Heuristic Evaluation of Checkup

For a more in-depth overview of A9, please refer to the A9 assignment spec.

(Your TA will remove your names before the document is given to the project team. Throughout the report, use these letters to identify yourselves.)

1. Problem/Prototype Description

CheckUp is an app that seeks to sync with your calendar and recommend care that fits within your schedule.

2. Violations Found

1. **H4: Consistency & Standards / Severity 3 / Found by: A, C, D**
    - The interface used the string “Save” on the first screen for saving the user’s profile, but used the string “Update” on the second screen. Users may be confused by this different terminology for the same function.
    - Fix: Use the same string on each screen.
    - **Mention the task that the violation applies to**

Authentication Flow

#	Heuristic	Description	Rationale	Fix	Sev	By
1	H3. User control and freedom	No method of switching between or exiting authentication flows.	Users may accidentally click on “login” or “sign up” and get stuck.	Either add a “have an account?” type toggle within the authentication page or allow the user to go back to the previous screen.	2	B
2	H3. User control and freedom	No method of exiting sign up flow.	Users may want to go back and change information.	Add a back button to each page of the sign up flow.	2	B
3	H3. User control and freedom	No method of signing out of account within the app.	Users may want to sign out of their account.	Include a sign out button or settings page.	2	B, C
4	H4.Consistency and standards	Unclear use of document scanning.	Users might find it more intuitive to use built-in document scanners, such as	Use built-in APIs for document scanning UI.	1	B

			those provided by the iOS SDK.			
5	H4.Consistency and standards	Inconsistent use of “skip” button formatting.	Buttons in other parts of the app are rounded with a drop shadow, not a link-like button.	Use consistent buttons.	2	B
6	H5. Error prevention	Inadequate information on insurance card and scanning requirements.	Users may be unclear on what side of the insurance card to scan or might want to see how to position it for scanning.	Provide more information on successfully scanning an insurance card.	2	B
7	H7. Flexibility and efficiency of use	Relying only on scanning. Scanning can be unreliable, especially for important data extraction.	Users may want to input their information or may not have a physical insurance card.	Allow users to manually enter their insurance information or manually verify it after the scan.	3	B
8	H8. Aesthetic and minimalist design	The “no preference” option is redundant.	Users may be confused when they don’t select “no preference” and move forward.	Remove the “no preference” option and make each field optional instead.	1	B

Scheduling / Rescheduling / Canceling

#	Heuristic	Description	Rationale	Fix	Sev	By
9	H8. Aesthetic and minimalist design	Unnecessarily large logo on home screen.	More important information can be placed here instead.	Consider making some fields glanceable from inside each of the options instead of the logo.	3	A,B
10	H4. Consistency and standards	Atypical home screen layout.	Most mobile home screens today provide usable information and not only navigation options.	Move information to the home screen and consider removing buttons or moving them to a tab bar.	3	B
11	H7. Flexibility	Interacting with current	Frequent users might want to adjust their	Allow users to interact with	3	A,B

	and efficiency of use	appointments, especially in a rush, is multiple taps away.	appointments without clicking through multiple menus.	upcoming appointments before they're on the appointments screen.		
12	H4. Consistency and standards	Violating system safe areas.	UI doesn't adjust to accommodate TrueDepth camera array.	Respect system-specific safe areas where available.	2	B
13	H11. Accessible design	Inconsistent keyboard use.	Not using standard keyboard placement might cause an accessibility issue for people with low-vision.	Use standard system keyboard placement.	3	B
14	H7. Flexibility and efficiency of use	Offering chatbot-only scheduling flow.	Power users may be frustrated by needing to chat with a chatbot to schedule an appointment.	Provide a manual flow for appointment booking.	3	A, B
15	H12. Value alignment and inclusion	Use of Generative AI for inclusion.	The use of Generative AI might perpetuate stereotypes towards people historically marginalized by the healthcare system.	Intentionally limit transparency between user data and the chatbot.	2	B
16	H7 Flexibility and efficiency of use	It's unclear from the prototype, but there doesn't seem to be a way to automatically choose your primary provider without needing to see other options.	Frequent users of the app might like to get a meeting scheduled regularly and quickly, making this an annoyance to click through unnecessary screens.	Add a way to be automatically scheduled from the chat portion at the beginning of the process.	3	A
17	H5 Error prevention	Selecting a provider immediately books the appointment.	The user might not know it would instantly book and have to cancel. Maybe they meant to click and see more information on the provider, or just was confused by the interface.	Add a confirmation and summary page so the user has a chance to review their choices before booking.	3	A

18	H1 Visibility of system status	Setting a provider as your primary provider only highlights the button.	There's no confirmation that this has gone through, and clicking multiple times doesn't seem to toggle on or off.	Add an alert or pop-up that shows that the provider has been successfully selected.	2	A
19	H11 Accessible design	The available days on the calendar are not highly visible and the overall calendar is fairly small.	This could be difficult to see if the user has color deficiency or difficulty with sight.	Make the calendar availability times more obvious, larger, and with more markers that it's important.	1	A
20	H6 Recognition rather than recall	The information of the calendar is hidden behind a hamburger menu.	While this could be a great choice for the area, it does ask users to remember what preferences/settings are hidden behind the menu rather than making them available.	Expose the options without needing to access a separate menu.	1	A
21	H5 Error prevention	When a user presses the cancel button, the only sign is that a confirm cancel button comes up.	This could be easy enough to accidentally hit again or not notice that it's changed, especially as there is no other visual indicator that you're about to cancel an appointment. This could be a pain point for users who don't realize. Additionally, it's not clear how to cancel the cancellation.	Make the confirm cancel button in the center of the screen, a different color, or otherwise more obvious.	1	A
22	H8 Aesthetic and minimalist design	CheckUp Title is cut into by the iPhone notch which results in an informal look for the UI	This is often a sign that the design process wasn't overviewed with detail, which can absolutely come off the wrong way on an app that is putting people attention to self-care at the fore front. Should be a	Auto Adjust UI to account for differing device types, while this may not be an issue for non-notch phones it is otherwise albeit minor	1	C

			simple fix too :)			
23	H7 Flexibility and efficiency of use	On the Appointments page the arrows that allow you to go between months on the calendar are incredibly small and take a few clicks to land	On a real phone this can be more difficult to click correctly and would result in unnecessary user interaction friction	Make interactive buttons like these arrows larger for ease of use and accessibility	3	C
24	H4 Consistency and standards	When a follow-up appointment is booked Nov 15 is bolded pink but neither 9:30 am was bolded pink nor was Dr.Park bolded at all when they were the first time an appointment was booked	A lack of Typeform and aesthetic consistency while not particularly negative to the user experience shows a misalignment in design throughout the product	Ensure design consistency by making 9:30 am bolded pink and Dr.Park bolded	1	C
25	H3 User control and freedom	The user cannot return to the November calendar on the appointments page when the arrow to October month is clicked. As such users have to click home and view appointments again instead of being able to click the forward arrow button to go back to November	A user should expect a forward button to do just that, load the next month, especially when the back button works. It can be frustrating to have an expectation and immediately have it denied. Having to go through the process of selecting home to then go and refresh to the default month a user wanted to reach is not user friendly	Ensure the forward arrow button allows users to move to the next month	3	C
26	H4 Consisten	Similar to problem 24, however, now for a rescheduled	Similar to problem 24, a lack of Typeform and	Ensure design consistency by making 9:30 am	1	C

	cy and standards	appointment with Dr. Barnes. Where Dr. Barnes isn't bolded and the time 9:30 am isn't bolded pink	aesthetic consistency while not particularly negative to the user experience shows a misalignment in design throughout the product	bolded pink and Dr. Barnes bolded		
27	H1 Visibility of system status	Scheduling an appointment at 1:30 results in a page saying the appointment is confirmed for 9:30 am instead	This would reasonably confuse and/or frustrate a user who is expecting a confirmation for 1:30 pm	Ensure alignment of expected system update and the given information	3	C
28	H1 Visibility of system status	Same as problem 9 but instead the 2:30 appointment defaults to 9:30 am	This would reasonably confuse and/or frustrate a user who is expecting a confirmation for 2:30 pm	Ensure alignment of expected system update and the given information	3	C
29	H1 Visibility of system status	Time is always mildly cut off, I presume it says 9:41 but in any double-digit instance it may altogether lose the first digit, like in the case of 10:12, would we only see 0:12?	This can be problematic if users are expected to see time correctly. Would they have to close the app to see the app in the aforementioned scenario? If so that's quite detrimental to quality of experience	Ensure time is adjusted to the right just enough to not get mildly cut off, or clean up the cutting bug	3	C
30	H2 Match between System and World	The "yes" button is on left and "no" on the right	Since buttons similar to "yes" such as "submit" are usually on the right, it would be less intuitive and more confusing for users to click yes on the left side.	Switch the "yes" button to be on the right.	1	D

31	H3 User Control and Freedom	User can't decline a review	It's good to provide options for the user to skip the review as it can be frustrating if they've time constraints to use that app.	Creating a skip button	3	D
32	H3 User Control and Freedom	The review form comes pre-filled with 3 stars	The users might submit default reviews if they accidentally submit.	Starting the form unfilled and showing an error sign if any of the parts aren't filled in.	2	D
33	H3 User Control and Freedom	No back buttons available	After you pick an appointment time and the lists of doctors show up, there's no back button to return to appointment time in case users want to change the timing.	Build a back button on the page where you select physicians as well as the appointment timing	3	D
34	H5: Error Preventi on	After clicking on a physician of choice, they immediately take you to confirmed appointment page	In case the user accidentally clicked on the wrong physician or wants to confirm time again, it's safer to have a summary page to confirm their info before finally booking an appointment.	Build an extra page of summary after the physician page so they can click confirm on the info.	3	D
35	H7 Flexibility and	The only way to book an appointment is to	There could be more than one way to book an option. If	For simplicity and to save time, maybe the	4	D

	efficiency of use	answer the question “What health issues are troubling you?”	the user knows exactly which specialist they want to meet with, asking generic questions about their symptoms could take them longer to type up all health issues.	“schedule an appointment” page first shows a list of different specialists to click on directly. And on the side corner, a chatbot can pop up if they want to figure out their symptoms first.		
	H7 Flexibility and efficiency of use	The “flag for follow-up” is unnecessary as it just provides another button to “Book follow-up”	it’s easier for the user to not undergo multiple steps to finally book a follow-up and it’s more intuitive to just have “Book follow-up” show up for each past appointment. The purpose of the flag feels redundant and takes up more space as well	Delete the flag and show the “Book follow-up” button on each past appointment	2	D
	H7: Flexibility and Efficienc y of Use	the arrows on the calendar were difficult to notice and click on it easily	it can be frustrating for the user to try clicking on the small arrows multiple times to finally land it. The placement of the arrows is unintuitive as it’s placed between multiple texts instead of on the sides of the	Enlarging the arrows and to make it more apparent to users, move the arrows to be on the left and right side of calendar than mixed in with other texts on the top	2	D

			calendar which took a while for me to figure out where it was.			
	H8: Aesthetic and Minimalist Design	the page where you choose physicians seems a little crowded	It could be hard for users to find the most important content if there's a lot of info thrown at them.	On each physician profile, you can limit the number of information to just their Location, Speciality and the review stars. Once the user clicks on a physician profile, it could show the full information and bio of the doctor with patient reviews.	2	D
	H8: Aesthetic and Minimalist Design	on top of the physician list page, the spacing for the box for the chosen appointment time is a little too big	It takes up space that could be used to expand the physician list which looks crowded. Since the user just selected their appointment time, the appointment time doesn't have to be as big. We want to focus more on the physician selection and make that pop out more with bigger fonts or graphics.	Shrink the size of the appointment time font by half and reduce the vertical length of the box by half as well. Afterwards, lengthen the boxes for physician selection.	1	D
	H8: Aesthetic and	the title "check-up is cut	It is unpleasant to the eye to see the main title cut off	adjust the design automatically for different iphones.	3	D

	Minimalist Design	off by the iphone camera on top	and makes the UI seem very crowded as a result. More open spacing will make the UI minimalist and pleasing.	Instead of hard coding, generalize sizing and spacing for every type of iphone.		

Appointment Follow-Ups

#	Heuristic	Description	Rationale	Fix	Sev	By
30	H1. Visibility of system status	No time estimate for potentially time-consuming process.	Users might become frustrated if the loading indicator doesn't show progress.	Consider using a progress bar instead of a progress indicator, or update the user using a time estimate if the appointment-finding process takes a while.	3	B
31	H4. Consistency and standards	Button text changes across review screens.	The capitalization changes.	Use consistent text capitalization in buttons.	1	B
32	H8 Aesthetic and minimalist design	The checkUp notification for "Checking Up!" is noticeably cut off, super minor as the text isn't simply the bubble itself doesn't fill the upper screen evenly which isn't what would be expected of an iPhone notification	It's a simple matter of expected design from users who know what notifications look like traditionally. A misalignment in that while lacking meaningful consequence is an unnecessary aesthetic bug	Lengthen the notification box for aesthetic consistency	1	C
Same as	H1 Visibility of	Time is always mildly cut off, I presume it says	This can be problematic if users are expected to see	Ensure time is adjusted to the right just enough to not	3	C

29 but there was no all tasks	system status	9:41 but in any double-digit instance it may altogether lose the first digit, like in the case of 10:12, would we only see 0:12?	time correctly. Would they have to close the app to see the app in the aforementioned scenario? If so that's quite detrimental to quality of experience	get mildly cut off, or clean up the cutting bug		

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			2	3		**5**
H2: Match Sys & World						
H3: User Control			3	1		**4**
H4: Consistency & Standards		4	2	1		**7**
H5: Error Prevention		1	1	1		**3**
H6: Recognition not Recall		1				**1**
H7: Efficiency of Use				5		**5**
H8: Minimalist Design		3		1		**4**
H9: Help Users with Errors						
H10: Help & Documentation						
H11: Accessible		1		1		**2**
H12: Value Alignment & Inclusion			1			**1**
Total Violations by Severity		**10**	**9**	**13**		**32**

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**	**Evaluator D**
Sev. 0 Ex: Eval A count / total sevs 0 in table #3	*NaN*	*NaN*	*NaN*	NaN
Sev. 1 Ex: Eval A count / total sevs 1 in table #3	50%	50%		
Sev. 2	12.5%	87.5%		

Ex: Eval A count / total sevs 2 in table #3				
Sev. 3 Ex: Eval A count / total sevs 3 in table #3	55.6%	88.8%		
Sev. 4 Ex: Eval A count / total sevs 4 in table #3	*NaN*	*NaN*		
Total (sevs. 3 & 4) Ex: Eval A = sum(sev 3: sev 4 counts) / sum(sev 3: sev 4 in table #3)	55.6%	88.8%		
Total (all severity levels) Ex: Eval A total sev count / total sevs (green cell) in table #3	39%	73.9%		

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

5. Summary Recommendations

This document provides a detailed evaluation of a medium-fi prototype of a mobile app designed for booking medical care. The app, while functionally promising, has a handful of usability issues that could be addressed to take it to the next level!

A key concern is the sole reliance on features such as document scanning or chatbots for major functionality of the app. Another concern is the lack of information on the home screen, which might be frustrating for users trying to navigate the app quickly. I would allow a lot of the main flows to be completed within the home screen, if possible.

Given the natural unreliability of these techniques, the app could benefit from more manual options for both power users and those that have issues with the default methods of data entry. In some places, there is inconsistency in the app's design and interaction, like unclear document scanning processes and varied button styles. Also, refrain from boxing the users into a certain process flow and instead offer the ability to schedule an appointment through multiple formats, cancel in the middle, or otherwise improve user control and freedom.

Overall, this prototype looks great and is clean. However, there are some clear issues that could be solved if it was tested by users. Try making the app more in line with conventional standards and a more minimal design. Error prevention is also a concern in places, with sparse guidance. The app could benefit from more intuitive user interfaces and clearer instructions. Overall, addressing these issues would greatly enhance the user experience and functionality of your app. Otherwise, this app is a wonderful idea and a refreshing break from our existing (and very broken) healthcare system!

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.

Missed Section Make Up Comparison:

Comparing my findings as Evaluator C with those of my teammates, Evaluator A (Haven) and Evaluator B (Vardhan), in our heuristic evaluation of the CheckUp app, I observe several key similarities and differences in our approaches and identified issues.

One notable similarity is our shared focus on the H4 (Consistency and Standards) heuristic. All of us identified inconsistencies within the app's interface and suggested similar fixes to improve user experience. This demonstrates a collective understanding of the importance of consistency in design.

However, there are differences in the types of issues we prioritized. Evaluator B seemed to concentrate heavily on user control and freedom (H3), identifying multiple instances where user choices were limited, such as the inability to exit the sign-up flow or switch between authentication flows. My analysis, while also highlighting user control issues, was more focused on the visibility of system status (H1), with particular attention to scheduling and confirmation discrepancies.

Evaluator A, on the other hand, identified broader issues encompassing various heuristics, including the aesthetic design (H8) and accessibility (H11). Their approach appeared more holistic, addressing not just functional aspects but also the overall user interaction experience. My recommendations were more narrowly focused on functional aspects and immediate usability concerns.

In summary, while there was a consensus on several issues, such as the need for consistency, our individual perspectives brought a diverse set of concerns to light. Evaluator B's focus on user control complements my emphasis on system status visibility, while Evaluator A's broader approach rounds out the evaluation by incorporating aesthetic and accessibility considerations. This diverse yet complementary set of evaluations offers a robust and comprehensive analysis of the CheckUp app.

Missed section make up (Tenzin):

There were multiple similarities across my heuristic evaluation and the three group members, however there were some key differences as well. One of the errors that wasn't mentioned was H2 Match Between System and the World where the "yes" button on the app is placed on the left instead of right which is where "submit" buttons are usually placed. Another new error I added was H3 User Control and Freedom since the user can't decline a review after the appointment is booked. It is important to add a skip button on reviews in order to save the user time and frustration. Another important error that wasn't mentioned yet was H3 User Control and Freedom as the review forms came pre-filled with 3 stars. I proposed starting the review form blank without any pre-filled info or stars so the user doesn't accidentally submit the default answers. I also thought that the "flag for follow-up" is unnecessary and to show the "Book follow-up" button instead which is H7 Flexibility and Efficiency of Use.

However, one of the key differences I noticed was that Evaluator B focused a lot on the authentication flow of logging in and signing out as Emmanuel also mentioned. I also found it interesting when evaluator B raised the concern of using generative AI which is H12. Value alignment and inclusion. They should definitely be careful around nonconsensual data collection through the AI chatbot for the healthcare equity and stereotype prevention.