Heuristic Evaluation of Thyme

For a more in-depth overview of A9, please refer to the [A9 assignment spec](#).

1. Problem/Prototype Description

Thyme is a mobile app which harnesses gamification to make it easier to remember to take medications and share your statuses with friends, family, and physicians.

2. Violations Found

H1: Visibility of System Status / Severity 2 / A
- ○ Problem: On the Profile Page, the user does not know what page they are on at the screen because there is no "You are here" feature like the navigation bar has when we are on that page. As a result, it is slightly confusing if I am on this page whether I am in settings or profile.
- ○ Rationale: Lacking a clear indicator of exactly what page you are in relation to others makes it difficult for a user to see and understand the system's status.
- ○ Fix: Label the profile circle icon with the word "Profile" when on the page to be consistent with the navigation bar which labels the current page.

H1: Visibility of System Status / Severity 2 / A, B, C
- ○ Problem: I expected all major pages to be at the bottom in the navigation bar, so I did not realize that the Profile icon was a link to a major page where many tasks are held.
- ○ Rationale: I believed that the major pages were in the navigation bar and as a result did not see one of the major components for a long time, which means that I struggled to understand the state of the home page and its relation to others.
- ○ Fix: Move Profile to Navigation Bar, or label circle with "View Profile", or try switching the locations of the settings and profile buttons. The task bar on the bottom should be a bookmark for most-visited pages; I think your users will find themselves navigating to profile much more often than settings. Also, the settings icon often lives in the top right corner of a page, where the profile button currently is, so it wouldn't be a deviation from what users are used to in other products.

H1: Visibility of system status / Severity 2 / D
- ● Description: when the garden on the home page is clicked, the garden appears with a calendar. There is no description of what this page is or what it is for.
- ● Rationale: This is not an easily learnable aspect of the app.
- ● Fix: add a title or description on the page.

H2: Match between system and the real world / Severity 2 / A, D
- ○ Problem: Garden component on home page has no clear connection to medications and as such just looks like a decorative button rather than a pressable page.
- ○ Rationale: While the garden idea is consistent with the app's natural aesthetic, there is no easily understandable match between the user's wants, which are to track medication, and an image of a garden.

- ○ Fix: Include a tagline like "Grow your garden by logging your meds!" or incorporate medical imagery with the existing natural imagery to draw the parallel more clearly.

H2: Match between system and the real world / Severity 3 / A
- ○ Problem: Users are included on the home screen even though we cannot see anything about them or interact with them in any way.
- ○ Rationale: In the real world, if we see a friend online or with us, we would reach out, connect, or interact with them in some way. This is not translated to the system, because we can only see them there.
- ○ Fix: Make the users buttons where you can share your report with them as a shortcut, rather than having to go to your own profile.

H2: Match between system and the real world / Severity 2 / A
- ○ Problem: Icon to share a report with a friend is a bell, which to me typically signifies a ping, reminder, or notification. I expected then for it to be a way to remind them to take their meds or to ask them to share their usage with me.
- ○ Rationale: There was a disparity between a real world symbol of a task and a system's task.
- ○ Fix: Change the icon to a "Share" arrow or paper airplane.

H3: User control and freedom / Severity 3 / A, B, C
- ○ Problem: If I go to add a friend in the profile page, and I change my mind and decide I don't want to add them, I have no way to cancel or go back without submitting.
- ○ Rationale: Since I cannot go back without being forced to add the friend, my user freedom is limited.
- ○ Fix: Add a "Cancel" button next to the "Done" button.

H3: User control and freedom / Severity 2 / A
- ○ Problem: If I am at the Settings page, I cannot access my profile without going back to the home page or the log page.
- ○ Rationale: Since I have to take an extended route to get from one major page to another major page, I lack the user control I would like to have to navigate more quickly.
- ○ Fix: Make the profile image in settings pressable so that it goes to the profile page.

H3: User control and freedom / Severity 2 / D
- ● Problem: If I am in the middle of a task flow, and click the profile icon, I cannot return to the task flow without starting over by clicking one of the home pages at the bottom of the screen.
- ● Rationale: Since I have to restart task flows, I lack the user control to change my mind about what task flow I want to be in.
- ● Fix: Incorporate a back button in the view profile page.

H4: Consistency and standards / Severity 2 / A
- ○ Problem: "Report" and "Report History" are for entirely different users – one for the user and one for the user's friends.
- ○ Rationale: The verb "Report" is inconsistently used, once for the user and once for the user's friends or something else, which creates confusion.
- ○ Fix: Change "View Report" to "View My Report" and "Report History" to "Friends' Report History".

H4: Consistency and standards / Severity 2 / A

- ○ Problem: The phrase "Report History" is used for friends, whereas "Logs" is for the user's report history. It is unclear if these refer to the same thing or different.
- ○ Rationale: The wording around a user's history is inconsistently used, creating confusion about the intended meaning of the term.
- ○ Fix: Change "Logs" to "My Report History" or clarify the difference between them.

H4: Consistency and standards / 1 / A

- ○ Problem: The phrase "Connected People" and "Connections" refer to the same thing.
- ○ Rationale: The wording around a user's connections is inconsistently used, creating confusion about the intended meaning of the term.
- ○ Fix: Change "Connected People" to "Connections" .

H5: Error prevention / Severity 1 / A

- ○ Problem: When tracking medication usage, there is no confirmation message after pressing "I completed my program."
- ○ Rationale: To prevent errors, having an extra opportunity for a user to confirm that they completed their program is helpful.
- ○ Fix: Add a confirmation message (like you do so well for all other buttons) after pressing "I completed my program".

H6: Recognition rather than recall / Severity 1 / A

- ○ Problem: When clicking on the garden, a user can no longer see the calendar when seeing what the tree is for.
- ○ Rationale: The tree is indicative of a user's adherence to their medication program, so recalling what their streak was like that led to the tree award is necessary because they cannot see the calendar.
- ○ Fix: Keep the calendar on screen or include relevant information from the calendar in the message about the tree.

H7: Flexibility and efficiency of use / Severity 2 / A, B

- ○ Problem: Sharing a report with a connection requires navigating through the profile despite the connections being visible from the home screen.
- ○ Rationale: An expert user would want a way to share a report in one or two clicks through the Connection component in front of them.
- ○ Fix: Add a button to the Connections on the home page so that a user can share their report more quickly.

H7: Flexibility and efficiency of use / Severity 2 / A

- ○ Problem: There is an information button over "Symptoms" in the "View Report" section of the profile page that goes nowhere.
- ○ Rationale: A user sees their symptoms and would like an efficient way to better understand them or how they were gathered. Since the button doesn't work, they have to go through their logs for more information, which is highly inefficient.
- ○ Fix: Add functionality to the information button that includes the frequency with which they have reported their symptoms.

H8: Aesthetic and minimalist design / Severity 1 / A, D

- ○ Problem: The calendar is misaligned with the month October and the garden icon above it. Icons not always aligned across pages.

- ○ Rationale: Misalignment is not visually appealing and interferes with the aesthetic of the design.
- ○ Fix: Center the calendar and streak information under the month and garden. Ensure grids match across pages in the same task flows.

H8: Aesthetic and minimalist design / Severity 1 / A
- ○ Problem: The font of the header Settings is sans serif and different style and size than any other header.
- ○ Rationale: Using a sans serif font directly above a serif font is not visually appealing, which interferes with having an aesthetic design.
- ○ Fix: Make the Settings header the same font as the rest of the headers and text.

H9. Help users recognize, diagnose, and recover from errors / Severity 3 / A, C
- ○ Problem: When I add a friend and click on the friend's (Becca) face, I accidentally share a report with Doctor Who.
- ○ Rationale: Because this bug is so surprising to a user, they may not realize that what they are now doing is related to a different user than the friend they were adding, which makes it difficult to recognize one's error.
- ○ Fix: Remove the link to Doctor Who on the page with Becca.

H11: Accessible design / Severity 2 / A, C
- ○ Problem: Text size under current medications in the overview of the user's report is too small and difficult to read.
- ○ Rationale: Small text is difficult for people with visual impairments to read and is therefore not accessible to everyone.
- ○ Fix: Increase font size.

H12: Value alignment and inclusion / Severity 2 / A
- ○ Problem: Having connections and their activity as one of the first reads in the app emphasizes how others are using the app despite this being a personal medication tracker.
- ○ Rationale: By placing an emphasis on how others use Thyme and track their medications, it adds a sense of comparison and guilt that goes against Thyme's mission to provide a personalized, fun app for users to track their personal medical habits.
- ○ Fix: Don't emphasize active users over dormant users, or don't include the connections as one of the most prominent features on the home screen.

H12: Value alignment and inclusion / Severity 3 / D
- Problem: Users are incentivized to take their medications every day by getting trees when they maintain a streak…how do we de-incentivize taking medications every day when they shouldn't be? Having a streak for taking adderall every day when you really should be using it as needed might be harmful for users.
- Rationale: could users potentially be harmed by the gamification of medication taking?
- Fix: create a reward system in the forest for as needed medications.

H1: Visibility of system status / Severity 3 / B, C

- ○ Description: Once you move screens after logging that you've taken the pill the check mark disappears if you come back
- ○ Rationale: Someone could forget if they've taken the pill or not and accidentally take more than they are prescribed to.
- ○ Fix: Maybe just change the background of the pill on the today's plan page to gray, use a function that stays on so it won't change back

H11: Accessible Design / Severity 1 / C

- ○ Description: User must type in their own symptoms
- ○ Rationale: Symptoms are hard for people to type out
- ○ Fix: Implement check boxes or something where the user isn't having to type things out every use.

H4: Consistency & Standards / Severity 2 / C

- ○ Description: After clicking log symptoms textbox the prompt changes from "log symptoms" to "how do you feel about Ativan today"
- ○ Rationale: The change in language could confuse users and cause them to not report the symptoms
- ○ Fix: Keep both consistent saying log symptoms

H5: Error Prevention / Severity 2 / C

- ○ Description: The text box where you log your symptoms says "how do you feel about Ativan today"
- ○ Rationale: Ambiguous wording that leaves room for incorrect interpretation and user error
- ○ Fix: Change text to say something like log the symptoms you're feeling

H5: Error Prevention / Severity 2 / B, C

- ○ Description: The icon for share report is a bell, but when you click it for Dia, it says do you want to remind her about taking medication
- ○ Rationale: Someone can think that you're sharing a report when instead you're sending a reminder
- ○ Fix: Add an icon for sharing and an icon for reminding

H1: Visibility of System Status / Severity 1 / C

- ○ Description: If you share the report from the report history section when you go back to connections it doesn't show if you've shared it or not
- ○ Rationale: Someone could forget what they've shared and then send their doctors lots of reports by accident
- ○ Fix: Have the system hold knowledge of who shared with who

H4: Consistency & Standards / Severity 1 / C

- ○ Description: When trying to share report the the button changes from share to Allow/Don't allow
- ○ Rationale: Just not consistent
- ○ Fix: Have the buttons say share/cancel

H4: Consistency & Standards / Severity 2 / D

- ● Task: share report with a doctor
- ● Description: The "share" button on the 'overview' section of the report histories is green, but when you go to the 'logs' section, it is white. Both are clickable, which is inconsistent.
- ● Rationale: Users might be confused on which page is sharable because the difference in colors sends different messages.
- ● Fix: make the share button in the logs page green.

H1: Visibility of system status / Severity 2 / C

- ○ Description: Calendar that holds the different streaks states that there are 7 current streaks but all highlights are green or gray.
- ○ Rationale: The user can't tell what medications they currently have streaks and for how long, because they're all the same color
- ○ Fix: Make different medications different colors, maybe implement a scroll where you can see each streak

H1: Visibility of System Status / Severity 2 / B

- ○ *Task:* track your daily medication use
- ○ *Description:* home page has no indication of whether you've done your daily check-in
- ○ *Rationale:* when I open this app, the first thing I want to see is whether I've taken my meds/logged my medication use. By putting this info on the home page, the user can be immediately aware of their status.
- ○ *Fix:* add a small status indicator on the home page or a prompt to log your medication if they haven't already. For example, "congrats! You've already logged your medication use today" or "don't forget to take your meds!"

H1: Visibility of System Status / Severity 4 / B
- ○ *Task:* track your daily medication use
- ○ *Description:* no clear way to add a medication to your daily list
- ○ *Rationale:* what do I do if I've just started taking a new medication and it's not on my profile yet? I was unable to figure out how to perform this important status change.
- ○ *Fix:* add a little plus button on the check in page to add a new medication!

H2: Match between System and World / Severity 0 / B
- *Task:* track your daily medication use
- *Description:* the time and dates on the check in page are military/european style
- *Rationale:* not a problem for me but if your audience is mostly American it may take a bit more effort to convert to 12hr time/cause confusion
- *Fix:* convert to 12hr time

H8: Aesthetic & Minimalist Design / Severity 1 / B
- *Task:* track your daily medication use
- *Description:* the neon green for "i completed my program" is very jarring
- *Rationale:* doesn't align with the overall mellow, pleasing design that Thyme has curated
- *Fix:* choose a different color from your palette

H8: Aesthetic & Minimalist Design / Severity 1 / B
- *Task:* track your daily medication use
- *Description:* the neon green check mark that appears once you've logged your meds doesn't stand out from the background very well
- *Rationale:* this is vital info for a user, so it really should stand out. I also checked to see if it was the same neon green as the previous page but it wasn't, so I'm not sure why it was chosen from an aesthetic standpoint.
- *Fix:* choose a different color from your palette

H3: User Control & Freedom / Severity 3 / B
- *Task:* logging symptoms of a medication
- *Description:* once you log your daily medication use, you can't click on it again to go back and, for example, edit symptoms
- *Rationale:* if I were a user I'd probably log my medication right when I take it, but my symptoms might show up a few hours later. I'd like to be able to have the freedom to account for this!
- *Fix:* allow users to edit their symptoms after initial log

H8: Aesthetic & Minimalist Design / Severity 1 / B
- *Task:* generate a report
- *Description:* the user's name is off-centered on the profile page
- *Rationale:* not a huge deal, just a bit distracting and makes design look less polished!
- *Fix:* center the user's name

H8: Aesthetic & Minimalist Design / Severity 1 / B
- *Task:* generate a report
- *Description:* from the general profile page to the report page, the profile photo shifts slightly
- *Rationale:* consistency in design across pages is important for the general flow of each task, ensures user doesn't get distracted by little inconsistencies

- ○ *Fix:* standardize your different pages to make changes from page to page minimal

H4: Consistency & Standards / Severity 1 / B
- ○ *Task:* share report with connected users
- ○ *Description:* when you click the notification bell for Dr. Who, the share report button is white and rectangular. When you click the same notification bell for Dia, the popup is rounded and green – looks totally different stylistically.
- ○ *Rationale:* it was really confusing to essentially click the same button for different people and get such different outputs.
- ○ *Fix:* keep popups consistent

H8: Aesthetic & Minimalist Design / Severity 1 / B
- ○ *Task:* add a connected user
- ○ *Description:* when you click the plus button, the popup with Dia's profile looks really different stylistically from the rest of the popups in the app.
- ○ *Rationale:* was just a bit surprising to see such a deviation to the otherwise pretty consistent popup style
- ○ *Fix:* make the background opaque and add the rounded shape you've used for other popups

H6: Recognition not Recall / Severity 2 / B
- ○ *Task:* other (garden)
- ○ *Description:* unclear what the difference is between the tree rewards in each user's garden (do they all mean the same thing? Do they represent different milestones?)
- ○ *Rationale:* the reward/gamification thing is cool in theory, but not as enticing if I'm not sure what each one means based on recognition alone.
- ○ *Fix:* maybe have some sort of key? Or allow some other kind of foresight on the garden page (pine tree 1 week, oak 1 month, etc).

H10: Help & Documentation / Severity 2 / B, D
- ○ *Task:* other
- ○ *Description:* there are no help/info buttons in the garden and profile pages, which are not super straightforward to novice users
- ○ *Rationale:* garden info button could help clarify the reward system, profile info button could touch on any user FAQs you identify!
- ○ *Fix:* add help/info buttons

H1: Visibility of System Status / Severity 2 / B
- ○ *Task:* other (garden)
- ○ *Description:* there are green streaks and gray misses on the garden calendar, but what are the blank days?

- ○ *Rationale:* I would think that every day would be either a day you took your meds or you didn't. Unclear what exactly the calendar statuses mean.
- ○ *Fix:* edit calendar key at the bottom to reflect what we see

H11: Accessible Design / Severity 1 / B
- ○ *Task:* other (garden)
- ○ *Description:* there is no alternative text for image-heavy pages (ie garden)
- ○ *Rationale:* blind users may rely on text dictation, and they will miss out on a really fun part of your product!
- ○ *Fix:* add alternative text for the garden imagery

H4: Consistency & Standards / Severity 1 / B
- ○ *Task:* other
- ○ *Description:* the "back" arrow buttons are not the same shape across pages. For example, backing out of the view report page versus a medication page
- ○ *Rationale:* still obviously understand the function, just is inconsistent from page to page
- ○ *Fix:* make the back buttons the same shape

3. Summary of Violations
A Google Sheet Template is provided here 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		1	6	1	1	9
H2: Match Sys & World	1		2	1		4
H3: User Control			2	2		4
H4: Consistency & Standards		4	3			7
H5: Error Prevention		1	2			3
H6: Recognition not Recall		1	1			2
H7: Efficiency of Use			2			2
H8: Minimalist Design		7				7
H9: Help Users with Errors				1		1
H10: Help & Documentation			1			1
H11: Accessible		2	1			3
H12: Value Alignment & Inclusion			1	1		2
Total Violations by Severity	**1**	**16**	**21**	**6**	**1**	**45**

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	Evaluator A	Evaluator B	Evaluator C
Sev. 0 Ex: Eval A count / total sevs 0 in table #3	0%	100%	0%
Sev. 1 Ex: Eval A count / total sevs 1 in table #3	31.25%	50%	18.75%
Sev. 2 Ex: Eval A count / total sevs 2 in table #3	45.8533%	29.1667%	25%
Sev. 3 Ex: Eval A count / total sevs 3 in table #3	33.333%	33.333%	33.33%
Sev. 4 Ex: Eval A count / total sevs 4 in table #3	0%	100%	0%
Total (sevs. 3 & 4) Ex: Eval A = sum(sev 3: sev 4 counts) / sum(sev 3: sev 4 in table #3)	30%	40%	30%
Total (all severity levels) Ex: Eval A total sev count / total sevs (green cell) in table #3	37.254%	39.2156%	23.529%

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

5. Summary Recommendations
[merge the general recommendations you made here]

Thyme has done a wonderful job crafting a visually pleasing brand identity, and has clearly been quite thoughtful in designing tasks to help users with their medication management. While the heuristic with the most violations was aesthetic and minimal design, most of these are easily fixable. Many others had to do with slight inconsistencies across pages, which is understandable in the context of a Med-Fi as we've been toying with different styles and moving things around. The three most problematic violations were the inability to add a new medication, inability to go back to log symptoms, and loss of the new state after logging symptoms or sharing a report when the user navigates away from the specific page. The above violations most significantly restrict your product's functionality.

Other problems with less common tasks include not being able to access the Profile page from all pages and not being able to cancel or return from adding a friend. Some minor considerations to keep in mind would be clarifying the connection between the natural theme and medications,

particularly around the use of the garden, and making this garden accessible and intuitive to a new user or visually impaired user. We also noticed that the home page has potential for improving the connections feature, which could in turn add flexibility and shortcuts for tasks in the profile page.

Going through all of the task flows, ensuring that they can be easily accomplished before making edits to design might be a good next step in the iterative process of this app. While the design of the app is really cohesive and visually appealing, task flows don't always have a clear path.

Overall, the app has impressive functionality and an elegant design. We particularly appreciated the use of confirmation messages, back buttons, and clear, labeled navigation. It was challenging to find violations of these heuristics, and as such the main trend across them is that they are mostly subtle or subjective to the user's values and expectations. We hope this report is useful to the Thyme team in improving an already great project!

Make-up contribution:

Mostly everything that I caught in my original heuristic evaluation for A7 was covered by the group evaluation for A9. The only violations I caught that my group did not were that there is no back button on the profile page, "share" buttons look different in different places, and the potential value misalignment when it comes to gamifying streaks of medications. I added these to the violations above.

Something my group members found that I did not find were accessibility issues. I did find a H1 violation with the garden page not having any text or description, but I didn't think about it as a potential accessibility issue, which another group member made note of. I've never had to think about tech accessibility as an able-bodied person so this violation was an easier one for me to miss. I will practice looking for this heuristic in the future. Other evaluators were also more keen on identifying places where fonts were different, which I missed, although I did realize that things were misaligned across pages even in the same task flows, which is visually disruptive and something to fix in new iterations of prototypes.

In my personal recommendations on A7, I brought up potentially having more colors in the color palette, as there is a lot of green but not much else. I think reducing the amount of green overall can make the more forestry/natural/plant elements of the app "pop" more, as well as introducing other colors as cues for tasks. I didn't see this recommended or mentioned by my group members. I also mention generally finding task flows difficult, and I am not confident that I would've easily figured out how to do things on the app without having the context of the ReadMe or powerpoint presentation.

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

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.

- 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.