# Heuristic Evaluation of EduCare

# 1. Problem/Prototype Description

EduCare by Team of Nate and Brenden is a healthcare learning APP designed to help its users (college-aged people) to learn about their health care plans and daily knowledges of healthcare systems, encourage those people engage in fun activities while gaining this information, using interesting techniques like Scavenger Hunt games, community groups, quiz assignments, networking and sharing with friends.

# 2. Violations Found

# 1 H5. Error Prevention / Severity: 1 / Found by: A, B

TaskLooking at Fun Facts and checking previous days.DescriptionThe text in the calendar page is not very easy to read and the dates are small<br/>and may be difficult to click intoRationaleOn a mobile screen, the texts can be even smaller, and not very clear for the<br/>users. Users may also find it difficult to click into a date, due to Fitz law.FixMaking the texts bigger by showing less months or even replacing the month<br/>view with a weekly view.

# 2 H1. Visibility of system status / Severity: 3 / Found by: A

TaskLooking at Fun Facts and checking previous days.

- **Description** The purpose of the calendar is not displayed on the calendar screen.
- **Rationale** When users are in the calendar, they do not know what will happen if they click one day. I think I will see more healthcare details or arrangements on that specific day, but when I tap, it gives me some fun facts. This is out of my expectation.
- **Fix** Adding some hints to the calendar page like "tap to see daily fun facts".

# 3 H1. Visibility of system status / Severity: 2 / Found by: A

TaskLooking at Fun Facts and checking previous days.

- **Description** The Fun Fact page does not show the system status.
- **Rationale** When I am in the fun fact page, I do not know that the displayed text is one "Fun fact". I initially think that this is like a to-do item or some daily arrangements, but after going back and forth many times, I begin to realize that the page is talking about some "Fun Facts".
- **Fix** Giving some title to the fun fact page like "Daily Fun Fact" or so on.

# 4 H2. Match between system and the real world / Severity: 0 / Found by: A

TaskLooking at Fun Facts and checking previous days.

# **Description** The daily fun fact seems to have no relationship to the specific day.

**Rationale** The daily fun facts need to be related to the calendar otherwise we do not need a calendar to view those telephone facts.

**Fix** Adding some relationship between the fun facts and some specific days for example mentioning some important days related to healthcare.

#### 5 H3. User control and freedom / Severity: 2 / Found by: A

- **Task** Looking at Fun Facts and checking previous days.
- **Description** Users cannot control the specific dates that are on the fun fact screen.
- **Rationale** We may want to go to the previous day or the next day directly in the fun fact screen instead of going back to the calendar.
- **Fix** Adding some "previous"/"next" buttons to the fun fact screens.

#### 6 H3. User control and freedom / Severity: 3 / Found by: A

- **Task** Looking at Fun Facts and checking previous days.
- **Description** Users cannot control months/years in the calendar.
- **Rationale** It seems that changing the years or months (longer than 4 months) is not possible with this interface.
- **Fix** Adding some buttons for the users to specify the years or months.

### 7 H3. User control and freedom / Severity: 1 / Found by: A

- TaskLooking at Fun Facts and checking previous days.
- **Description** Users cannot control how many days to view.
- **Rationale** When the screens are small, users may want to zoom in the calendar to have a weekly view or 3 day view.
- **Fix** Add some zooming functionalities to the calendar.

## 8 H4. Consistency and standards / Severity: 2 / Found by: A, C

TaskLooking at Fun Facts and checking previous days.

- **Description** The color of the calendar icon is different on different screens. Calendar button at bottom of screen leads to screen containing current month and past months while calendar button on fun fact card on home screen leads to card of current month
- **Rationale** On the home screen, the calendar has a red background, but on some other screens, the calendar icon has no background. This may make users think they are different icons. Users may be confused that two calendar icons lead to different Calendar views
- **Fix** Make some of these icons consistent (if they are really the same icons), or use consistent icon backgrounds.

#### 9 H4. Consistency and standards / Severity: 1 / Found by: A

TaskLooking at Fun Facts and checking previous days.

- **Description** The "back" icon on the home screen and each calendar screen have different looks.
- **Rationale** The "back" icon on the home screen has a blue background, but it has gray background or another cycle shape on the fun fact screens and the sharing screens.
- **Fix** Redesigning the "back" icons on some screens.

#### 10 H5. Error prevention / Severity: 3 / Found by: A, B

TaskLooking at Fun Facts and checking previous days.

Description	Icons of days are too small and cannot prevent mistaken taps.
Rationale	On some mobile phones, the button for each day can be very small, and the
Fix	current size of those icons are difficult to tap on a real mobile screen. Make the buttons for each day bigger or use some interface to reduce mistaken taps.

#### H6. Recognition rather than recall / Severity: 1 / Found by: A 11

Task	Participating in the Learning Module.
Description	The Scavenger Hunt has a map icon, which might be confused with a map.
Rationale	In general, the Scavenger Hunt is a game that is independent from the map
	functionality. Perhaps consider a better visual indicator?
Fix	What about a Gaming icon? like this:



#### H7. Flexibility and efficiency of use / Severity: 2 / Found by: A 12

Task Participating in the Learning Module.

Description Users need to type in the minutes or number of facts in the Hunt.

Rationale In most Apps users can control number inputs with scrollers instead of only having a typed input.

Fix Adding some scrollers to the number control in the map of the Scavenger Hunt.

#### 13 H9. Help users recognize and recover from errors / Severity: 3 / Found by: A

Participating in the Learning Module. Task

- **Description** It seems that when users input unacceptable numbers for minutes or tasks in the Scavenger Hunt, nothing can prevent errors.
- Rationale When users input illegal or wrong minutes or tasks in the Scavenger Hunt, users can not see what range of data is recommended or legal.
- Fix Perhaps adding hints to indicate recommended or legal range of input data, or automatically clip user input and also let users know.

#### 14 H10. Help and documentation / Severity: 3 / Found by: A, B, C, D

Task Participating in the Learning Module.

There is no help or documentation for the Scavenger Hunt. Description

Rationale If the users are unfamiliar with the rules of the game or what is expected for their achievements in this game, they will find the game confusing.

Adding some help pages or documentations to teach users how to use the Fix Scavenger Hunt?

#### 15 H1. Visibility of system status / Severity: 1 / Found by: A

Participating in the Learning Module. Task

- Description Users do not know how many facts remain, before they start the Scavenger Hunt.
- Rationale Before I start the game, or when I am on the home screen, I will want to know

how many facts still remain for me to collect, otherwise I might have less motivation to open the game.

**Fix** Adding some tags or hints on the home screen to indicate the number of remaining facts to collect.

### 16 H3. User control and freedom / Severity: 3 / Found by: A, B, C

**Task** Participating in the Learning Module.

- **Description** Users cannot go back from Scavenger Hunt Clues to the maps or the home screen without losing progress and data.
- **Rationale** It is unreasonable that once users come back to a previous screen, they immediately lose all gaming data. This can be avoided at the design level.
- **Fix** Allowing users to preserve gaming data when they come back to the home screen or the map screen from the Clue screen. Consider removing the "Are You Sure You Want To Exit" box, and simply save and load data when users shift screens.

### 17 H12. Value alignment and inclusion / Severity: 4 / Found by: A, D

**Task** Participating in the Learning Module.

- **Description** "Health and Wellbeing": The inclusive problem between physical disability and the Scavenger Hunt design.
- **Rationale** Some people may have some physical disabilities to participate in the Scavenger Hunt, and some other people with vision inefficiency have difficulties to capture the photos with very specific requirements.
- **Fix** Considering some alternatives of the Scavenger Hunt and providing more options to finish the Hunt achievements.

#### 18 H4. Consistency and standards / Severity: 1 / Found by: A

**Task**Participating in the Learning Module.

- **Description** The title design of the fun facts are not consistent.
- Rationale When users find a fun fact in the Scavenger Hunt game, the fun fact page has a title saying that this sentence is a fun fact. Nevertheless, when users check a fun fact directly in the calendar, the fun fact screens do not have any titles.
- **Fix** Make the title design of all fun facts consistent.

# 19 H5. Error prevention / Severity: 2 / Found by: A

TaskSharing and teaching fun facts to friends.DescriptionAfter clicking "send today's" the x button is next to the title "send to nate"RationaleThe User may be confused by the x button next to the title send to nate as both<br/>when clicked do not send the fun fact to nateFixReorientate the title or provide label next to the x button to provide distinctness

# 20 H4. Consistency and Standards / Severity: 1 / Found by: A, C

- TaskSharing and teaching fun facts to friends.
- **Description** Fun fact that is shared is provided in a hyperlink
- **Rationale** The shared fun fact is the only occurrence of a hyperlink throughout the app making it inconsistent with the rest of the app design. The link also provides an

additional barrier from viewing the fun fact that could deter the user from learning.

**Fix** Replacing the text links with some icons. Or sending fun fact as an image

### 21 H8. Aesthetic and minimalist design / Severity: 0 / Found by: A

- TaskSharing and teaching fun facts to friends.
- **Description** The "Messages" icon on the home screen does not look like a message.
- **Rationale** The message icon is currently an arrow, which is not a good representation of the semantic of messages.
- **Fix** Consider a better icon for the message? Perhaps:



← A better icon for the Message button

# 22 H5. Error Prevention / Severity: 3 / Found by: A, C

Task	Sharing and teaching fun facts to friends.
Description	If the user sends a mistaken message, they cannot edit or delete it.
Rationale	When users send mistaken messages, they may want to edit it or remove it.
	Especially when they send some wrong fun facts to unsuitable persons.
Fix	Adding some editing or deleting functionalities to the message screen.

## 23 H4. Consistency and standards / Severity: 0 / Found by: A, B

**Task**Sharing and teaching fun facts to friends.

- **Description** To give fun facts to others, some screens use the word "Send" while some others use the word "Share".
- **Rationale** The word "Send" and "Share" have some minor differences like whether or not to involve text links or other APPs, but in the current interface, they are all the same. Then it becomes unnecessary to use the two different words.
- **Fix** Replacing all the word "Send" to "Share", or replacing all "Share" to "Send", or keeping both but introducing some different functionality between them.

# 24 H3. User control and freedom / Severity: 1 / Found by: A

TaskSharing and teaching fun facts to friends.

- **Description** Users can not shift the fun facts in the fun fact viewing screen.
- **Rationale** If there are multiple fun facts in the same thread of messages, the user may want to swipe or shift in between multiple fun facts just in the fun fact viewing pages.
- **Fix** Adding some "previous" and "next" to the viewing screen if the users have multiple items in one message thread.

# 25 H7. Flexibility and Efficiency of Use / Severity: 2 / Found by: A

TaskSharing and teaching fun facts to friends.

- **Description** Users can not send fun facts in batches.
- **Rationale** Just imagine that I have collected a lot of fun facts and I want to share all of these with my best friend. I cannot send multiple facts together and I need to

operate one-by-one. That is very time-consuming.

**Fix** Adding a page to the users for them to share multiple fun facts together, perhaps in a batch.

#### 26. H4 Consistency and Standards/ Severity: 2 / Found by: B

Task: Looking at Fun Facts and Checking Previous DaysDescription: The back button is quite smallRationale: May cause errors and inaccuracies in button presses as per Fitts' lawFix: Make the back button bigger

#### 27. H4 Consistency and Standards/ Severity: 2 / Found by: B

Task: Looking at Fun Facts and Checking previous days Description: The icons on each part of the landing page are different sizes, eg the ones on the top bar, those on the popup, the icons in the body page and those on the bottom navbar Rationale: Users may be confused by what the different sizes mean/represent Fix: Use a standard icon

### 28. H8 Aesthetic and Minimal Design / Severity: 1 / Found by: B

Task: Scavenger Hunt
Description: The pop-up has a large amount of text
Rationale: The large amount of text may distract the users/ is to lengthy and potentially off-putting
Fix: Describe the quiz in a more concise way

# 29. H7 Flexibility and Efficiency of Use / Severity: 4 / Found by: B

Task: Scavenger Hunt
Description: The interface asks for camera access permissions for each individual picture being taken
Rationale: Approving camera permissions is an extra time-consuming task that can cause user frustration
Fix: Only ask for the permissions once and save the information

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

**Task:** Healthcare quiz

**Description:** When completing a scavenger hunt task, the button to proceed says "correct" **Rationale:** This may confuse users on whether they are choosing their own correct answer **Fix:** Rename the button to the next action, eg "Next Task"

## 31. H4 Consistency and Standards / Severity: 1 / Found by: B Task: Scavenger Hunt

Description: The "Let's Go" button used a color (yellow) that hasn't appeared in the rest of the prior screens
Rationale: Users may be confused by what the new color indicates
Fix: Use a consistent primary color (burgundy/red)

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

Task: Scavenger Hunt Description: The "Let's Go" button text is inconsistent with the rest of the app Rationale: Users may be confused/distracted by the change of font Fix: Maintain a consistent font

# 33. H7 Flexibility and Efficiency of Use / Severity: 4 / Found by: B

Task: Looking at fun facts and checking the previous days
Description: Sharing a fact with a friend takes the user to a chat feature and doesn't have an option to simply share the fact without going into messages
Rationale: This adds an extra step in the sharing process and may cause user fatigue/irritation
Fix: Add an option to share the fact without going into messages, ie have those two features be independent of each other

# 34. H11 Accessible design / Severity: 3 / Found by: B

**Task:** Messaging, sharing and teaching fun facts to friends **Description:** Little contrast between bottom nav bar icons color and the nav bar's background color

**Rationale:** May cause strain and errors for users who can't see that contrast very well **Fix:** Change either the icon colors or the background colors, or modify the saturation of either

# 35. H5 error prevention / Severity: 3 / Found by: B

Task: Messaging, Sharing and teaching fun facts to friends
Description: The message/text box in the chat feature is too small
Rationale: The small size may cause errors when the user tries to click/ select the textbox
Fix: Increase the textbox size

# 36. H2 Match between System and real world/ Severity: 3 / Found by: B

Task: Messaging, Sharing and Teaching fun facts to friends
Description: The "send today's" button text isn't clear
Rationale: Users may be confused by what the button's functionality is
Fix: Modify the text to clearly indicate the button's functionality, eg share today's fact

# 37. H5 Error Prevention / Severity: 3 / Found by: B

**Task:** Looking at fun facts and checking previous days **Description:** The share/send button/icon on the fun fact window on the landing page is too small

Rationale: Can cause errors in selection due to Fitt's law

Fix: Increase the icon/button size

#### 38. H5 Error Prevention / Severity: 3 / Found by: B

Task: Messaging friends

**Description:** The fire icon with badge notifications is unintuitive/ ie I couldn't figure out what it represented

**Rationale:** The emoji can either represent streaks or the current number of notifications and this would confuse the users

**Fix:** Either label the icon or if it represents the number of unread messages, we can use the badge notifications on the message icon in the bottom navbar to replace this icon

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

Task: Sharing, teaching and messaging friends

**Description:** The fire icon lacks a border and padding , and has a different color from the icons next to it

**Rationale:** Can cause confusion on its functionality. This lack of a border also makes it seem like it is not a button

Fix: Add a border to the icon

### 40. H8 Aesthetic and Minimal Design / Severity: 2 / Found by: B

Task: Looking at fun facts and checking previous days
Description: On the landing page, the header text "Today, November 2nd" and "Learn" lack bottom padding from their corresponding actionable items
Rationale: This lack of padding congests the design due to a lack of whitespace
Fix: Add more whitespace after the headers

#### 41. H6 Recognition rather than recall / Severity: 3 / Found by: B

Task: Sharing, teaching and Messaging friends

**Description:** The compose a new message feature does not make suggestions on which friend(s) you may want to send a message to

**Rationale:** This means the user will have to remember a friend's specific username, which may not necessarily be their official names and this would cause difficulties in messaging **Fix:** Have a drop down recommendation of friends a user may want to message

# 42. H2 Match between system and the real world / Severity: 2 / Found by: C, D

Task: Looking at Fun Facts and Checking previous days

**Description:** Calendar months are ordered with most recent month at the top and previous months below

**Rationale:** Users may be confused by the non-chronological ordering of the calendar **Fix:** Order Calendar chronologically where the most recent month is at the bottom of the screen and users have to scroll up to view past months. Or order Calendar where there are left and right buttons where users can click left to view previous month and right to view next month

# 43. H4 Consistency and standards / Severity: 3 / Found by: C

Task: Looking at Fun Facts and Checking previous days

**Description:** Calendar icon on the fun fact card when the fun fact is viewed from the calendar screen returns the user to the home screen. The home button from the fun fact card screen also returns the user to the home screen. The same calendar icon on the home screen brings the user to the calendar screen.

**Rationale:** Users may be confused that the same calendar icon performs different functions and that two different buttons on the same screen lead to the same screen.

**Fix:** Remove Calendar button from fun fact card when the fun fact is viewed from the calendar screen

# 44. H4 Consistency and standards / Severity: 2 / Found by: C

**Tasks:** Looking at Fun Facts and Checking previous days; Participating in the Learning Module; Messaging, Sharing, and Teaching fun facts to friends

**Description:** X button in top left corner after share button is clicked and when share to friends is visible closes share to friends popup

**Rationale:** Users may be confused that both X buttons on share to friends screen returns the user to the same screen. The X on the top left corner implies that the entire share screen will go away.

**Fix:** Have the X button on the top left corner close both share to friends popup and share and bookmark screen.

# 45. H6 Recognition rather than recall / Severity: 3 / Found by: C

Task: Participating in the learning Module

Description: Fun Fact after location is found disappears

Rationale: Users may forget the fun fact they learned at some location

**Fix:** Once a location is visited, have the grayed out location card be 'flippable' to view the fun fact from that location, be able to add that fact to your bookmarks

# 46. H4 Consistency and standards / Severity: 2 / Found by: C

**Task:** Messaging, Sharing, and Teaching fun facts to friends **Description:** On new message screen, both the back arrow and cancel lead back to the same previous screen

**Rationale:** Users may be confused that two buttons perform the same action **Fix:** Remove either back or cancel button

# 47. H6 Recognition rather than recall / Severity: 1 / Found by: C

Task: Messaging, Sharing, and Teaching fun facts to friends
Description: Fun Fact that was sent by friend can be sent back to friend
Rationale: Users may forget who the fun fact was sent by and sending the fun fact received by a friend to a friend is redundant
Fix: Remove ability to send a friend fun facts they have sent you

#### 48. H1 Visibility of System Status / Severity: 2 / Found by: C

Task: Looking at Fun Facts and Checking previous days; Participating in the Learning Module; Messaging, Sharing, and Teaching fun facts to friends
Description: No confirmation of sent message after fun fact is shared from fun fact card screen
Rationale: Users may be confused if their fun fact was shared or not
Fix: Add confirmation screen to show that message was sent

#### 49. H3 User Control and Freedom / Severity: 1 / Found by: C

Task: Messaging, Sharing, and Teaching fun facts to friends Description: User cannot delete message conversation from messages Rationale: Users may want to delete conversations Fix: Add ability to remove conversations

#### 50. H5 Error Prevention / Severity: 3 / Found by: C

Task: Messaging, Sharing, and Teaching fun facts to friends.
Description: No way to remove friend request.
Rationale: Users may accidentally send a friend request or change their mind about a friend.
Fix: Provide a way to remove Friend Requests.

### 51. H4 Consistency and Standards / Severity: 2 / Found by: C, D

**Task:** Messaging, Sharing, and Teaching fun facts to friends **Description:** Back button from a conversation always goes to all messages screen rather than prior screen

**Rationale**: User may get to conversation from multiple screens **Fix:** Have the back button go to prior screen in conversation

#### 52. H8 Aesthetic and Minimalist Design / Severity: 1 / Found by: C

Tasks: Messaging, Sharing, and Teaching fun facts to friendsDescription: Text bubbles are red / too much saturated, high-contrast colorsRationale: The red scheme provides a sharp contrast to the blue from the rest of the app and the color is associated with negative reactions. Users may have negative reactions when a message is sent

Fix: Change color of messages

#### 53. H10 Help and Documentation / Severity: 3 / Found by: D

Task: Scavenger hunt

**Description:** The instructions for the scavenger hunt only appear once the "Let's Go" button is clicked.

**Rationale:** Users may be confused by how the scavenger hunt works, especially when figuring out how to set the distance and number of fact parameters.

**Fix:** Provide instructions on the default scavenger hunt screen, not just when the button is clicked.

## 54. H8 Aesthetic and Minimalist Design / Severity: 2 / Found by: D

Task: Check user network

**Description:** The interface displays the same user multiple times.

**Rationale:** Users may be confused by having the same user present multiple times for the same task.

**Fix:** Only display unique users and don't repeat ones already displayed, even if the screen isn't filled.

### 55. H8 Aesthetic and Minimalist Design / Severity: 2 / Found by: D

Task: Send friend request

**Description:** The interface displays the same user multiple times.

**Rationale:** Users may be confused by having the same user present multiple times for the same task.

**Fix:** Only display unique users and don't repeat ones already displayed, even if the screen isn't filled.

### 56. H11 Accessible Design / Severity: 3 / Found by: D

**Task:** General app use; sending a message to another user

**Description:** The interface lacks the ability to type a message without having to use the keyboard, and also lacks text-based alternatives for comprehending information on the screen.

**Rationale:** Users with low vision or users who have trouble typing with their hands may not be able to use the app.

Fix: Enable text-to-speech functionality for general app use and enable speech-to-text

# 57. H3 User Control and Freedom / Severity: 3 / Found by: D

#### Task: Take the quiz

**Description:** The x button to back out of taking the EduCare quiz after clicking the quiz button on the home page takes the user to the quiz anyway.

**Rationale:** Users are unable to avoid taking the quiz if they accidentally click the quiz button.

**Fix:** Have the x button return the user to the home page instead of having the same functionality as the "I'm Ready" button.

# 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		1	2	1	1	5
H2: Match Sys & World	1		1	1		3
H3: User Control		4	1	2		7
H4: Consistency & Standards	1	8	4	1		14
H5: Error Prevention		1	1	6		8
H6: Recognition not Recall		2		2		4
H7: Efficiency of Use			2		2	4
H8: Minimalist Design	1	2	3			6
H9: Help Users with Errors				1		1
H10: Help & Documentation				2		2
H11: Accessible				2		2
H12: Value Alignment & Inclusion					1	1
Total Violations by Severity	3	18	14	18	4	57

*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 A	Evaluator B	Evaluator C	Evaluator D
Evaluator				
Sev. 0	3/3 = 100.00%	1/3= 33.33%	0.00%	0.00%
Ex: Eval A count / total				
sevs 0 in table #3				
Sev. 1	8/18 = 44.44%	5/18 = 27.78%	4/18 = 22.22%	1/18 = 5.56%
Ex: Eval A count / total				
sevs 1 in table #3				
Sev. 2	6/14 = 42.86%	3/14 = 21.43%	6/14 = 42.86 %	4/14 = 28.57%
Ex: Eval A count / total				
sevs 2 in table #3				
Sev. 3	7/18 = 38.89%	9/18 = 50.00%	6/18 = 33.33%	4/18 = 22.22%
Ex: Eval A count / total				
sevs 3 in table #3				
Sev. 4	1/4 = 25.00%	3/4 = 75.00%	0.00%	1/4 = 25.00%
Ex: Eval A count / total				
sevs 4 in table #3				
Total (sevs. 3 & 4)	8/22 = 36.36%	12/22 = 54.54%	6/22 = 27.27%	5/22 = 22.73%
Ex: Eval A = sum(sev 3:				
sev 4 counts) / sum(sev				
3: sev 4 in table #3)				
Total	25/57 = 43.86%	21/57 = 36.84%	16/57 = 28.07%	10/57 = 17.54%
(all severity levels)				
Ex: Eval A total sev				
count / total sevs (green				
cell) in table #3				

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

# **5. Summary Recommendations**

The Medium Fidelity Prototype looks amazing! Your aesthetic and design are outstanding, especially with this minimalist style of user interface. This prototype does the three tasks with remarkable quality, and the design pattern clearly reflects well the team's values, such as the community building concept facilitated by the design of message and sharing functionalities. This is an awesome starting point towards your eventual product! With regard to more detailed improvements, we may also consider revising the design of some buttons, choices of some icons, and adding more interactions for the users to edit/delete messages as well as sending multiple "fun facts" in a batch. Some of the key design issues are around consistency and sticking to a predefined design system in order to maintain a coherent feel and look on the app. The app would also benefit from an increase in user status updates, and notifications around completed incorrect and missing tasks. The bookmarked feature was a nice touch to save one's favorite fun facts, but it's design lacked color, and ordering and seemed more like a blank list, it would be nice to have that spruced up in a way. The idea to use a color gradient in the bottom learn icons is a valid design choice, though might not fit the overall clean and minimalist theme that the app has going on. I also recommend using more white space around titles and also using things like shadows or underlining them in order to properly demarcate where a title begins and ends. Many of the icons performing different tasks were either very similar or identical. Much of this confusion could be resolved with the introduction of different icons or removal of redundant buttons. While I think your overall design is pretty impressive, paying attention to these details is indispensable for achieving a really perfect product. Finally, I noticed that when clicking on the calendar button from the home page, then clicking back to return, the fun fact on the homepage is set to the calendar view even if it wasn't set to that previously. I would recommend either keeping it as the view that was set before the calendar was clicked, or defaulting the view to be the fun fact view.

We also have some comments beyond the Heuristic violations that could be constructive for improving the product. First, perhaps we might consider adding some incentives to encourage users to share their healthcare knowledge more often, such as adding some rewards, since healthcare is not a very frequent topic in people's daily conversations. Additionally, as the app is geared towards learning and remembering new healthcare facts, I would enjoy more ways to review old facts rather than just viewing prior daily ones. Especially in the scavenger hunt task, I would appreciate ways to view the fun facts associated with a monument after having been there. The app does not give the user many opportunities to cause errors that might warrant an error message, so it is difficult to ascertain how it might do better in this regard. The major fault that was present in the interface was its tendency to repeat the same friend user on certain screens to fill space. It was unclear what the purpose of this was, and was generally confusing. Something else I noticed was that multiple buttons would lead to the same screen. While this level of freedom is nice to have as a user, it is redundant due to EduCare not having that many screens to navigate between anyway. Finally, the interface could also improve its accessibility for differently-abled individuals: is the Scavenger Hunt really the best way for people to collect and learn those healthcare knowledge? One may also think that scavenger hunts have high requirements for physical factors such as physical mobility and vision of the participants, which in turn are not suitable for medical healthcare APPs, since the users of an inclusive medical healthcare APPs might have diverse body conditions; scavenger hunts may unnecessarily penalize these factors.

Should we have some alternative interfaces for diverse groups of users?

Again, thank you for the extremely impressive Medium Fidelity Prototype! I cannot wait to see your final product come to life!

# 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.