

Cognitive Walkthrough

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Video Demonstration of Prototype:

<https://www.youtube.com/watch?v=eNlmnjuFmts>

It is a usability inspection Method for expert evaluation of the prototype. A small team walks through a typical task in the mindset of a novice user and produces a success or failure story at each step along the correct path. The purpose of the cognitive walkthrough is to focus on the user's ability to learn and understand the software system either as a new user or an infrequent user.

This document contains the cognitive walkthrough for our note taking application - "**Notica**". We have selected some representative tasks and described steps to perform these tasks.

Requirements:

1. A medium-fidelity and vertical prototype
2. 3 member team: Sudesh Chaudhary, Aditya Patil and Kushal Sangwan.

The evaluators will mimic exploratory learning behaviour to evaluate the prototype.

Human exploratory learning: Rather than reading manual or attend course, users often prefer to learn new system by "trial-and-error"

1. Starts with rough idea of the task to be accomplished
2. Explore interface and select the most appropriate action
3. Monitor interface reactions
4. Determine what action to take next

After the evaluators have given their responses, we would evaluate the successful steps, failure steps and any suggestions for improving any steps that failed and summarise the major results.

Introduction:

Taking good notes in class is an integral part of academic success in college. Actively taking notes during class sessions can help you focus and better understand the main concepts. Efficient and concise notes can also save time, energy, and confusion for a student. So our application **Notica** provides the users with the best experience of note taking, helping them organize their lectures so that they could quickly retrieve essential details and information of the lecture during last minute revisions. Thus, Notica takes off the burden of arranging notes from students so that they can focus on their studies and excel in academics.

Cognitive Walkthrough preparations:

1. **User population or the target audience:** Any person, primarily college student, with sufficient cognitive, physical and technological capabilities to use a laptop.
2. **Representative Use Cases:**
 - a. **Search Note:** This use case helps to search the notes which contain the specified keyword.
 - b. **Edit Note:** This allows the users to write and edit text.
 - c. **Share Note:** This helps the users to share their notes and collaborate collectively to make better notes.
3. **Prototype:** Please find the prototype video demonstration link attached along with this document in the assignment submission.

Link to Video demonstration of Prototype:

<https://www.youtube.com/watch?v=eNlMnjuFmts>

Link to the prototype:

<https://www.figma.com/file/nFh1HKprWUOtxWsEOTrGGu/Notica?node-id=3%3A2>

You can access the prototype through the above link. Press the present button at the top right corner to start execution of the prototype.

A video demonstration of the same has also been submitted.

Representative tasks and Action Sequences

Task 1

You wrote various notes about a topic “Frequent Itemset mining” in your Data Mining Course and now you wish to look for a particular occurrence of this concept across all notes you have written in a particular notebook as the end sem exam is nearby.

Interface-level Tasks

1. Press the login screen to access your notes. Make sure that Email and Password are filled correctly.
2. Enter the keyword “itemset” in the search bar.
3. Search across different notes which come up in the search results.
4. Search through occurrences in a particular note.
5. Clear the Search bar to reset the search results.

Questions

1. **Are you able to locate the search bar easily ?**

Expert_1: Yes, the search bar was clearly visible above my notebooks and it was easy to locate because of its consistent position similar to other applications I use.

Expert_2: The Search Bar is easily locatable, with the logo and “Search” written over it. Also, the placement of the search bar is also appropriate.

Expert_3: Yes, the search bar was easy to find.

2. **Were the number of occurrences clearly visible along with the name of the notes?**

Expert_1: No, the number of occurrences were not clearly visible. It would be nice if you would have written it with bold font.

Expert_2: Yes, the number of occurrences are clearly visible to experienced users. But to first time users, it might not be apparent what the number in front of Note names is for.

Expert_3: Yes, the number of occurrences is interpretable enough and easy to find. But a suggestion I had here is when a query is searched, the original note remains open by default while instead, the note with the maximum occurrences should be opened.

3. **Were the occurrences clearly visible inside a note ?**

Expert_1: Yes, the occurrences were clearly highlighted with fluorescent yellow color. And the search results were not case sensitive which is helpful.

Expert_2: Yes, the yellow color works well and I had no issues with finding the occurrences of the search.

Expert_3: Although the occurrences are clearly visible, I suggest the user should have an option as to what color he wants the highlighted words to be in.

4. **Was the action of clearing the search bar to reset the search results apparent to you?**

Expert_1: It is intuitive but a cross indicating clearing the search results would have been better.

Expert_2: Yes, but the Search logo does not change to a Cross which is a feature that should be added.

Expert_3: Yes it is intuitive in itself.

5. **Is the interaction required to change from one note to another in the search results apparent?**

Expert_1: Yes, the notes were neatly arranged and interaction to change from one note to another was clear. It was also nice that the file which was previously opened before the search remained open still.

Expert_2: Yes, the interaction is intuitive enough. The idea of maintaining all the search results on the left hand side is good.

Expert_3: Yes, but the strip highlighting which note is currently selected is not visible enough. (I am vision disoriented).

Task 2

You are taking notes during a class and you want to enter textual data inside the note. You then want to change the color of the text to red and decrease its font size to 10.

Interface-level Tasks

1. Select the Insert Panel.
2. Select the Insert text box under the text subsection.
3. Enter text inside the textbox.
4. Select the text to be formatted.
5. Select the Format Panel.
6. Select the red color from the color palette.
7. Select the Format Panel.
8. Select the font size 10 from the drop down menu.

Questions

1. **Are you able to locate the option to insert text box easily?**

Expert_1: Yes. I was looking for it in the insert bar and I found it there. The icon for the textbox made it easy to locate it in the insert bar.

Expert_2: No. I mean I found it eventually, but I would prefer if for all options in the Insert Drop down menu have texts as well as logos instead of only logos.

Expert_3: Yes, the location of the text box was pretty intuitive. But as Notica being a Notes app, I would prefer clicking anywhere on the Note would send me into Edit mode instead of the user needing to insert a Textbox every time.

2. **Are you able to locate initial font size and colour easily?**

Expert_1: Yes. Locating this was not a problem with the instructions. However, this might not be as easy to do for people who have not been instructed as its position is not intuitive.

Expert_2: No, as someone less experienced than most in apps like MS Word, I found it rather difficult to locate. I suggest the designers add a demo walkthrough with the app.

Expert_3: Yes, I was able to find this pretty easily.

3. **Is the interaction required to change font size and color apparent?**

Expert_1: Yes. This is straightforward as it is very similar to other applications. The dropdowns were pretty intuitive.

Expert_2: Yes, the format menu is intuitive.

Expert_3: Yes, I could do it easily.

4. Did you try to change the text color using the color grid ? Were the colors inside the grid clearly visible?

Expert_1: Yes, but I found the organization of the color palette distasteful. The colours were clearly visible but it would help to have more colours.

Expert_2: Yes, I tried to change the colors and it worked perfectly well.

Expert_3: Yes, I tried to change the colors and the colors were all visible as well.

Task 3

You have finished writing a note for your software engineering class. You want to share these notes with a friend whose email ID is zemo_dances@wakanda.com who was absent because of coronavirus.

Interface-level Tasks

1. Click on the share option from the file drop-down menu. A dialog box will open.
2. Enter the email ID(zemo_dances@wakanda.com) in the share by email text box.
3. Choose the permission to give to this user (viewer or editor).
4. Click on the send invite option. This user gets added to the list of users with whom you have shared the file.
5. To unshare the note with a user, find the user in the list of users with whom the note had been shared with. Click on the (X) beside their name. This will remove them from the list of users that the note has been shared with and revoke their access.
6. Click elsewhere in the screen to close the dialog box.

Questions

1. Was it easy to find the share option?

Expert_1: Yes, it was easy to find. However, it was not very easy to unshare the file.

Expert_2: Yes, it was easy to find. But I think the designers have missed out on adding an unshare option. Also, a separate share option on the main screen would have been more intuitive.

Expert_3: No, I would prefer if the word “Share Note” option appeared outside the file drop-down menu.

2. Could you have found the share option had you not been given these instructions?

Expert_1: Yes the share option was in a pretty commonplace.

Expert_2: Yes, the share option was in an intuitive place.

Expert_3: No, it would've taken me more time to find the option.

3. Did you receive sufficient feedback from the software that you had successfully shared the note?

Expert_1: I did see the user added to the list of users with access to the note. A pop-up message would have been more helpful.

Expert_2: The Username was immediately visible in the list which is enough feedback for me.

Expert_3: No, I had to find and check the Username list to see if the name was actually added. I suggest that a pop-up message appears after the name is added.

4. Do you think it is problematic that unsharing a document requires you to choose the share option from the file menu?

Expert_1: Yes. It would be best to add an unshare option that opens the same dialog box. Also, to change user access from 'can view' to 'can edit', it had to be removed and added again, would have been better if a drop down allowed for that to change.

Expert_2: I don't mind as adding another unshare button might clutter the space. Instead, the 'Share' button can be replaced with something like 'Share/Unshare', or 'Modify Users'.

Expert_3: Yes, that is fine although Editing access from View to Edit and vice versa action is not present.

5. Was it easy to close the share dialog box?

Expert_1: It would be better to have an (X) at the top of the dialog box to close it. It might not be easy for the novice user to close it otherwise.

Expert_2: I expected a X in the top right corner of the pop-up. Not only this pop-up, but all such messages should have this X.

Expert_3: A 'Close' or 'Exit' or 'Return' button somewhere on the Pop-up is better.

Usability Issues And Feedback Analysis:

The feedback received by the experts was very useful. A lot of usability issues were discovered and shall be rectified in the final product. A summary of these issues follows.

For the task of searching, the position of the search bar was easily locatable for the users, but for searching a keyword the functionality of pressing the return key would help. The interaction required for changing from one note to another is apparent but the current note which is opened is not clear, due to weak highlighting in the left side bar . A better colour scheme should be used to highlight the opened note (additionally , making the text bold or some other formatting can be used). The search results should also contain a heading in the right column ,named the number of occurrences, so that users can identify it easily. The occurrences inside a note are clearly visible although the option of changing the highlight colour could be provided to the user. Also for the interaction of going back from search mode to normal, instead of just clearing the search bar, a cross button is to be added which can lead back to normal. For textbox insertion, going to insert dropdown menu is perceived as quite mundane and unintuitive by most experts. Instead we can allow inserting text on double click i.e., allow users to enter textual data anywhere because users mostly use the app for this task only. As most experts perceive format dropdown to be a not obvious place for editing or viewing text properties, a panel below the file toolbar can be added for this, as users working with ms-word or google docs expect it. The feedback after successfully sharing the notebook is not enough. So just adding the user to the editor's list is not sufficient, instead we should add a pop up message saying successfully invited. Also the location of unshare option is not evident and the option should be separate of file drop down and can be an individual heading in that bar along with file and edit options. Also, for closing the share box , a cross option should also be added at the top.

Task	Issue	Recommendation
Search	Clicking anywhere on the search bar results in a search.	The search should occur only when the enter key is pressed.
Search	The number of occurrences displayed was not clearly visible.	It would be nice if you would have written with bold font.
Search	Unclear how to clear search results.	Add a cross on the search bar to make the process more intuitive.
Inserting text	Takes time to find some options.	The insert has only icons for the different actions that can be performed(example: inserting a textbox). Add some text to make it easier to locate these options
Editing text	Colour palette can be improved.	Allow choosing custom colours on the colour palette. Also organize it better.
Unsharing	Difficult to unshare a shared document.	Add an option called unshare to the file drop down menu which also opens the same dialog box as share.
Share	Difficult to close the share dialog box.	Add a close button to the share dialog box to make it easier to close it.
Share	More feedback required when a file is successfully shared.	Add a popup message when a note is shared with the user.