

## Heuristic Evaluation of Ping!

### 1. Problem/Prototype Description

*We evaluated the medium-fi prototype of the app Ping. Ping provides a way for individuals to connect with their loved ones in a low-stakes way, to show people that you're thinking of them even when life gets busy.*

### 2. Violations Found

#### 1. H1 Visibility of System Status / Severity 3 / Found by: A, C, D

- After saving a token, where does it go? User is taken back to the home screen with no immediate visual feedback on where the saved token went as only recent tokens are visible. Users may be confused as to where the saved token is saved and how they can view it later.
- Fix: After saving a token, take the user to the profile of a friend where the user can view the saved token with that friend.

#### 2. H1 Visibility of System Status / Severity 2 / Found by: A, D

- When viewing your goals with a person, there is a positive message that says the user is on track towards their goal, but nowhere for the user to see how close they are to reaching that goal. For example, if the goal is to connect with Bryan 6x per week and the user is "on track with your goal", how many times does that mean they've connected so far? Users may be confused on how "on track" they are to their goal and how far they have left to go.
- Fix: Updated message to include information about how many times the user has connected with that friend so far. Potential to add some sort of graph feature/visual showing how many more times they have to connect to reach their goals and how many days are left for them to reach that goal.

#### 3. H1 Visibility of System Status / Severity 3 / Found by A, B, C, D

- After sending a token, where does it go? Did the friend open it yet? Users are not able to see any sort of history on their sent tokens, or if it's been opened by the other person.
- Fix: Add a "Sent" tab to "Your Tokens" page that shows tokens that have been delivered and if they've been opened yet. Take users to this page immediately after they send a token.

#### 4. H1 Visibility of System Status / Severity 2 / Found by: B

- Not clear how many unopened tokens or missed moments haven't been addressed without scrolling through many tokens on the home interface. It would be helpful to see the number of to-dos/notifications to be addressed as a number somewhere on the app so the user can sanity check that they haven't missed anything.
- Fix: Suggest adding a notification number next to the tokens section and next to the moments section on the home page AND next to your friends' name if you haven't opened their token on the friends page.

#### 5. H1 Visibility of System Status / Severity 3 / Found by: D

- When I looked at the sent token page for the first time I wasn't sure what I was looking at / how to interpret the emojis. It violates Visibility of system status because I think there is no description of what the page is.
  - Fix: There should be a title at the top saying token sent from Emily
- 6. H1 Visibility of System Status / Severity 1 / Found by: D**
- In the your friends tab I'm not really sure what the icons mean. This violates H1 because the user is not informed of what is being shown on the screen.
  - Fix: There should be labels at the top describing those
- 7. H1 Visibility of System Status / Severity 3 / Found by: D**
- In Bryans profile it shows the three icons again but no explanation for what they are. Violates H1 because the user is not informed of what those icons are and therefore lack the information for next steps.
  - Fix: Add labels to the icons.
- 8. H2 Match b/w System & World / Severity 2 / Found by: D**
- The banners of the profiles are different colors. Not sure what the intentions were for the colors but general design practices use green, yellow, and red to show status. It violates the Match between system and the real world heuristic because usual design practices would either have one color pattern for all borders or add functionality like the red green and yellow to depict status.
  - Fix: Either pick one color for all banners or use the red, green, and yellow idea to depict status.
- 9. H2 Match b/w System & World / Severity 1 / Found by: A, B**
- Notification on iPhone home screen doesn't have name of app "Ping". IOS notifications have name of the app the notification is coming from as the first line of text.
  - Fix: Update notification to have first line "Ping" and second line about token like "New token from Emily".
- 10. H2 Match b/w System & World / Severity 3 / Found by: C**
- There is no clear option to import friends. While you can search for friends on the second tab of the app, there is no clear pathway for adding friends to your network.
  - Fix: Sync to user contacts in the profile tab of the app, or add a clear "Add Friends" button to the top of the "Your Friends" page.
- 11. H2 Match b/w System & World / Severity 2 / Found by: C**
- There is a "Delete Friend" option, but no clear reciprocal action for deleting this friend. What happens to the friend's "Your Friends" page when you delete them?
  - Fix: Change the "Delete Friend" option to "Remove from Friend List," or similar wording that clarifies that the action is one-sided. If the action is indeed two-sided, the app should send a notification to your friend or delete you from their list as well when you take this action.
- 12. H2 Match b/w System & World / Severity 2 / Found by: C**
- There is no clear rationale for the requirement of a username, display name, and email. Users may not understand the difference between a username and display name specifically, and there are no details on the profile page indicating the rationale for each field.

- Fix: Choose a limited amount of fields (ex. Just username and email, or just display name and email), or justify the need for all three fields currently present in the app.

**13. H2 Match b/w System & World / Severity 2 / Found by: A, B, C, D**

- Many messages disappear too quickly. For example, confirmation of a scheduled token appears, it disappears before you have time to read all of the displayed text. In the real world, disappearing messages appear for at least the amount of time it takes to read them.
- Fix: Option 1) Increase length of time disappearing messages are on the screen, ensure time allows for users to read all text on the screen. Option 2) Leave message up for indefinite amount of time and allow user to close it when they're ready.

**14. H2 Match b/w System & World / Severity 2 / Found by: A, D**

- "Saved Tokens" are not accessible from "Your Tokens" page. In the real world, oftentimes "Your X" implies that all types of "X" are visible. Take the homepage on the iMessage app for example. *All types* of messages can be viewed on the Messages page (home page)–opened, unopened, sent, received.
- Fix: Add another tab where users can view Saved Tokens from Your Tokens screen.

**15. H2 Match b/w System & World / Severity 1 / Found by: A, C**

- Current Profile tab only displays generic information about the user that they would input when they first log into the app. Typically in the real world, icons on the bottom represent the most important pages–things users are visiting most frequently. Users will only need to visit this screen when they want to edit their profile, which won't be very often.
- Fix: Option 1) Delete profile navigation from bottom bar and make it accessible from just the homescreen, perhaps icon in upper right corner. Option 2) Add more information to the Profile page that would make it somewhere a user would visit more frequently. Perhaps statistics on how close they are to meeting their connection goals across friends, history of tokens they've delivered, etc.

**16. H2 Match b/w System & World / Severity 1 / Found by: A, B**

- A heart logo representing a moment seems love focused/might send the wrong message to some friends since this is what I associate it with in the real world. Some users might not feel comfortable sending something represented by a pink heart to someone beyond my close family or very close friend circle platonically. Also the LDR phrase is confusing as it's often associated with romantic long distance relationships.
- Fix: Make this icon less clearly insinuate romance and more descriptive of what a moment is: from my understanding a moment is about showing each other that you are thinking about each other and sharing that time. I recommend making an icon that implies two people sharing time together, perhaps two hands meeting.

**17. H2 Match b/w System & World / Severity 2 / Found by: B**

- The meaning of "Your Moments" and "a moment" is vague until it is understood in the context of this app. Moments tend to insinuate a past memory.
- Fix: I would consider doing one of the following (1) change the name for the 'create a moment' task to make it more clear so that it better insinuates that the goal is to show someone that you are thinking of them, or (2) add a small descriptor on the main

homepage of what a moment is. i.e. it would make more sense to me if it said "show a friend you're thinking of them" rather than "create a moment" especially when I first use the app.

**18. H2 Match b/w System & World / Severity 2 / Found by: B**

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**19. H3 User Control & Freedom / Severity 4 / Found by: A, B, C, D**

- After a user selects a prompt to send with their token, they cannot choose a new prompt without sending a token associated with that prompt or restarting the process of creating a token over again. If the user changes their mind about their selected prompt or chooses a prompt by mistake, there is no easy way to "undo" that choice.
- Fix: Allow users to click the "Idea" button multiple times while in the process of creating a token.

**20. H3 User Control & Freedom / Severity 4 / Found by: A**

- After the user selects a prompt to send with their token, they cannot delete the prompt. If the user decides after selecting a prompt that they no longer want to send a token associated with a prompt, there is no way for them to delete the prompt (undo) without starting the whole process of creating a token over again.
- Fix: Give users the option to delete the prompt after selecting it before sending their token.

**21. H3 User Control & Freedom / Severity 3 / Found by: B, C, D**

- If someone were to share a gift or a token with me in the real world I would expect to be able to keep it to remember it. While the app does have an option to 'Save token', it declares that it will overwrite the previous token when doing so. This seems overly restrictive when the goal is to help cherish a friendship or relationship over time; some users might want the ability to be able to save multiple tokens, similar to how you can choose to save any message/sent content on Snapchat.
- Fix: Allow the user to save and remember as many tokens as they like.

**22. H3 User Control & Freedom / Severity 1 / Found by: C, D**

- When I was looking at the moment between me and Mhar I couldn't back out. It forced me to share a moment with him. Pressing the blurred section of the prototype forces you into starting a new moment.<sup>3</sup> This violated H3 because it didn't offer the appropriate emergency exit functionality and routed the user somewhere it shouldn't have.
- Fix: If you x out on the page where it says "Showing Mhar you are thinking of them" it should x out to the page that contains the moment you just shared, not back to the home page.

**23. H3 User Control & Freedom / Severity 1 / Found by: D**

- Hitting x after sharing a moment with mhar still continues the flow. This is a violation of H3 because there is no easy/understandable exit from the popup screen that shows up.
- Fix: There should be an appropriate back button that goes back to all moments.

**24. H3 User Control & Freedom / Severity 1 / Found by: D**

- After clicking on Create new moment you cannot go back to the home page, the button is not clickable. Violates H3 because there is no emergency exit.
- Fix: Make the back button clickable

**25. H3 User Control & Freedom / Severity 1 / Found by: D**

- After clicking the plant on bryans profile it brings us to the goal page. But then clicking on the back button leads the user to all of their goals instead of going back to bryans profile. This is a violation of the emergency button routing to the wrong page7
- Fix: Have the back button on that page go back to Bryans profile

**26. H4 Consistency & Standards / Severity 2 / Found by: A**

- When you navigate to Garden of Goals page, sometimes two subheaders are “This Week’s Growing Goals” and “The Week’s Mature Goals” and sometimes they’re “Water these goals this week” and “These goals are growing strong”. User may think that these categories are different which is confusing since they are basically two versions of the same page.
- Fix: Choose one set of subheaders and maintain consistency throughout each iteration of Garden of Goals page.

**27. H4 Consistency & Standards / Severity 1 / Found by: A, B, C**

- When you save a new token, Confirm and Cancel buttons are on the same level but different sizes. In the real world, if there are two buttons on the same level, e.g., “Confirm” and “Cancel”, they are usually the same size (but different colors, which you’ve done well!).
- Fix: Make Confirm and Cancel buttons the same size.

**28. H4 Consistency & Standards / Severity 2 / Found by: A, C**

- When sharing a moment with Manar, Manar is supposed to have 30s to log on and share that moment, but the moment disappeared well before 30s.
- Fix: Ensure moments last for the appropriate/indicated amount of time, and add a scale to give user options to lengthen/shorten the default time.

**29. H4 Consistency & Standards / Severity 2 / Found by: A, D**

- On home page, “Create New Moment” screen is a lighter pink than “Your Moments” logo and it is *larger*. “Send new Token” is a *darker* green than “Your Tokens” logo and is *smaller*. The relationship between these buttons and their respective subheaders/logos should be consistent as they are on the same level on the page (bottom of subsections).
- Fix: Make “Create New Moment” and “Send New Token” buttons the same size, and choose one color type of either darker/lighter than their respective section logos.

**30. H4 Consistency & Standards / Severity 2 / Found by: A, B, C, D**

- Time of token disappearance is displayed when the time of opening is not—displaying of exact time versus text description is not consistent across opened / disappearing messages.
- Fix: Display “Token disappears in 24 hours” when “Opened just now” is displayed, and then display time for disappearance e.g. “Token disappears at 7:45 am tomorrow” when time opens is displayed e.g. “Opened at 7:45 am”. Alternatively, could just display time opened with an info “i” next to it that says something like “Tokens disappear 24 hours after opening”.

**31. H4 Consistency & Standards / Severity 1 / Found by: A**

- Photos on “Your Friends” page are different sizes if user saved a token from that friend versus if they didn’t. If user saves a token from a friend, their picture becomes smaller and therefore less prominent on the screen—makes them seem less of a priority. I would argue that if a user has saved a token from a friend, that friend actually may be *more* important/connected to the user.
- Fix: Make sizes of friends consistent on the page, regardless of if the user saved a token from that person or not.

**32. H4 Consistency & Standards / Severity 1 / Found by: A, D**

- Inconsistent coloring on “Your Moments” page. In view of all moments: In coloring around friend pictures—pink is for shared moments, green is for friend to you and you to friend moments; all text highlights are pink. Filter by friend: In coloring around friend picture—pink is for shared moments, friend to you *and* you to friend moments; all text highlights are maroon. Shared moments filter: Pink around friend pictures, all text highlights are maroon. These inconsistencies make it difficult for users to easily visually distinguish between types of moments.
- Fix: Pick three colors: one for shared moments, one for friend to you, and one for you to friend, and match text / picture color based on which category it falls into, across filters. For example: everytime “You were thinking of X”, that friend’s picture and “X” text is green; everytime “X was thinking of you”, that friend’s picture is maroon and “X” text is maroon; everytime “You & X shared a moment”, that friend’s picture is pink and “You & X” text is pink. These colors should persist across filtered views (i.e. shared, friend to you, you to friend, search for a specific friend).

**33. H4 Consistency & Standards / Severity 1 / Found by: A, D**

- Inconsistent coloring between moments and tokens. Most of the time, pink is for items associated with moments and green is for items associated with tokens. However, this is not always the case—search icon on both moments and tokens page are pink. Ideas icon on page for creating a token is pink.
- Fix: Be consistent in coloring between green and pink, as now it seems a bit random. Is green always for tokens and pink always for moments? Or maybe green is for text / coloring around profile pictures and pink is for buttons? Colors should be consistent either within a topic (moments vs tokens) within an object type (text vs image vs button) or within an action (static versus actions needed to be taken by the user), and icons can be used to distinguish.

**34. H4 Consistency & Standards / Severity 2 / Found by: B, D**

- The way that time is expressed on the app is inconsistent across components. Sometimes time zones are not included, (e.g. on token on screen 20/52 says "received at 11:04 am" and next to Emily it says "Sent at 11:04 pm GMT+4"). I assume (though it wasn't immediately clear) that when no time zone is included that it means it is your current time zone.
- Fix: To avoid this, consider standardizing the way time is represented or saying "my time" vs "their time".

**35. H4 Consistency & Standards / Severity 1 / Found by: B**

- Inconsistent color of buttons to go and complete a task. While sending a token had a green button, starting a moment has a pink button. It seems more logically consistent to have these be the same color and differentiate the buttons based on the wording/icon rather than color.
- Fix: Help the user associate the color of a button with the completion of a task or proceeding with a task by making the 'create a moment' and 'send token' buttons the same color. Distinguish the buttons via the side icon or the text on the button.

**36. H4 Consistency & Standards / Severity 2 / Found by: A, B**

- Buttons for accepting and rejecting tasks look the same as the options to toggle different viewing options, e.g. on the Your tokens screen. Toggling was then confusing after I got used to pressing task buttons that looked the same.
- Fix: Make your toggle view buttons a distinct shape or somehow distinctly different from the rest of the task buttons.

**37. H4 Consistency & Standards / Severity 1 / Found by: D**

- Usually there is a primary color and a secondary color. Profile banners should be the same color as the buttons unless they are trying to show that the user is active.<sup>4</sup> This violates H4 because if a color of something differs from the chosen color palette then it means that there is a certain functionality entailed. However, here the color is different but there is no external functionality.
- Fix: Change the color of the profile banner in the image attached to the color palette chosen by the team.

**38. H4 Consistency & Standards / Severity 2 / Found by: C**

- There is little distinction between the three screens used to "Share a Moment with Mhar." First, users need to select the friend they want to share a moment with, then click their friend's profile icon in the second screen, and finally they are notified if their friend responds, which navigates to a final fourth screen with a summary. It feels unnecessary to wait for each screen to complete.
- Fix: Reduce the screens used to just starting the moment and the notification of whether or not their friend joins the "Moment," or add differentiators between the screens currently used.

**39. H4 Consistency & Standards / Severity 2 / Found by: C**

- "See all Moments" and "Create New Moment" both offer the option to create a new moment with a friend, and it's unclear which pathway the user should take to start a moment.

- Fix: Redirect to the “Create New Moment” screen from “See all Moments,” or entirely remove the option to set up a “Moment” from the “See all Moments” history screen.

**40. H5 Error Prevention / Severity 3 / Found by: D**

- When you are sending a new token to Bryan it doesn't show how many tokens can be sent. This is a violation of H5 because the design might allow the user to enter an infinite number of tokens which might be error prone.
- Fix: Like in twitter you should show exactly how many characters (tokens) are allowed.

**41. H5 Error Prevention / Severity 3 / Found by: D**

- Make sure that when the date is inputted, you make sure it can't go before today's date for the recipient. Because of the time zone changes it could get very confusing to know when is not an appropriate time to send the tokens. Violation of H5 because not enough error messaging could enable mistakes when you send a token.
- Fix: error handling should display an error if user picks time before today

**42. H5 Error Prevention / Severity 3 / Found by: A**

- No upper limit on connection goals. If the user is setting/editing a weekly connection goal, for example, it appears that they can select a number greater than 7 (the number of days in a week).
- Fix: If connection goal (number) does not make sense with second option (e.g. “per week”), i.e., goes above the maximum (e.g. “7”), automatically set the connection goal to be the maximum. For example, if user selects connection goal to “8” “per month” and then changes “per month” to “per week”, they should be forced to also change “8” or it should change automatically to “7” before confirming the selection.

**43. H5 Error Prevention / Severity 4 / Found by: B**

- When I edit my profile it seems that I am editing in real time since there is nowhere to 'save' my data. This does not help the user prevent accidental changes or check that they are making changes correctly.
- Fix: add regex error checks on email and checks on password etc, then allow the user to 'save' their profile before updating.

**44. H5 Error Prevention / Severity 3 / Found by: B**

- There is no error prevention when sending a token. When I was creating a token for Bryan I almost sent the token and I can imagine if people spent a while getting creative with their tokens they would also easily send it before complete. The time change options were also right next to the send button, making it even easier to be clumsy and send before you are ready.
- Fix: Create a check screen with 'Confirm send token?' or some other similar message to help the user avoid accidentally sending before they meant to. Also make it possible to unsend a token.

**45. H5 Error Prevention / Severity 2 / Found by: C**

- After clicking “edit” for a specific goal, the trash icon appears immediately in the same area of the screen. I can imagine users would easily—and accidentally—delete ongoing goals as a result.



- Fix: Move the trash icon to the bottom right corner of the screen, or at the very least the bottom half of the screen, because that is where most “cancel” or “delete” options appear in other screens.

**46. H6 Recognition not Recall / Severity 4 / Found by: A, B, C, D**

- Let's say user receives a token from Bryan prompted by prompt A. If the user wants to send a token back to Bryan prompted by prompt A (same prompt), they have to remember what prompt A was, begin crafting a message for Bryan, go to prompts and then find that prompt themselves. User must *recall* what the prompt was during token creation.
- Fix: Automatically select the prompt that was used to prompt the token that was sent to user when they are replying to the token. Have users “opt-out” (e.g. with an “x”) if they don't want to use that prompt, instead of making them search for it if they do want to use it.

**47. H6 Recognition not Recall / Severity 3 / Found by: B, C, D**

- When I'm crafting a token to send to a friend (e.g. to send to Bryan in the prototype) I can't see the previous token Bryan sent me so I had to remember that or click out of the screen for creating a token. It would be really helpful to have that available.
- Fix: Add some side display or history of the previous token/s to reduce the friction of recall on the 'create token' screen.

**48. H6 Recognition not Recall / Severity 2 / Found by: D**

- When sharing a moment with Mhar it seems as though two pages fade in and out the first stating that a new moment was created and a second to say when it will notify mhar. These are two screens that could be put into one, but is an overload of information that because there is a self timer goes too fast and was confusing for me. Had to go through the flow multiple times. Violation of H6 because not only was there memory overload in the two screens but you could decrease number of screens used
- Fix: Reduce information overload to only necessary info and reduce to one post screen effect.

**49. H6 Recognition not Recall / Severity 2 / Found by: C**

- Although “Sharing Moments” is one of the key three tasks of Ping!, it's hard to access information on past moments, or begin a new one, because it does not have its own tab. Similarly, viewing and scheduling tokens requires specific navigation from the home page.
- Fix: Add shortcuts in the bottom icon bar to both “Moments” and “Tokens.”

**50. H7 Flexibility and Efficiency of Use / Severity 3 / Found by: B, D**

- After completing the send a new token task it takes the user back to the home screen. This is a violation of H7 because in order to increase efficiency of use it should route the user to the my tokens page to see that the new token has either been locked in to be sent or sent already.
- Fix: Route the user to my tokens page after completing the send new token task.

**51. H7 Flexibility and Efficiency of Use / Severity 2 / Found by: D**

- When editing the goal that you share with Bryan it pulls up a page with the same icon from the previous page taking half the screen again. This is a violation of H7 because its not efficient to have two screens. Screen 7, 8
- Fix: put all of the features on one page. Just combine the informational page with the edit page

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

- Some of the back buttons take you back two rather than one screen in the flow, which is disconcerting and can also make some tasks inefficient. For instance, when setting a goal with a friend (e.g. on 26/52 when I am setting a new goal with James), if I instead wanted to choose a different friend, instead of going back one screen, I go back two, requiring me to begin the task from the very beginning rather than efficiently switch to another user.
- Fix: for most back buttons default to going to the previous page rather than back multiple steps.

**53. H7 Flexibility and Efficiency of Use / Severity 3 / Found by: B, C, D**

- It makes a lot more sense to have the app design predominantly separated by person rather than by task. i.e. If I am a regular user of this app, when I enter the app I will likely go in with the mindset of "let's send something to X" rather than "let me create a moment". As a result, I'd rather that the most accessible thing when I open the app be the friends or people I communicate with often on Ping. Then from that person's page I'd like to be able to either send a token or create a moment. I see that this structure is starting to develop on the friends tab, but think it would make more sense to organize the main structure of the app around friends and have token/moment options as sub options under individual friends rather than the reverse.
- Fix: recalibrate the design for ease of access to friends/relationships I want to frequently have moments and send tokens with. Under each friend, be able to easily send a token or create a moment.

**54. H7 Flexibility and Efficiency of Use / Severity 2 / Found by: C**

- While new tokens can be sent from the home page while the user still has unread tokens, users cannot view the prompt to "Create New Moment" unless they take part in the ongoing moment prompted by one of their friends. This makes it impossible for users to engage with more than one friend at a time using moments.
- Fix: Still make the "Create New Moment" button accessible to the user when they have ongoing moments with friends visible on the home page.

**55. H7 Flexibility and Efficiency of Use / Severity 2 / Found by: A**

- If a user is having a busy week, there is no way for them to indicate that they do not want to have their goals across Garden of Goals for that week—they would have to manually go in and update every goal they have with a friend for that week.
- Fix: Allow user to easily silence all goals for a week if they are having a busier week than normal so they don't feel bad about not being able to connect as much that week.

**56. H8 Aesthetic & Minimalist Design / Severity 2 / Found by: A, B**

- On “Your Friends” page, buttons for performing actions associated with a friend (goals, moments, tokens) are large and repetitive. They take up a lot of the screen and take away focus from the friend information (profile picture, friend name).
- Fix: Option 1) Make action buttons smaller and put it below each friend’s profile picture, making the friend name/picture the focal point of each friend section. Option 2) Remove action buttons from every individual friend section and have them only appear when you select a friend to avoid repetition.

**57. H8 Aesthetic & Minimalist Design / Severity 2 / Found by: B**

- There are quite a few redundant buttons in the design. For instance, on screen 36/52 I can both use the 'x' and 'cancel' to get out of the screen when really I only need one of those options.
- Fix: Choose either x or cancel and keep one of them. Do the same on similar screens and pop ups with exit options.

**58. H8 Aesthetic & Minimalist Design / Severity 2 / Found by: B, D**

- Some of the token info is overly wordy, especially on the token-related screens. This is also true of the home screen where under “Your Moments” it is obvious that “recent moments” are moments.
- Fix: As some examples, “Send Token to Bryan” could just be “Send token” because it’s clear that it’s sending to Bryan based on the title of the screen.; “Save token” could just be “save”, or even just a pin icon. Furthermore you could simplify timing wording, e.g. “Token disappears at 02:40 am tomorrow” could be “Disappears 2:40AM tmr” or even shorter. Make “recent moments” just “recent”.

**59. H8 Aesthetic & Minimalist Design / Severity 1 / Found by: B**

- There are some extraneous icons on the app, for instance the blank person icon next to “Bryan’s profile” which isn’t needed to convey that the page is indeed Bryan’s profile.
- Fix: Remove the person icon here along with any other icons which don’t explicitly augment the meaning of a title/icons that don’t make the meaning clearer or add aesthetic value.

**60. H8 Aesthetic & Minimalist Design / Severity 2 / Found by: D**

- The screen that pops up when you create a moment with someone that says we will notify the other person at ... time is unnecessary. It’s information that could be placed somewhere more lowkey rather than giving an entire page popup. The reason it violates Aesthetic and Minimalist Design is because the response is two screens that take a lot of time to get through and aren’t important enough to take up two screens worth of information
- Fix: Instead of a popup screen, send a popup modal (½ screen) and then route to the “you to friend tab” where you will add the new moment with the information displayed on the two screens. No need for a full screen notification.

**61. H8 Aesthetic & Minimalist Design / Severity 2 / Found by: D**

- There is no need to show both the time of yourself and your partner’s time in the “your moments page”. Reason is because there is too much math and effort needed to know what time they will have received it and it doesn’t offer much functionality. It violates

minimalist design because it crowds up the moment tab with a lot of information that is not necessarily needed.

- Fix: Like snapchat just add how long ago it was sent or received. Keep it simple

**62. H9 Helps users recognize, diagnose and recover from errors / Severity 3 / Found by: B, D**

- It is not easy to know whether you started sharing a moment or not; and if you did start a moment but didn't mean to, there's no way to tell the other person it was a mistake or that you meant to do something else.
- Fix: I would like some minimal abilities to let someone know the intention of trying to reach them via a moment/with a token. e.g. maybe an option to send a follow up saying that I started a moment by mistake. For instance, I might have accidentally started a moment with someone in the middle of the night their time which could seem rude but that would help me recover from that error.

**63. H10 Help & Documentation / Severity 2 / Found by: B, D**

- I wanted information earlier than was given on how the moment functions work. e.g. When I started a moment with Mhar I was told that Mhar would be able to join in the moment with me, but I had to actually start a moment to find that out.
- Fix: It would be more useful for the user if the app explains what a moment is on the page where they can start a moment rather than once they've actually started the moment. I recommend moving this info snippet from the shared moment with an individual screen to the main moments screen.

**64. H10 Help & Documentation / Severity 2 / Found by: B**

- Cross next to the information snippet, e.g. on 17/53, implies that this information will disappear once I've seen it once. As the user I wondered, what if I forget about the instructions? It's unclear how I will access that information again or in general access instructions about how to use the different features.
- Fix: Make it clear how the user can access helpful information after they close information snippets. This could be that you keep the 'i' icon but minimize it, or it could be that you have a help section of the app, for instance.

**65. H10 Help & Documentation / Severity 3 / Found by: A, B, C, D**

- Missing High Level help page—where can users go when they have questions or want to learn about less frequently used features?
- Fix: Add help page with FAQ, short descriptions of icons that don't have text descriptions, and instructions for less frequently used features to help users increase familiarity with the app.

**66. H10 Help & Documentation / Severity 2 / Found by: A, B, C, D**

- Unclear why tokens disappear at the time they do when you open a token. E.g. token from Emily was “received at 11:04am” and “will disappear at 7:48am”. It doesn't seem like this disappearance occurs a definite number of hours later after receiving (otherwise it would disappear at XX:04 time), so users may not know why the token is disappearing at that time. If it's disappearing at a certain number of hours away from the time opened, it's confusing that there is no time next to opening (just says “opened just now”).

- Fix: Have an info “i” next to the token disappearing statement that provides information on when tokens disappear like “all tokens disappear X hours after opening”.

**67. H10 Help & Documentation / Severity 3 / Found by: A, C, D**

- Where does it describe the difference between a moment and a token? Looking at the home page I'm not sure what the difference is. This violates Help and Documentation since the lack of an explanation of what the difference is makes it hard for me to understand the use case of either tokens or moments.
- Fix: On the main page there could be an information icon that when pressed gives a description of the difference. Or an intro couple of slides to explain the difference between them.

**68. H10 Help & Documentation / Severity 2 / Found by: C**

- Although tokens on the home page have visible prompts, the page with the option to reply to a token has no visible prompts for the icons.
- Fix: Label the lightbulb prompt button with clear “Prompts” text so that users can easily determine where to find prompts similar to the ones sent by their friends.

**69. H10 Help & Documentation / Severity 2 / Found by: C**

- While users have the option to turn on push notifications for a new goal, they aren't given an example of what the push notification will look like, or its frequency.
- Fix: Add an image of an example push notification and/or tell the user the frequency of notifications in text below the “Set Reminders” slider.

**70. H11 Accessible / Severity 1 / Found by: A**

- Small text with low contrast (gray on gray) for times tokens received / opened, subheaders on “Send a token to” page (“It's been a while ..” “This week you have ...”) could be hard for users who are visually impaired to see.
- Fix: Increase size of text for smaller light gray descriptions and/or choose color with greater contrast against background (e.g. black).

**71. H11 Accessible / Severity 1 / Found by: A**

- Small text for “Token Prompted By” when opening a token could be hard for users who are visually impaired to see.
- Fix: Increase size of text for prompts associated with received tokens.

**72. H11 Accessible / Severity 3 / Found by: A, B**

- Small text on friends' pages (names of friends) could be hard for users who are visually impaired to see.
- Fix: Increase size of names of friends on Your Friends page.

**73. H11 Accessible / Severity 3 / Found by: B, C, D**

- This app is not accessible to the visually impaired. As far as I can tell there is no way to provide any sort of description to the tokens making the app even more reliant on visual components than a typical social media/messaging UI. Furthermore, the search bar is identical on both the “Friends” and “Connections” pages, with no clear text in the search bar indicating what the user is searching for, which would make the app more usable for those with screen-readers.

- Fix: Either allow some captions to accompany tokens or have the option to have alt text for the emoji tokens.

**74. H11 Accessible / Severity 3 / Found by: C, D**

- When creating a new token there is no way to create an emoji message using audio or voice activation. This violates H11 because it does not offer accessibility to those that are blind or have low-vision.
- Fix: An audio button that is easily accessible using audible trackers so that users can speak the emojis into existence

**75. H12 Fairness and Inclusion / Severity 3 / Found by: D**

- Since this is an app that is meant for worldwide communication there are no options to change the language. This is a violation of H12 because it does not offer inclusive features for everyone around the world.
- Fix: Add a google translate option for more text heavy sections such as the prompts page.

**76. H12 Fairness and Inclusion / Severity 3 / Found by: B**

- I wonder how older generations will find using this app, especially when often the people we move away from are our family members of all different ages. I know that most of my family members would find the app's ephemeral tokens difficult to wrap their heads around. This was mainly intuitive to me because I have previously used Snapchat.
- Fix: Make it easier for users to save their tokens for those who find the ephemeral tokens confusing/disconcerting, and would rather just have a record of the past tokens.

**77. H12 Fairness and inclusion / Severity 1 / Found by: A**

- Overly pink color scheme and heart details traditionally associated with femininity may make users who don't identify with such qualities feel like that app is not for them.
- Fix: Consider alternative color combinations more traditionally associated with friendship/not associated with a particular gender. Potential to utilize green in more places than pink (right now pink is dominating) and/or incorporate yellow (the color of friendship).

**78. H13 Value Alignment / Severity 3 / Found by: A**

- Ping is meant to provide a low-stakes way for individuals to stay connected with their loved ones. In the "Share a Moment" feature, friends must respond within 30s to engage with a user who wants to share a moment with them. This is a bit high-stakes as users could feel bad if they aren't able to respond within 30s and be reminded of the fact that they are too busy to engage with their friend.
- Fix: Option 1) Increase amount of time for friend to respond to moment (perhaps undefined–e.g., while user is still on the app). Option 2) Allow users to put in times that they are free to receive moments (or when they're not free) so they are more likely to be free to engage when someone wants to share a moment with them.

**79. H13 Value Alignment / Severity 4 / Found by: A, B, C, D**

- One of Ping's values is "meaningful connection". Part of maintaining meaningful connections with loved ones involves feeling you are still a part of your life. Right now, users have no way to add a message or description to their tokens. When user sends to Bryan that a basketball and leaf emoji made them smile today (Task 2), Bryan may not know what that means. Did the user play basketball outside? Did they trip on a basketball into a leaf pile? I wonder if more frequent communication via something as short as a token could feel superficial to some users without additional information. Personally, I can imagine that if I were a grandparent/a parent and I was only receiving tokens rather than other communication forms from my child or grandkid, for example, it might feel like my relationship was not continuing to grow or stay strong.
- Fix: Consider 1) adding an option for captions or more diverse tokens which could potentially come across as more meaningful (e.g. the ability to add a photo, a short message tag, a voice memo); or 2) allow for goal setting beyond the communication goal of counting messages/moments as tokens - e.g. could you have a goal to contact a person *beyond a moment or a token* as an additional type of goal? These are just thoughts, but I think it is worth thinking about ways to potentially strengthen the depth that the tokens can convey with further customization and/or encouraging people to increase the means through which they contact their loved ones

**80. H13 Value alignment / Severity 2 / Found by: B**

- While the app is designed to increase communication with loved ones by more frequent sending of messages like tokens, I wonder if more frequent communication via something as short as a token could feel superficial to some users without additional information. Personally, I can imagine that if I were a grandparent/a parent and I was only receiving tokens rather than other communication forms from my child or grandkid, for example, it might feel like my relationship was not continuing to grow or stay strong.
- Fix: Consider (1) adding an option for captions or more diverse tokens which could potentially come across as more meaningful (e.g. the ability to add a photo or a short message tag); or (2) allow for goal setting beyond the communication goal of counting messages/moments as tokens - e.g. could you have a goal to contact a person beyond a moment or a token as an additional type of goal? These are just thoughts, but I think it is worth thinking about ways to potentially strengthen the depth that the tokens can convey with further customization and/or encouraging people to increase the means through which they contact their loved ones.

**81. H13 Value alignment / Severity 2 / Found by: B**

- While most buttons are not large or prominent on the app, the option to 'delete' a friend on the app is very large and very noticeable. This bright red does not align with the rest of the aesthetic. While the intention may have been to make sure people know this is a different and more serious button than other buttons, this actually drew my attention immediately to the button on the friend page which made me contemplate the friendship in a dramatic way with the lens of 'oh, I have the option to delete this friend'. This seems to go against the goal of trying to continue relationships strongly. Especially since the app may include people who miss each other or wish they could

stay in contact more, I feel that it would be more thoughtful to have this as a smaller, less dominant button.

- Fix: While it makes sense to have a 'delete' option, I would make this small and more discrete so that the attention on the friend page is focused on positive aspects of the friendship.

### 82. H13 Value alignment / Severity 2 / Found by: B, D

- The values that I get from the mission statement are a simple one tap solution to communicate with those you love. I think that the home page could be more simple to offer that simple feeling. The vibe I initially expected was less clutter and more simple solutions to communicating yet there was an extensive flow to send a simple emoji message. This violates H13 because although the additional design decisions are great it makes the initial solution harder and more complex than the mission intended.
- Fix: offer go-to solutions to enable faster and easier methods of communication while

Severity levels

*0 = not a problem, 1 = cosmetic, 2 = minor, 3 = major, 4 = UI catastrophe*

## 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	1	2	4	0	7
H2: Match Sys & World	0	3	7	1	0	11
H3: User Control	0	4	0	1	2	7
H4: Consistency & Standards	0	6	8	0	0	14
H5: Error Prevention	0	0	1	4	1	6
H6: Recognition not Recall	0	0	2	1	1	4
H7: Efficiency of Use	0	0	4	2	0	6
H8: Minimalist Design	0	1	5	0	0	6
H9: Help Users with Errors	0	0	0	1	0	1
H10: Help & Documentation	0	0	5	2	0	7
H11: Accessible	0	2	0	3	0	5
H12: Fairness & Inclusion	0	1	0	2	0	3
H13: Value Alignment	0	0	3	1	1	5
<b>Total Violations by Severity</b>	<b>0</b>	<b>18</b>	<b>37</b>	<b>22</b>	<b>5</b>	<b>82</b>

**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	N/A	N/A	NA	NA
Sev. 1	60%	24%	18%	47%
Sev. 2	30%	41%	35%	43%
Sev. 3	32%	50%	46%	68%
Sev. 4	80%	80%	60%	60%
<b>Total (sevs. 3 &amp; 4) (numerical)</b>	37%	56%	48%	67%
<b>Total (all severity levels)</b>	40%	43%	35%	51%

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

## 5. Summary Recommendations

### Positives

Overall, you did a wonderful job with your medium-fi prototype! We can see the effort and thought that you put into this prototype, and we all appreciate your dedication to a bright, cheery, and aesthetically-pleasing color scheme; an incorporation of the tasks you have mentioned throughout the last few weeks; and the feedback screens after almost every action. The tasks were all completable and in many cases delightful to complete. The custom graphics to illustrate connection goals are lovely and communicate both your friend's timezone and the status of each connection well. In general, this design was well flushed-out and usable, and we look forward to seeing how it further develops in the weeks to come!

### Improvements

In terms of the Nielsen heuristic categories, **the most notes by number fall under H4: Consistency & Standards**, though these tend to be smaller and quick fixes. We recommend looking at the individual recommendations here.

- Creating meaningful friendships / values encoded

There are great opportunities to design for even more thoughtfulness within the tasks of creating tokens and moments, e.g. through allowing users to send short custom captions to make sure that the receiver understands what a token means, which will likely also increase the accessibility of the tokens to some users who are less familiar with other ephemeral messaging apps like Snapchat. You could consider adding voice memos and/or captions. Furthermore, allow users to make their own prompts or think of broader prompts for the tokens. It would be great to be able to send photos from a photo album as photos can often portray even more than an emoji, though the intention is to also make this app low-stakes, so you could consider perhaps some limited functionality for this. It makes sense to be able to

see the history more easily of past tokens, to create a memory trail of the tokens, which in our opinion aids in the ability to come up with sustained thoughtful responses.

Since you want to continue building meaningful connections through texting emojis then there should definitely be a history functionality where you can see all the past tokens that were shared to laugh at the goofy things that were sent in the past year. Never stop the trail at the last token, it should be a long string of memorable tokens that two people can share.

Further, you can add more information about the user themselves. As this app is made for individuals who have a hard time remembering to reach out to their friends, some statistics on how they have connected with friends across time could be encouraging. For example, how often has the user met their connection goals across friends? How many times have they connected with certain individuals since joining that app? The app only showcases information in the short term—most recently saved tokens, weekly goals...but it would be nice for users to feel like they're maintaining these connections over a longer period of time. This would allow users to realize the extent of the positive impact of using Ping—helping them maintain and strengthen important connections.

- Focus on friends not the task

Relating to H7 - Flexibility and Efficiency of Use , since all tasks on Ping are focused on reaching out to a specific individual, it makes sense to focus on grouping the different tasks *under* the individual friend, so we would structure the homescreen with most recent friends, showing the most recent interaction first, e.g. showing most recent either contacted or received moments and tokens. This structure is similar to how prioritization works on Snapchat messages, Instagram messages and Facebook messenger - it makes sense because then you can focus on being thoughtful around a person rather than around the separate tasks of creating a moment and sending a token which are actually means through which you can be thoughtful about a person.

- Aesthetic and simplicity of user experience

Violations surround lack of intentionality around colors and size of objects relative to others. It seems like green versus pink is used randomly, making it difficult for a user's brain to switch from thinking about 1) moments vs tokens vs goals, and 2) different types of moments. More intentional use of color will further increase efficiency in using the app and allow a user to more easily navigate between different app functionalities. Size of objects should also be the same within levels (e.g. two buttons in the same spot relative to their subheaders on the same page should be the same size) and most important objects should be largest on a page (e.g. friend profile picture on Your Friends page). In terms of mimicking things in the real world, there were times when we expected certain things to happen or pop up because of our experience with other apps. For example, when clicking on my profile in the bottom bar, we expected there to be a greater breadth of information about my activity on the app, rather

than more static information. When we saved the token, we expected to be taken to that saved token immediately. When a pop up appeared, we expected it to be up for enough time for us to read all of the displayed text. Greater attention to user experience and perhaps comparing your app to other popular apps (e.g., what happens when you click on Profile on Facebook, Instagram, Twitter, and how does that compare to when you click on Profile in Ping) can help make use of your app more intuitive and efficient.

- Distinguishing moments vs tokens

For new users who have not seen the design process of Ping, we think it is really important that the concept and difference between a moment and a token is fleshed out or provided. Increasing the documentation or making the descriptions of these tasks clearer would be very helpful to users. On the main page there could be an information icon that when pressed gives a description of the difference.

Furthermore, there were some functionality improvements to be made which we imagine will be ironed out for the high-fi, e.g. needed a save button on the profile screen or putting maximums on the number of tokens that could be sent.

Once again, we wanted to congratulate you on a great medium-fi prototype and hope that our extensive feedback will be useful to you for the high-fi. We can't wait to see the final product.

## **Keys**

### **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: 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.

#### **H13: 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.