

Heuristic Evaluation of HouseMates

1. Problem

HouseMates is a mobile phone application that connects help-seekers (people with accessibility concerns) with home-seekers (people who are in need of housing, but can provide a service).

This prototype is an app for connecting home-seekers to help-seekers by allowing them to make profiles and connect via messaging to set up mutually beneficial living arrangements.

HouseMates is an app that helps establish mutualistic relationships between help seekers and help givers.

2. Violations Found

1. **[H3. User control and freedom] / Severity 3 / Found by: A, D, B, C**
When signing up, if the user accidentally clicks “home seeker,” the user cannot return to the previous screen (and vice versa for clicking “home seeker”). This violates the heuristic because the user does not have an “emergency exit” for mistakes. This can be solved by adding a back button.
2. **[H2. Match between system and the real world] / Severity 2 / Found by: A, D**
When signing up and creating a profile, the default profile icon is a house, which makes it unclear whether to upload a photo of the user’s face or the user’s home. The profile photo should instead match the real world convention of using a human figure icon.
3. **[H3. User control and freedom] / Severity 2 / Found by: A**
There are only 3 options each for “Will provide” and “Needs”, which limits the user’s freedom to request more things.. The system should allow for more fields to be added, perhaps with an additional empty field that can be optionally filled in.
4. **[H5. Error prevention] / Severity 0 / Found by: A, C**
When a home-seeker looks at the help-seeker’s profile, the user is able to mark/unmark the checkboxes that show what the help seeker provides/needs. This makes it seem that these fields are editable, when they shouldn’t be because these fields have already been decided by the help-seeker. These fields should be frozen.
This issue persists for the help-seeker case as well.
5. **[H3. User control and freedom] / Severity 4 / Found by: A, C**
When a home-seeker visits a help-seeker’s profile, clicks “Message”, and then hits the “Back” button, the user is sent to a list of all messages. If a user accidentally clicked the Message button, the user may want an emergency exit back to the previous screen (the help-seeker’s

profile) rather than the message list. This can be fixed by changing where the “Back” button redirects the user. This issue persists for the help-seeker case as well.

6. **[H5. Error prevention] / Severity 4 / Found by: A, C**
When a home-seeker clicks “Apply”, the user’s application is immediately submitted. There is currently no way to prevent accidental application submissions from occurring. This can be solved by adding a confirmation message before officially submitting an application.
7. **[H9. Help users recognize, diagnose, and recover from errors] / Severity 3 / Found by: A**
Currently, it seems that the list of home-seeker’s applications are not clickable. As a continuation of the previous point, if a home-seeker realizes that their application had a typo, there is no way for them to edit or withdraw their application. To accommodate this error, users should be able to look at their previous applications and a withdraw button should be added so that users can cancel or resubmit.
8. **[H4. Consistency and standards] / Severity 1 / Found by: A**
There is a consistency error between the words “profile” and “application”. When a home-seeker hits “apply”, it seems like only the user’s profile is sent and no additional information is required. Thus, does a user’s profile become their application to a help-seeker? If so, the word choice should be standardized. If not, the differences between them should be clarified and highlighted.
9. **[H10. Help and documentation] / Severity 1/ Found by: A, C**
When a home-seeker views a help-seeker’s profile, it is unclear whether messaging is required, and if so, if messaging should be done before or after applying. Since the order of events is unintuitive, perhaps a help button should be added or a guided tutorial for first-time users to apply to a fake help-seeker.
10. **[H1. Visibility of system status] / Severity 2/ Found by: A**
After a home-seeker applies to a help-seeker, all the user knows is that their application is “Pending.” The user has no idea if their application has been viewed yet or if the help-seeker would like more information. The system should provide more feedback by having additional icons on their applications that signify this type of information.
11. **[H4. Consistency and standards] / Severity 2/ Found by: A, D**
It seems like the home-seeker should reach out to a help-seeker first, but when you view the message conversations, it looks like the help-seeker messaged first. This is perhaps dependent on the previous point of whether an application is submitted and then a help-seeker messages back, or if a home-seeker messages a help-seeker before submitting an application. Whichever the case, the etiquette on who messages first should be clarified and standardized.
12. **[H5. Error prevention] / Severity 3/ Found by: A, D**

When creating a profile, it is unclear how much/what type of information is expected in the Background, Introduction, and House sections. This could lead to errors, in the sense of the irrelevant information being shared in the “Background” section. This could be solved by showing a sample profile, since home-seekers can’t view other home-seeker’s profiles and help-seekers can’t view other help-seeker’s profiles.

13. **[H2. Match between system and the real world] / Severity 1/ Found by: A, B**

The term “live-in” help seeker is unclear. I asked a friend what he thought it meant, and he had no idea. This is because when reading “live-in” help seeker, people tend to read it as “live-in” “help seeker” rather than “live-in help” “seeker”. Perhaps move the quotations or find a new word to describe these users. Could also reframe as “What are you looking for” instead of asking users to self-identify as help-seeker or home-seeker

14. **[H8. Aesthetic and minimalist design] / Severity 3/ Found by: A, D**

There is too much information on the Help Seeker - Proxy screen, which makes it content confusing. It seems like “Start Connecting” will immediately auto dial the phone number above, rather than take you to the interface of the app. It is also unclear whether the phone-number is mandatory or not. Perhaps this information could be presented on two separate screens. Fix: add more whitespace so that start connecting is separate from the phone number.

15. **[H6. Recognition rather than recall] / Severity 2/ Found by: A, D**

When a help-seeker is looking through his messages, there should be some way to easily visit the home-seeker’s profile because the user may not remember who wrote the message. The help-seeker should not be expected to be able to distinguish who each person is in a list of 20 applications. I recommend making the profile picture clickable, where tapping on the home-seeker’s face will redirect you to the home-seeker’s profile.

16. **[H4. Consistency and standards] / Severity 2/ Found by: A, C**

It is unintuitive that the “Pending Applications” section is listed under the “Search” button which has a “Home” icon. Users should not have to wonder what the “Search” button is. Perhaps rename that button as “Applications” instead.

17. **[H7. Flexibility and efficiency of user] / Severity 4 / Found by: A**

When editing the profile of a help-seeker, there is no expectation or way to attach photos of your house to your profile. However, being able to see one’s home is a key element of the home-picking process. This can be solved by having an icon of a house where you can attach photos of your home, so users can easily attach images of their face and their home to the appropriate location. Ensure that the images are aligned such that the profile image is grouped with the background and the house image is grouped with the house text.

18. **[H1. Visibility of System Status] / Severity 1 / Found by: D**

On the “Your Profile” page of the Home Seeker track, the status is unclear. At this point, people have not yet made their profiles and so it may be confusing to see “Your Profile” already made.

Fix: Change “Your Profile” in the top left to “Create Your Profile” or “Start Your Profile.”

19. **[H4: Consistency and Standards] / Severity 1 / Found by: B, D**

The “Your Profile” screen has the words ‘type changes’ in the Background and Introduction boxes. However, at this point the user has not entered anything into the text boxes so there should not be anything to change.

Fix: Change the wording to something like: “Enter information”

20. **[H4: Consistency and Standards] / Severity 1 / Found by: D**

The grammar on the “Hi there!” screen for the “where are you looking...” part is a bit strangely worded.

Fix: Change the wording. Something along the lines of: “where do you want to live?” Or “where are you seeking housing?”

21. **[H7: Flexibility and Efficiency of Use] / Severity 1 / Found by: B, D**

Some users may not want to type in their location to the “Hi there!” screen. There could be a shortcut for them, as many people will probably be wanting to search nearby their current location.

Fix: Add a “current location” button to autofill the search bar for expert users

22. **[H7: Flexibility and Efficiency of Use] / Severity 2 / Found by: B, D**

There is no filter option in the searching for the homes page and the applications page. Adding a filter would allow the expert user to find their ideal living situation faster rather than scrolling through the listings

Fix: Add the option to filter the search results (e.g. by rent cost, living accommodations, tasks needed, etc.)

23. **[H8: Aesthetic and Minimalist Design] / Severity 1 / Found by: D**

There is a lot of whitespace on the “Hi there!” screen that seems like it could be used better or be made to look nicer.

Fix: Delineate the “hi there” message, the “where are you looking...” and the search bar, perhaps using shaded backgrounds in shades of gray.

24. **[H2. Match between system and the real world] / Severity 1 / Found by: B**

On the Init Screen, new users are unclear on whether to select sign in or get started.

Fix: needs to be clear for first time user that they don’t have the option to sign in

25. **[H5. Error prevention] / Severity 2 / Found by: B**

On sign up screen, no example phone number.

Fix: show a typical 10-number format.

26. **[H4. Consistency and Standards] / Severity 1 / Found by: B**

On Sign Up screen, Sign Up button is skinnier and wider than on previous screen. Fix: match the two buttons.

27. **[H8. Aesthetic and Minimalist Design]] / Severity 1 / Found by: B**

On “Sign Up 2” Screen, body text on screen (Are you and or) are now bold
Fix: stick with one style for body font so as to be consistent.

28. **[H4. Consistency and Standards] / Severity 1 / Found by: B**

On Help Seeker Init screen, Rounded buttons for proxy yes/no buttons, as well as thinner smaller text. There’s four different font sizes on this page alone.
Fix: use a consistent style for all buttons.

29. **[H5. Error prevention] / Severity 3 / Found by: B, D**

User isn’t required to set proxy setting before pressing start connecting, could make a mistake with no way to go back.
Fix: Require user to set a setting for Proxy before allowing them to continue (“start connecting”)

30. **[H4: Consistency and Standards] / Severity 1/ Found by: B, C**

On Help Seeker Search, see full profile is a different text size, hard to read, and probably unnecessary (could be done symbolically). In other places, Inconsistent handling of cases where the user could press the box to read more (messages and profiles). In one case, we have a small “see more” label and in the other, we have ellipses.
Fix: Use an icon or use the same wording everywhere with the body font size

31. **[H3. User control and freedom] 2/ Severity 2/ Found by: B, C**

On Help Seeker application screens, no way to go back to contract screen if the user accidentally accepts or way to see your contracts. When we accept, it immediately jumps to a contract screen but there should be a popup and confirmation.
Fix: Make all contracts visible to the user, Add a popup that says “Congrats! You’ve accepted ___! Let’s create a contract” with a button linking to that tab.

32. **[H5. Error prevention] / Severity 2/ Found by: B**

On all Help Seeker screens, user able to access contract screen without having a “person” active.
Fix: No need for a contracts tab that redirects to a new contract.

33. **[H3. User control and freedom]] / Severity 4/ Found by: B**

On Home Seeker screens, user unable to change locations after initial setup
Fix: Allow user to go back and change search location

34. **[H8. Aesthetic and Minimalist Design] / Severity 1/ Found by: B**
On Home Seeker applications, text is justified right up against photo, making it inaccessible.
Fix: Add margins and padding between text and photo.
35. **[H1. Visibility of System Status] / Severity 1/ Found by: C**
Unclear status once they apply for a job: it seems as though immediately not approved.
Fix: Add a pop-up saying “your application has been sent to ____!”
36. **[H8. Aesthetics and Minimalist Design] / Severity 1/ Found by: C**
The sign up screen for help seekers has more words than necessary. Regardless of whether or not the person is a proxy, it would make sense to have them have either option of filling out the form or calling the hotline to help (to accommodate elderly who are technically savvy? Or proxies who want to call?)
Fix: Have less text on this screen: ask the user if they want to fill out a form or call the phone number and based on the response take them to the corresponding screen
37. **[H2. Match between System and Real World] / Severity 0/ Found by: C**
Upon logging in as a help seeker, we get taken to the Contract page first which violates the natural order of progression through this app!
Fix: Land on a dedicated home page with a summary or on the profile page (maybe a glitch?)
38. **[H2. Match between system and the real world] / Severity 2 / Found by: C**
For the help seekers, they have a search option, whereas in reality that should be a review applications option because they are not searching.
Fix: Change the name of the tab on the bottom left from Search to Review for the help seeker interface
39. **[H3. User control and freedom] 2/ Severity 2/ Found by: C**
Help seekers should be able to both accept and message if needed to clarify what aspects of the helper’s skills they need/want.
Fix: Consider putting the message button in a popup after they accept as well?
40. **[H8. Aesthetic and Minimalist Design] / Severity 1/ Found by: B**
On Home Seeker applications, the text under title is center-justified, when the rest of the text is left-justified
Fix: Make all text either left-justified or center-justified.

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	0	2	1	0	0	3
H2: Match Sys & World	1	2	2	0	0	5
H3: User Control	0	0	3	1	2	6
H4: Consistency	0	6	2	0	0	8
H5: Error Prevention	1	0	2	2	1	6
H6: Recognition not Recall	0	0	1	0	0	1
H7: Efficiency of Use	0	1	1	0	1	3
H8: Minimalist Design	0	5	0	1	0	6
H9: Help Users with Errors	0	0	0	1	0	1
H10: Documentation	0	1	0	0	0	1
Total Violations by Severity	2	17	12	5	4	40
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
sev. 0	2	0	2	0
sev. 1	2	10	4	5
sev. 2	6	4	3	4
sev. 3	4	2	1	4
sev. 4	3	1	2	0
total (sev. 3 & 4)	7	3	3	4
total (all severity levels)	17	17	13	13

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

5. Summary Recommendations

- *General lack of back buttons*
- *Prototype allows for functionality (ie checkboxes) that should not be editable.*
- *Need to identify what the differences in a proxy's interaction is from a regular user's interaction*
- *Need to have a stylesheet and a screen grid in order to keep consistent aesthetic*
- *Need a consistent plan about the interaction and the timeline: ie, do home seekers reach out first, and help seekers only respond?*
- *Home seekers need to identify the entire housing period (start and end)*
 - *More generally, developers need to consider exactly what information they should solicit for profile/application such that enough information is included to make an informed decision.*

- *Streamline the workflow, especially concerning that the target user group is elderly populations that may not be the most tech-experienced and order the tabs accordingly*
- *Limiting the home-seeker's view of the help-seeker's profile*
 - *For safety and privacy reasons to protect vulnerable help-seekers*

Severity Ratings

- 0 - don't agree that this is 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

H5: Error Prevention

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, kb shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design

- No irrelevant information in dialogues

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