

Group 12:

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Prototype:

Here is the working Figma prototype link:-

<https://www.figma.com/proto/KtWbNMsRYI7KdyhJJFSjzT/Prototype?node-id=3%3A4&viewport=228%2C75%2C0.4699999988079071&scaling=scale-down&page-id=0%3A1>

Video Link of the cognitive walkthrough:

<https://drive.google.com/file/d/1dKXUv4dsyePPzzJKGWimrYnaSKZywOmw/view?usp=sharing>

Early Evaluation Report

1. Technique Used:

Cognitive Walkthrough

2. Prototype:

Medium Fidelity and Vertical Prototype

3. Task Description:

Start the tour and explore the first organ and go to the second organ.

4. Interface Level Tasks:

- 4.1. Start Virtual Tour
- 4.2. Choose between VR and touch(in this use case choose touch)
- 4.3. Open menu for mouth description
- 4.4. Select show working option and see the working
- 4.5. Go back to the menu
- 4.6. Select the connected organs option and see connected organs
- 4.7. Go back to the menu
- 4.8. Select the connected glands option and see connected glands
- 4.9. Go back to the menu
- 4.10. Select the nutrients option and see nutrients
- 4.11. Go back to the menu
- 4.12. Select the diseases option and see diseases

- 4.13. Go back to the menu
- 4.14. Proceed to the next organ
- 4.15. Go back to the previous organ

5. Usability issues:

- 5.1. Are you able to start the tour easily?
- 5.2. Did you find it difficult to locate the VR or touch option?
- 5.3. Are you able to choose between VR and touch easily?
- 5.4. Is the Interaction required to open the mouth description menu apparent?
- 5.5. Did you find it difficult to locate the show working option in the menu?
- 5.6. Is the Interaction required to change the screen from the mouth description menu to the working view apparent?
- 5.7. Did you try to go back to the mouth description menu and was the mechanism to go back clearly visible?
- 5.8. Did you find it difficult to locate the connected organs option in the menu?
- 5.9. Were you able to find the connected organs to the mouth easily?
- 5.10. Did you try to go back to the mouth description menu and was the mechanism to go back clearly visible?
- 5.11. Did you find it difficult to locate the connected glands option in the menu?
- 5.12. Were you able to find the connected glands to the mouth easily?
- 5.13. Did you try to go back to the mouth description menu and was the mechanism to go back clearly visible?
- 5.14. Did you find it difficult to locate the nutrients option in the menu?
- 5.15. Were you able to find the nutrients in the mouth easily?
- 5.16. Did you try to go back to the mouth description menu and was the mechanism to go back clearly visible?
- 5.17. Did you find it difficult to locate the diseases option in the menu?
- 5.18. Were you able to find the diseases in the mouth easily?
- 5.19. Did you try to go back to the mouth description menu and was the mechanism to go back clearly visible?
- 5.20. Did you try to close the menu and was the mechanism to go close the menu clearly visible?
- 5.21. Is the Interaction required to change the screen from the mouth view to the oesophagus(next organ in the tour) view apparent to the user?
- 5.22. Did you try to go back to the mouth view and was the mechanism to go back the mouth view clearly visible?

6. Feedbacks:

6.1. Feedback 1:

- 6.1.1. Yes .It can be started very easily with the help of “START TOUR” button.Also the designs for buttons and digestive system are very good.Also liked the exit button provided on the first screen.

- 6.1.2. No .VR and TOUCH options can be easily located after pressing START TOUR button.Also want to appreciate to put vr icon and touch icon in the interface.
- 6.1.3. Yes. Can be choosed easily, but the buttons are very small for small resolution phones.It would have been better,if the buttons were little big.
- 6.1.4. At first it was not visible, but can be located after seeing the down arrow below written “organ name”.Should work on this for better user experience.
- 6.1.5. No.It can be located easily.Font size should be larger so that it can be viewed easily even in small resolution phones.
- 6.1.6. Yes.Selecting “Show Working” option from the menu for watching working of the organ is natural.There was not any problem for choosing this option.
- 6.1.7. Yes, Using “BACK” button in bottom left corner i could easily go back to the mouth description.Want to appreciate the location of back button as it is placed at right place so that user can easily access for going back.
- 6.1.8. No. It was clearly visible same as the “Show Working” option.Again want to say to work on font size for better user experience.
- 6.1.9. Yes, It can be seen easily after selecting “Connected Organ” option from the menu.Also it was a nice idea to put cross icon below the list of connected organs to go back quickly.
- 6.1.10. Yes, It was easy similar to the case of “Show Working” option.
- 6.1.11. No, “Connected Glands” is seen easily below connected organ option.Since interface is similar to the other options,Hence it looks very uniform.
- 6.1.12. Yes, Similar to other options, it was also easily visible.
- 6.1.13. Yes, using cross icon below the glands name,i could easily go back to the mouth description.
- 6.1.14. No, It was also located very easily below “Connected Organs” option.
- 6.1.15. Yes, Just by clicking the nutrients option ,i was able to see the nutrients of organ easily.
- 6.1.16. Yes, Using cross button , it was a very easy task to go back to the mouth description menu.
- 6.1.17. No. It could also be located easily below nutrients option.
- 6.1.18. Yes, by pressing “Disease” option from the menu, same as other options.
- 6.1.19. Yes, again by using cross icon given below diseses list.
- 6.1.20. Yes .Cross icon is also available to close menu .
- 6.1.21. Yes ,it was easily located using connected organ option.But should work on the options name,so that user can easily understand how to complete whole tour.Because it cannot be understood by “Connected organ” option.

- 6.1.22. Yes, Using back button i could easily go back to the mouth view from its connected organ's view.

6.2. Feedback 2:

- 6.2.1. Yes, there is a button "Start Tour" for that purpose. It is in the centre of the screen easily visible and with an icon too.
- 6.2.2. No, it was not difficult they were also in the centre of the screen, appropriate in size. I liked the consistency in the buttons.
- 6.2.3. Yes, it was fairly easy to choose between the 2 options both were changing screen to the respective VR and touch view for the tour.
- 6.2.4. Yes, it's apparent but I think the size of the down arrow must have been more so that it would have been more apparent and easy to click for lower-resolution phones.
- 6.2.5. No, the Show working option was the first option of menu and with fairly visible colour contrast easy to find.
- 6.2.6. Yes, the interaction required to go to show working view was to touch the show working option and it was easy to identify.
- 6.2.7. Yes, I tried to go back to the mouth description menu and the mechanism was clearly visible. The left bottom placement of the back button makes it a view and feel that it takes us back to the previous screen.
- 6.2.8. No, the Connected Organs option was the second option of menu and with fairly visible colour contrast easy to find.
- 6.2.9. Yes, the interaction required to display connected organs was to touch the connected organ option and it was easy to identify.
- 6.2.10. Yes, it was at the bottom of the list and having the shape of the cross icon.
- 6.2.11. No, the Connected Glands option was the third option of the menu and with fairly visible colour contrast easy to find.
- 6.2.12. Yes, the interaction required to display connected glands was to touch the connected glands option and it was easy to identify.
- 6.2.13. Yes, it was at the bottom of the list and having the shape of the cross icon.
- 6.2.14. No, the Nutrients option was the fourth option of the menu and with fairly visible colour contrast easy to find.
- 6.2.15. Yes, the interaction required to display Nutrients was to touch the Nutrients option and it was easy to identify.
- 6.2.16. Yes, it was at the bottom of the list and having the shape of the cross icon.
- 6.2.17. No, the Diseases option was the fifth option of the menu and with fairly visible colour contrast easy to find.
- 6.2.18. Yes, the interaction required to display diseases was to touch the diseases option in menu and it was easy to identify.
- 6.2.19. Yes, it was at the bottom of the list and having the shape of the cross icon.

- 6.2.20. Yes, it was at the bottom of the menu and having the shape of the cross icon which made it obvious that it was to close something and it did close the menu.
- 6.2.21. Yes, it was at the bottom of the page and having the shape of downward arrow which made it obvious that it was to go deeper or downward in the tour and yes it changed the screen to oesophagus view.
- 6.2.22. Yes, I tried to go back to the mouth description menu and the mechanism was clearly visible. The left bottom placement of the back button makes it a view and feel that it takes us back to the previous screen.

6.3. Feedback 3:

- 6.3.1. Yes, using the “Start Tour” button it is easy to start the tour. The positioning of the button is in centre and it is easy to click at the first instant.
- 6.3.2. No, they were not difficult to locate. The positioning is Centre and for both the options, there is a clear distinction that is made on the screen. The icons only make it more convenient.
- 6.3.3. Yes, it was easy to choose between the two to navigate to respective views because of clear demarcation of buttons in the centre.
- 6.3.4. It was not apparent in the beginning to me that clicking the down arrow would give me the organ description. For better user experience, some other way might be explored.
- 6.3.5. No, the Show working option was the first option after clicking the downward arrow. Colour contrast was nice and font type could be changed for better user readability.
- 6.3.6. Yes, the interaction was easy. All I had to do was touch the “Show working” option which was identifiable.
- 6.3.7. Yes. The positioning of back button in bottom left for reverting back to previous screen; was very convenient. The icon for back button made the button identifiable without even looking at the text.
- 6.3.8. No, there was no difficulty in locating the Connected Organs option. Colour contrast of the menu is good, there can be some improvements in font size and font type though.
- 6.3.9. Yes, the interaction was easy. All I had to do was touch the “Show connected organs” option which was identifiable.
- 6.3.10. Yes. The positioning of back button in bottom left for reverting back to previous screen; was very convenient. The icon for back button made the button identifiable without even looking at the text.

- 6.3.11. No, there was no difficulty in locating the Connected Organs option (third in menu). Colour contrast of the menu is good, there can be some improvements in font size and font type though.
- 6.3.12. Yes, the interaction was easy. All I had to do was touch the “Show connected glands” option which was identifiable.
- 6.3.13. Yes. The positioning of back button in bottom left for reverting back to previous screen; was very convenient. The icon for back button made the button identifiable without even looking at the text.
- 6.3.14. No, there was no difficulty in locating the Show nutrients option (fourth in menu). Colour contrast of the menu is good, there can be some improvements in font size and font type though.
- 6.3.15. Yes, they were clearly visible on clicking the option.
- 6.3.16. Yes. The positioning of back button in bottom left for reverting back to previous screen; was very convenient. The icon for back button made the button identifiable without even looking at the text.
- 6.3.17. No, there was no difficulty in locating the Show diseases option (fourth in menu). Colour contrast of the menu is good, there can be some improvements in font size and font type though.
- 6.3.18. Yes, they were clearly visible on clicking the option.
- 6.3.19. Yes. The positioning of back button in bottom left for reverting back to previous screen; was very convenient. The icon for back button made the button identifiable without even looking at the text.
- 6.3.20. Yes, the Cross icon was convenient to close the menu
- 6.3.21. Yes it is apparent. The dropdown icon in the below seemed like a navigation button to move from one organ to other. If button can be given some text label, it would be appreciated from user experience.
- 6.3.22. Yes. The positioning of back button in bottom left for reverting back to previous screen; was very convenient. The icon for back button made the button identifiable without even looking at the text.

6.4. Feedback 4:

- 6.4.1. Yes, a button called "Start Tour" is available for that reason. It's right in the middle of the page, easily recognisable, and it even has an icon.
- 6.4.2. No, it wasn't complicated because they were both in the centre of the screen and the right height. I loved how the buttons were all the same colour.
- 6.4.3. Yes, it was relatively simple to select between the two choices, all of which included turning the screen to the respective VR and touch view for the tour.

- 6.4.4. Yes, it's obvious, but I believe the size of the down arrow should have been larger so that it was more visible and easier to select on lower-resolution screens.
- 6.4.5. No, the Show working choice was the first option on the menu, and it was easy to find due to the reasonably visible colour contrast.
- 6.4.6. Yes, the interaction needed to access the show working view was to tap the show working choice, which was simple to locate.
- 6.4.7. Yes, I returned to the mouth definition menu, and the process was clearly apparent. The back button's location on the left bottom creates the impression that it returns us to the previous screen.
- 6.4.8. No, the Connected Organs option was the second option on the menu, and it was easy to find due to the reasonably visible colour contrast.
- 6.4.9. Yes, the interaction needed to view connected organs was to touch the connected organ alternative, which was simple to recognise.
- 6.4.10. Yes, it was at the bottom of the list and was shaped like a cross.
- 6.4.11. No, the Connected Glands option was the third option on the menu, and it was easy to find due to the reasonably visible colour contrast.
- 6.4.12. Yes, the interaction needed to show connected glands was to tap the connected glands alternative, which was simple to recognise.
- 6.4.13. Yes, it was at the bottom of the list and was shaped like a cross.
- 6.4.14. No, the Nutrients option was the fourth option on the menu, and it was easy to find due to the reasonably visible colour contrast.
- 6.4.15. Yes, the interaction needed to show Nutrients was to tap the Nutrients choice, which was simple to recognise.
- 6.4.16. Yes, it was at the bottom of the list and was shaped like a cross.
- 6.4.17. No, the Diseases alternative was the fifth option on the menu, and it was easy to find due to the reasonably visible colour contrast.
- 6.4.18. Yes, the only intervention needed to view diseases was to touch the diseases alternative in the menu, which was simple to find.
- 6.4.19. Yes, it was at the bottom of the list and was shaped like a cross.
- 6.4.20. Yes, it was at the bottom of the menu and had the appearance of a cross symbol, indicating that it was to close something, and it did also close the menu.
- 6.4.21. Yes, it was at the bottom of the page and had the form of a downward arrow, indicating that it was to go deeper or downward in the tour, and yes, it switched the screen to oesophagus view.
- 6.4.22. Yes, when I returned to the mouth definition menu, the process was clearly apparent. The back button's location on the left bottom of the screen gives the impression that it returns us to the previous screen.

7. Feedback Analysis:

Since reviewing all of the feedback, we've distilled it down to the following points:

- 7.1. Navigation: The navigation property is extremely simple to use. Users are able to distinguish between the various outcomes of various control acts. The user is aware of the sequence of actions required to complete a specific mission. There are forwards and backward buttons in each screen also helpful icons that help the user to navigate.
- 7.2. Consistency: The majority of users thought the device was intact during the process. The colour scheme, use of various symbols, and control behaviours are all understandable. Most of the buttons and options have colour consistency and also design consistency which helps the user to get used to the system.
- 7.3. Efficiency of use: Users are capable of completing the tasks in a timely manner. The framework provides a quick and easy way for the user to achieve his or her objective. For example: if the user does not want to learn about diseases in an organ he/she doesn't have to open the option and skip through.
- 7.4. Overall Aesthetics: The system's aesthetics are user-friendly and easy to understand, according to the majority of users. The use of dropdowns, buttons, and highlighted text allows users to more easily absorb the information provided by the system. Although the dropdown organ description menu icon was quite small as pointed out by feedback 1 and should be difficult for a user to find it.
- 7.5. Recognizable procedures: When moving to a new screen, the system is designed so that the user does not have to remember the data presented on the previous screen. The majority of users felt in command of the system and that they could easily understand all of the figures, data, and control actions presented to them.

8. Broader Usability Issues

- 8.1. Will the user see the down arrow for the organ description menu?
- 8.2. Will the user select the next organ button instead of the menu button?
- 8.3. Will the user see that the cross button closes the menu?
- 8.4. What happens if the virtual environment does not load?
- 8.5. What happens if the show working video does not load?
- 8.6. Will the user understands that the nutrients shown are digested by the organ not needed?
- 8.7. How will a student acquainted with books for learning the digestive system react to this system?