize this point is because we are living in a time period where collaboration is limited. People don't have access to a full team because of COVID. But the need for connections in the music industry is still prominent. As of right now, it isn't clear who the target audience is or how you will bring these people together. We highly recommend helping people find specialists in different areas. This whole class recommends coming in with a diverse team of different expertises and backgrounds. The same applies for music. Design thrives in team contexts.

Our final recommendation is reconsidering the complexities of your tasks. The complex tasks seem like two simple tasks put together in order to make a complex task. We would argue that posting your own soundbite is more complicated than connecting with a user or looking at the evolution of a soundbite. If the user is given editing capabilities within the app, the act of posting a sound bite becomes much more complicated. Finally, adding to a soundbite, and posting your own soundbite have basically the same process. It seems as though these two tasks could be combined into one because the end goal is uploading a soundbite.

Overall, we think the general trend we saw in the violations is being minimalistic to a fault. You definitely have a really clean interface which is aesthetically pleasing, but in turn, you sacrifice specificity and detail. Even the tasks seem a bit too minimalist. We think the main goal for you is to add back in this information while keeping the pros of your minimalistic design.

We are super excited to see what you all are capable of producing. We think the aesthetic of your app is top-notch. The layout, color scheme, and simplicity of icons show the attention that you have put into this prototype. However, we encourage you to remember how this process started. Go back to the users and revolve the design around them. Good luck!

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

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