Heuristic Evaluation of grove

1. Problem/Prototype Description

Grove is a mobile application that helps new-grads manage and be more intentional about their social lives through setting weekly hangout preferences, posting activities that they want to do, and reflecting on those activities.

2. Violations Found

TASK 3 VIOLATIONS

1. **H4: Consistency and Standards / Severity 2 / Found by: A, B, C, D**
   Task #3
   Problem: The large app logo is the largest element and center of the home page. Users might have the expectation that large, centeretd items are usually interactive. Thus, users might expect to be able to click on the logo to start a task flow.
   Suggested Fix: Make the logo as the button for planting an activity to really tie in the fact that grove is for planting activities.

2. **H6: Recognition not Recall / Severity 1 / Found by: A, B, C**
   Task #3
   Problem: No way for user to see what they had inputted in previous steps of planting an activity. Possible scenarios where an user might step away from their phone or be distracted in the middle of completing "planting" thus might forget what they had inputted previously.
   Suggested Fix: Show what user has imputed in previous steps as they go along

3. **H7: Flexibility and Efficiency of Use / Severity 1 / Found by: A, B, C, D**
   Task #3
   Problem: No shortcuts for planting an activity. User needs to type in the activity they want, where, when and available for every single time they want to create one. It's possible there are certain choices that they might want to use again and again (eg. they might choose to plant activities at a certain location that they particularly like multiple times)
   Suggested Fix: Have pre-set activity-location sets to choose from or recommendations of input values or commonly used

4. **H10: Help and Documentation / Severity 3 / Found by: A, B, C**
   Task #3
   Problem:
   - "Activity you want to plant"
     Users have no idea what kinds of activities they can plant - can they type in any activity? Are there any unsupported activities? Do the activities need to be one word like the example given? Can they be a phrase?

- "Where"
  How specific the user need to be? Is it a free for all? Can they put "middle of lake" if their first input was coffee (maybe there is a place in the middle of lake for coffee :))
- "When"
  Is when a final time? Can users choose multiple? Does "Saturday afternoon" mean the upcoming Saturday or another one? → User only gets to see that it is "Next Saturday" after they click Plant
- "Available for"
  Users don't know what happens for the individuals/groups that they input "Available for" as - do they all get notified, will only one of the group be chosen, how might that work? - Not obvious that grove automates the hangout / matches the activity with one of eligible friends.
- "Plant" Button
  What does "Plant" mean? Not clear what happens when you click the button.

Suggested Fix: More clarity on what each of the steps mean - maybe in a FAQ or clearing up the language and adding more descriptions

5. **H1: Visibility of System Status / Severity: 1 / Found by: A, B**
   Task #3
   Problem: Users don't know when their input is acceptable and they can move to the next screen when "planting an activity". There's no indication that the user can go to the next input since the right arrow doesn't update after input (as compared to no input).
   Suggested Fix: Have the Next button be grayed out until user inputs something valid

6. **H5: Error Prevention / Severity: 1 / Found by: A, B**
   Task #3
   Problem: Users don't know that if they press the left arrow, their text will disappear. Assuming that behavior is only due to the Figma medium, users don't know if they go back whether their inputs will be kept the same or not. For example if they wanted to actually change the activity they chose after inputting "Saturday afternoon" and go backwards, they lose that they put "Saturday afternoon".
   Suggested Fix: Allow users to input values in one screen or let them add inputs out of order

7. **H5: Error Prevention / Severity: 2 / Found by: A, B**
   Task #3
   Problem: Suppose users type in something that is not allowed/acceptable/supported in the text fields for "activity they want, where, when", will there be an error message to inform users what might be wrong? What if they misspell something?
   Suggested Fix: Adding in error messages or adding in more options to choose from along with variable input

8. **H2: Match between System and World / Severity 1 / Found by: B, C**
   Task #3
   Problem: For the Where and When Steps, usually people see a map when deciding on

a location and usually have some clock or calendar-type display when deciding on a time. Using words to write those may not be as intuitive.
Suggested Fix: Add other more native input widgets beyond the short text-like calendar or map

9. **H3: User Control and Freedom / Severity 1 / Found by: B, C, D**
Task #3
Problem: No obvious way for the user to exit planting an activity if they don't want to finish. The only way for a user to do so is by clicking one of the menu buttons on the bottom, but this is not a clearly marked exit.
Suggested Fix: Add an "X" button in top left corner

10. **H4: Consistency and Standards / Severity 3 / Found by: A, B, C**
Task #3
Problem: The placement of the input fields moves as you go from screen to screen in the Plant an Activity process which may be difficult for users to adjust and find the new input location.
Suggested Fix: Keep the input fields in one place - maybe at minimum bottom half the screen, and images to the top part of the screen.

11. **H8: Aesthetic and Minimalist Design / Severity 2 / Found by: A,B,C**
Task #3
Problem: the background images for each phase of Plant an Activity are distracting and do not add to the user goal of planting an activity. This is especially severe in the "Available for" step, although also apparent in the other steps.
Suggested Fix: Minimize the background images as a header image or use small status icon instead of full screen backgrounds

12. **H11: Accessible / Severity 1 / Found by: B,C**
Task #3
Problem: Text for input fields during each step of the Plant an Activity flow is kind of small, including the prompts, and the step indicator - particularly for the "Available for" screen - the key information is nested near the bottom of the screen.
Suggested Fix: Make input field text size bigger

13. **H5: Error Prevention / Severity 1/ Found by: A, B,C**
Task #3
Problem: Can't review your inputs before pressing the "Plant Button"
Suggested Fix: Add a confirmation screen that goes away or have the planted activity opened-accordion style in the Planted Tab

14. **H3: User Control and Freedom / Severity 4 / Found by: A, B, C, D**
Task #3
Problem: Users cannot cancel or edit an activity they've planted. What if they are no longer free during the time they had scdheduled? What if they want to change the location of their hangout?

Suggested Fix: Add editing/canceling functionality

15. **H12: Fairness and Inclusion / Severity 2 / Found by: D**
Task #3
Problem: There is no direct way to indicate a preferred price point for activities. Although this is mitigated by the user suggesting their preferred activities, it is still unclear whether they could also be matched to a much more expensive plan (eg. going to a concert vs. coffee) with another friend. Making financial choice/accessibility clear to the user is important to avoid making this app only accessible for certain privileged friend groups.
Suggested Fix: Add functionality to set a budget for a specific activity or a weekly/monthly activity budget

TASK 4 VIOLATIONS

16. **H4: Consistency and Standards / Severity 1 / Found by: B**
Task #4
Problem: Button in Upload Photos has drop shadow, bolded text unlike previous Plant an Activity and Plant Buttons. It is a slightly different aesthetic tone and feels different from the other screens.
Suggested Fix: Choose a button style and use it throughout

17. **H11: Accessible / Severity 3 / Found by: B, D**
Task #4
Problem: According to the contrast checker, the light green "Reflect" buttons and the "View" buttons which have small font in the Past screen in My Hangouts are not readable even for fonts over 18 and fail the color difference and color contrast tests.
Suggested Fix: Use the darker green color from the rest of the app or make the entire list item clickable for reflection/viewing

18. **H13: Value Alignment / Severity 2 / Found by: B**
Task #4
Problem: Not obvious at first why the screen immediately following pressing "Reflect" largely asks users to upload photos. Writing notes about the photos ties in deeply with the sentiment of reflect but my initial feelings seeing the big upload photos was comparing to social media-esque vibes.
Suggested Fix: Minimize the size (and thus importance) of the photos, and make it look more like scrapbook-type activity. Make the notes component of photos more prominent.

19. **H3: User Control and Freedom / Severity 2 / Found by: B**
Task #4
Problem: On the "Add Notes " Screen, the user can't pick the image they want to write a note for, nor can they write a note for the event in general. Additionally, once a user starts writing captions and presses "Save", it automatically navigates to the next photo without giving the user the ability to navigate or exit out.
Suggested Fix: Add an "X" on top left or top right; Add a left and right toggle between photos

20. **H1: Visibility of System Status / Severity 1 / Found by: B**
Task #4
Problem: User cannot see how the number of photos they still have to write captions for or how many they've finished/successfully saved.
Suggested Fix: Implement a tracker in the form of a row of filled in / not filled in dots to show how many photos are completed/left

21. **H4: Consistency and Standards / Severity 1 / Found by: B**
Task #4
Problem: "Add Notes" takes you to "Write a caption", language shift from notes to caption usage. Caption sounds like Instagram, whereas Notes sounds very formal.
Suggested Fix: Pick one term you feel best evokes the sentiment you desire and stick with it.

22. **H13: Value Alignment / Severity 4 / Found by: A, B**
Task #4
Problem: One of the values of the project is Privacy and being clear on what data is being shared with friends however it was difficult interface-wise to tell what was being shared with friends - particularly on the Reflect pages - with the photos and notes, wasn't sure who would see them, especially since the example captions were very much social media sound bites. Where else do the photos exist other than the past events? Does the other person see them?
Suggested Fix: Make it more clear that only the user gets to see the photos and notes and reflections - maybe add some text to indicate this. Instead of using the word "caption", which might be associated with Instagram, use another word.

23. **H3: User control and freedom / Severity 2 / Found by: A, D**
Problem: The user cannot easily go back to the Past Hangouts tab after clicking on the "reflect" button for an activity. The user may be clicking on this just to see what the button leads to, or may click it by accident. They have to click back on the "Hangouts" tab and toggle to "Past" in order to get back to this screen.
Suggested Fix: Add a back button

24. **H2: Match Between System and the Real World / Severity 1 / Found by: D**
Task #4
Problem: Ranking system for location and activity seems unintiutive. Smiley faces do not seem like a standard "word, phrase, or concept" that is intuitive to use.
Suggested Fix: Provide a clearer label like "Feedback" or "Review" rather than "Reflect" and consider a more common ranking system.

25. **H7: Flexibility and Efficiency of Use / Severity 2 / Found by: D**
Task #4
Problem: On the "My Hangouts" / "Past" screen, there is no option to "Edit" an existing reflection, only "View". Editing an existing reflection seems like a task an experienced user would want the flexibility to do.
Suggested Fix: Provide an option to edit an existing reflection

26. **H5: Error Prevention / Severity 2 / Found by: D**
    Task #4
    Problem: There is no error checking on whether this photo or reflection is being matched to the right friend.
    Suggested Fix: Provide an option to "Delete" a photo in addition to the existing option to "Save" a photo in the process of uploading it to a reflection. Or, have the title of the upload screen be the friend's name.

27. **H1: Visibility of system status / Severity 1 / Found by: A**
    Task #4
    Problem: The user gets no feedback once the rating has been set and they may be confused as to whether or not the rating was actually logged by the system.
    Suggested Fix: Add notification that tells the user that the rating has been set

28. **H8: Aesthetic and minimalist design / Severity 1 / Found by: A**
    Problem: The background of the "My Hangouts" page is busy and distracting. The differing shades of green especially with the "Plant an Activity" button on the Planted tab are distracting to the user.
    Suggested: Fix: Use a simpler background that does not distract or clash with the essential elements of the screen

29. **H11: Accessible / Severity 2 / Found by: A**
    Problem: The buttons on the Past section of the My Hangouts page are small and also relatively close together. This may cause usability issues and accessibility issues especially on a mobile platform.
    Suggested Fix: Make the buttons bigger and provide more separation between different hangouts

TASK 2 VIOLATIONS:

30. **H8: Aesthetic and Minimalist Design / Severity 4 / Found by: A, B, C, D**
    Task #2
    Problem: Friends Tab is visually busy. Hard to tell the background image is a plant since the friend cards cover most of it. There doesn't seem to be a pattern to the layout which makes it look a bit messy. The left and right arrows on the bottom are not noticeable at first glance.
    Suggested Fix: It's a really cool idea to have the plant metaphor but potentially make it a more organized pattern? Maybe horizontal scroll with friend profiles hanging from branches?

31. **H11: Accessible / Severity 2 / Found by: B,C**
    Task #2
    Problem: Text for friend profiles is too small (eg. "1 time per month" and the numbers) which makes it difficult to read. Additionally, the toggles for "Alert me.." and "Make Callie a top-priority…" are small and close together.
    Suggested Fix: Make text and toggles larger.

32. H2: Match between System and World / Severity 1 / Found by: B
Task #2
Problem: On the friend profile page, the button labeled "Memories with Callie" does not look much like a button since it blends in with the background. It seemed more like a header. Additionally, a camera icon usually indicates taking a picture but the language on the button seems to imply existing photos rather than the action of taking a picture.
Suggested Fix: Separate the photos from the customizable preferences. Change icon to picture icon instead of camera icon.

33. H13: Value alignment / Severity 1 / Found by: D
Task #2
Problem: Use of numbers to quantify relationships with friends (ie. target of "8x month" with Callie) seems to conflict with grove's value to create meaningful individual hangouts with friends
Suggested Fix: Transition the overall brand/value to be more in line with a scheduling app or reconsider how to quantify friend relationships and frequency of hangouts

34. H4: Consistency and Standards / Severity 1 / Found by D
Task #2
Problem: "My Grove" and "Friends" labels are different ways to say the same thing, user wonders if they are the same. For example, "My Grove" is at the top of the screen after navigating to the Friends tab.
Suggested Fix: Choose one word to represent friends and stay consitent

35. H4: Consistency and Standards / Severity 1 / Found by A, D
Task #2
Problem: On Callie's friend screen, there is an option to make Callie a "top priority" friend this week and on the "Me this week" screen, there is a section to choose friendships "to focus on this week". It is unclear whether these different phrases mean the same thing
Suggested Fix: Choose one wording and be consistent

36. H3: User control and freedom / Severity 2 / Found by: A,C
Task #2
Problem: The user cannot easily go back to the "Friends" landing page after clicking on a friend.
Suggested Fix: Add a back button

TASK 1 VIOLATIONS
37. H4: Consistency and Standards / Severity 1 / Found by: B
Task #1
Problem: In "Me this week" there's a "+" and "-" button for the number of automated

hangouts but no "-" for "Friendships to focus on this week." Additionally, the placement of the buttons is to the left of the number of automated hangouts while the placement of the button is to the right of the friendships.
Suggested Fix: Bring the buttons to one side, or to differentiate between the number toggle and adding a friend, use slightly different add button for the friend

38. **H4: Consistency and Standards / Severity 1 / Found by: B**
Task #1
Problem: In "Me this week" the content in the accordions use a slightly different color scheme than the page content outside of the accordions.
Suggested Fix: Standardize colors

39. **H11: Accessible / Severity 2 / Found by: B**
Task #1
Problem: "Me This Week": the color scheme of content within the accordion breaks web color contrast accessibility rules. The "Edit" button for Availability accordion section is extremely difficult to read and very small. Similarly, so is the "Enter" button for the "Preferred Activities" accordion.
Suggested Fix: Use the darker green for visibility

40. **H11: Accessible / Severity 2 / Found by: A, B**
Task #1
Problem: "Me this week" screen nests the "Availability" "Preferred Distance" and "Preferred Activities" in an accordion which seem pretty important for users to set.
Suggested Fix: Take them out of the accordion in to individual cards

41. **H1: Visibility of System Status / Severity 2 / Found by: A, B**
Task #1
Problem: Not immediately clear what the user has indicated as availability for the week. Do Afternoon, Dinner, Evening, refer to specific times? Possible that different users will have different conceptions of what each of those labels refer to .
Suggested Fix: Maybe use times instead of word descriptors or change layout of availability to take up more space so its a list item per block of availability

42. **H10: Help and documentation / Severity 3 / Found by: A, B**
Task #1
Problem: The usage of "ideally" on "Me this week" page and friend profile page is ambiguous (user may be confused about if the app can guarantee this and if not, how this information will be used in the overall flow of the app) and may be too fine-grain of a scale.
Suggested Fix: use buckets of engagement with friends/hangouts that are less fine grain (ie. a few times, a lot, etc.)

43. **H1: Visibility of system status / Severity 1 / Found by: D**
Task #1

Problem: On the "Me this week" page, there is no direct feedback on how many out of my "x" preferred automated hangouts I have received or completed. The goal seems to be "floating" with no direct progress report

Suggested Fix: Either present the ideal number of hangouts on another screen with my hangouts for the week or embed a tracker of how many you have completed out of the intended number for the week directly on this page

44. H8: Aesthetic and minimalist design / Severity 2 / Found by: D

Task #1

Problem: The 4 options of "Upcoming", "Pending", "Planted", and "Past" are all competing dialogues. The presence of "Past" hangouts on this page seems to diminish the visibility of the other three tabs, which are all centered around planning or partaking in a new upcoming activity.

Fix: Have two tabs up top for "Upcoming" and "Past" events to avoid so many competing labels. Within the list of "Upcoming" activities, section off the events as "Confirmed", "Pending", and "Planted" with headers within the same list so as to not lose information.

OVERALL/MISC. VIOLATIONS

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

Problem: Text headings, font and capitalization for each tab seem to vary. (eg. My Grove vs Me this week)

Suggested Fix: Apply standard capitalization

46. H11: Accessible / Severity 1 / Found by: D

Problem: Text size on menu bar labels is too small, so it is hard to read, and thus hard to navigate.

Suggested Fix: Reduce the need for labels or make them larger

47. H4: Match Between System and Real World / Severity 2 / Found by: D

Problem: App makes use of two menu conventions – both a hamburger menu on top left and menu bar at the bottom, thus it is confusing which information is accessible from which menu. Specifically, this is violating industry conventions.

Suggested Fix: Be consistent with menu depiction and only use one type of menu

36. 3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H 1: Visibility of Status		4	1			**5**
H 2: Match Sys & World		3				**3**
H 3: User Control		1	3		1	**5**
H 4: Consistency & Standards		7	2	1		**10**

H 5: Error Prevention		2	2			4
H 6: Recognition not Recall		1				1
H 7: Efficiency of Use		1	1			2
H 8: Minimalist Design		1	2		1	4
H 9: Help Users with Errors						0
H 10: Help & Documentation				2		2
H 11: Accessible		2	4	1		7
H 12: Fairness & Inclusion			1			1
H 13: Value Alignment		1	1		1	3
Total Violations by Severity		**23**	**17**	**4**	**3**	**47**

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	*0%*	0%	0%		
Sev. 1	23%	62%	29%	33%	
Sev. 2	44%	44%	19%	44%	
Sev. 3	75%	100%	50%	25%	
Sev. 4	100%	100%	67%	67%	
Total (sevs. 3 & 4)	86%	100%	57%	43%	
Total (all severity levels)	38%	57%	28%	36%	

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

5. Summary Recommendations

Overall the flow of this app was well-designed and clear to use! We found that H4 Consistency and Standards, H11 Accessibility, and H3 User Control had the highest violations out of all the heuristics. While we enjoyed the continuous planting analogy that was carried out throughout the app, we think there were some parts where that analogy took away from an aesthetic design. For example, the "plant an activity" flow did not feel like it needed to be spread out over 4 extra screens except to show the activity being planted. The random organization of the friends on the tree also did not feel like it added anything extra to the user experience except to continue the tree analogy. We think that allowing the tasks/information to speak for themselves with a small nod (like a small icon) towards the plant analogy would allow the user to focus more on using the app rather than getting bogged down by the analogy. We also feel like more consistent shades of green and fewer shades throughout the app would help with cohesion and allow the user to focus on the task at hand.

Altogether, cleaning up consistency and standards as well as incorporating the metaphor more seamlessly into the background came up as key next steps. Because you're using the plant metaphor, choice of words/copy writing, documentation, and error prevention will be important to pay attention to. We also think that being aware of where the user is in their hangout planning flow would be helpful in terms of what information to emphasize on certain screens. For example, if a user is still in the planning stages of the hangout, they may want to see suggested activities on the "What" screen of planting. If a user has an upcoming hangout that is already planned, it would be nice to make information for that hangout easily accessible so the user can quickly check

where they need to go without having to go through multiple screens. Excited to see what you do with the app!

6. Reviewer D Makeup Comments

Overall, I noticed more Accessibiliy (H11), Consistency (H4), and Flexibility (H7) violations than my fellow group members. I found most of my violations in Task 3 and 4, which overall had lower severity than the other two tasks, which could explain why I had a lower percent findings of high-severity issues compared to all issues. I believe my violations were centered around Task 3 and 4 because I found the wording of Task 1 and 2 to be a bit challenging to fully comprehend what was part of the task flow.

Similar to my evaluator team, I identified aesthetic barriers; however, I struggled to categorize these issues in specific violations. For example, I felt that, as a whole, the plant metaphor was busy and overpowering, which I mentioned in my overall write up, but did not identify specific heuristic violations (like #10 in this report).

In total, I believe I recognized the majority of the issues brought up in this report; however, I did not explicitly define every error that I noticed. For example, I was aware that there were quite a few usability issues within the Plant An Activity flow, but did not pull out the changing input field locations on its own. I believe this is because I was testing the Figma on a desktop where certain usability constraints are different than those on a mobile phone. For example, moving my mouse a small distance to another field is quite less substantial than the equivalent of moving my thumb or entire hand to reach another input box. In conclusion, my testing could have been tighter if I had worked to imagine myself using the app in my hand on a mobile device rather than a desktop, and I strongly encourage the grove team to recognize this limitation.

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

H 1: Visibility of System Status
- Keep users informed about what is going on

H 2: Match Between System & Real World
- Speak the users' language
- Follow real world conventions

H 3: User Control & Freedom
- "Exits" for mistaken choices, undo, redo
- Don't force down fixed paths

H 4: Consistency & Standards
- Words, actions, and UI elements should be consistent across the entire platform
- Follow platform and industry conventions

H 5: Error Prevention
- Minimize error-prone conditions
- Remove memory burdens, support undoing, and warn your users when necessary

H 6: Recognition Rather Than Recall
- Make objects, actions, options, & directions visible or easily retrievable

H 7: Flexibility & Efficiency of Use
- Accelerators for experts (e.g., gestures, keyboard shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H 8: Aesthetic & Minimalist Design
- No irrelevant information. Focus on the essentials.

H 9: Help Users Recognize, Diagnose, & Recover from Errors
- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

H 10: Help & Documentation
- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large

H 11: 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.

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

H 12: Fairness and Inclusion
- Users shouldn't feel that the design is not made for them.
- The design should meet all users' needs equally and prevent the reproduction of pre-existing inequities.
- It should not create additional burdens for members of disadvantaged populations.

H 13: Value Alignment
- The design should encode values that users can understand and relate to.
- Conflicting collateral values should not emerge when the user interacts with the product.
- Encoded values should match users' values in a broad set of use-contexts.