Group 2
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Web App Prototype

A research project in collaboration with KTH and Stockholms University

1. High Fidelity prototype

1.1 Developing process

We expanded the low fidelity prototype developed in Figma for A1 into a high fidelity prototype, based on the feedback we got from our last survey. We got overall positive feedback concerning the design for our first prototype so we decided to continue developing from that. There were some issues with the usability from our last form, but since that was because some participants had problems displaying the prototype correctly, we decided to keep the white menu bar at the bottom of the page.

A couple of slightly different prototype versions were created in order to assess user preferences on specific open design issues, we added the support for the cognitive tests and made the prototype a bit cleaner. Two versions were created that were similar but which integrated the cognitive tests differently, see Fig 1. Our group discussed how to add the cognitive tests to our prototype that would be easiest for users to use, and we came up with two different suggestions. For the first prototype the cognitive tests were added as a separate button on the menu bar, this button will get a red notification symbol when there are new tests for users. The second prototype embedded the cognitive tests on the home screen, together with the morning and evening surveys.

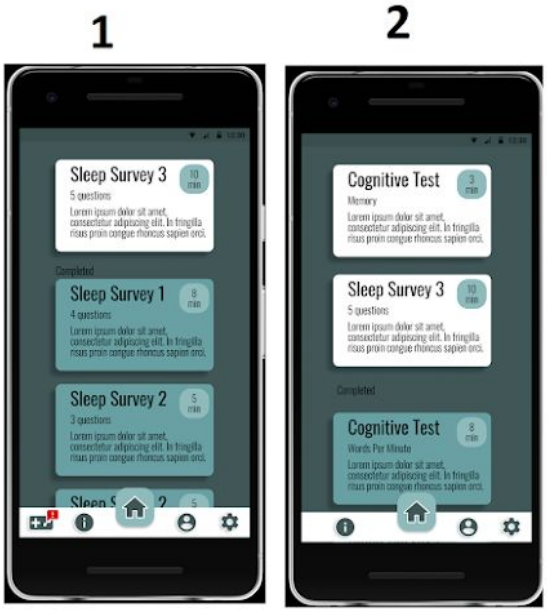

Fig 1. Prototype 1 (left) and prototype 2 (right)

1.2 Google form

We used once again a Google form to receive feedback on our two different prototypes. We started this survey by asking the participants their age. The participants were then asked to navigate through our two prototypes and evaluate their experience of the overall design from 1-5, where 1 was terrible and 5 represented perfect. We then asked which of the prototypes they prefer over the other and depending on their answer, the participants got different follow up questions. For prototype 1, they were asked to choose between two different layouts of the cognitive tests, see Fig 2.

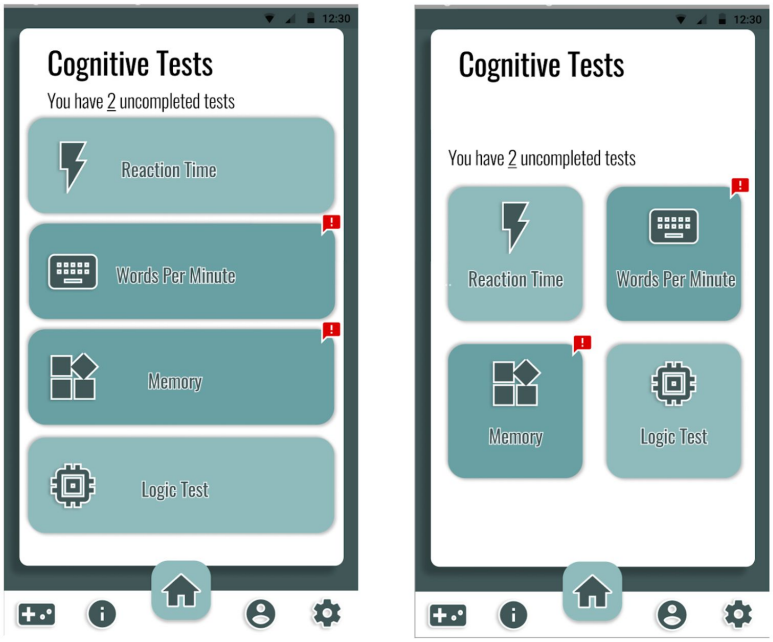

Fig 2. The two design choices, choice 1 (left) and choice 2 (right)

Both groups were asked why they preferred the chosen prototype over the other and if they had any additional feedback.

1.3 Results

We got 6 answers on our form, where 5 were in age group 18-29 and one in age group 50-64. The results from our first question about the overall design, prototype 1 got an average of 4.1 and prototype 2 got 3.5. There was a slight preference for the prototype with a separate view for the cognitive tests, however it seems that both prototypes were better than the low fidelity prototype, that got an average of 3.3. This also shows in the results from the question where the participants were asked to choose one of the prototypes, see Fig 3, where around 67% of the respondents prefered the prototype 1. The reason given was that it was more visually appealing, cleaner and easier to understand than prototype 2.

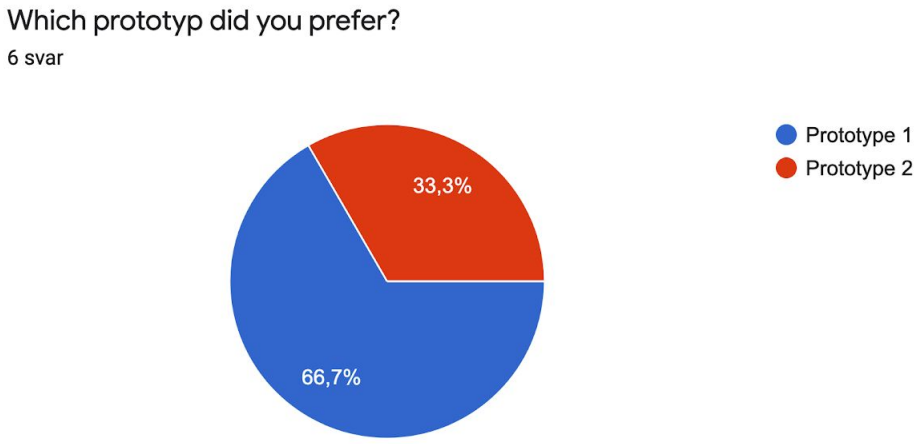

Fig 3. Answers to the question "Which prototype did you prefer?"

The answers for the same question for those who chose prototype 2 over prototype 1 was that they did not like the red notifications in prototype 1 and that the test and surveys were grouped together.

If the respondents had answered prototype 1 we then asked them a follow-up question regarding the design of the menu for the cognitive tests, this is the results from that question, see below in Fig 4.

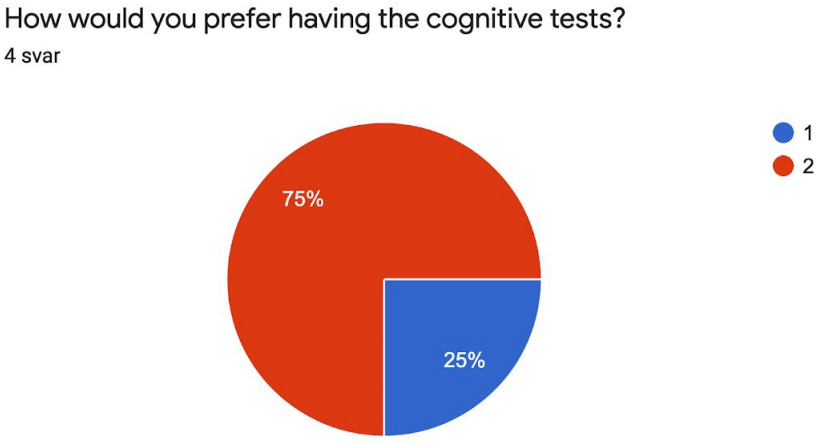

Fig 4. The answers to the question "How would you prefer having the cognitive tests?"

2. Web app prototype

For developing the first web app prototype of our Figma mockup we chose to use the Javascript library called JQuery. This simplifies HTML DOM tree traversal and manipulation as well as CSS

animation. The reason for using jQuery is that it takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.

2.1 Implementation

When we implemented the web app prototype we chose to follow the design of prototype 2. We chose the second one even though the result from our survey showed otherwise, because it was prefered by our group and we did not receive that many answers in this week's survey. It was therefore hard to draw any conclusions from our results and chose to trust the group's opinion instead, since we believe the design will make most sense in the end. We are focusing on making the app as easy to use as possible and we feel that prototype 2 will make that possible.

Figure 5 shows the implementation of our Figma prototype as a web app. We tried to follow the design as much as possible but we soon found it difficult to work with tools that we were not very experienced in. In figure 6 we can see that clicking on one of the surveys opens up a popup screen for the user.

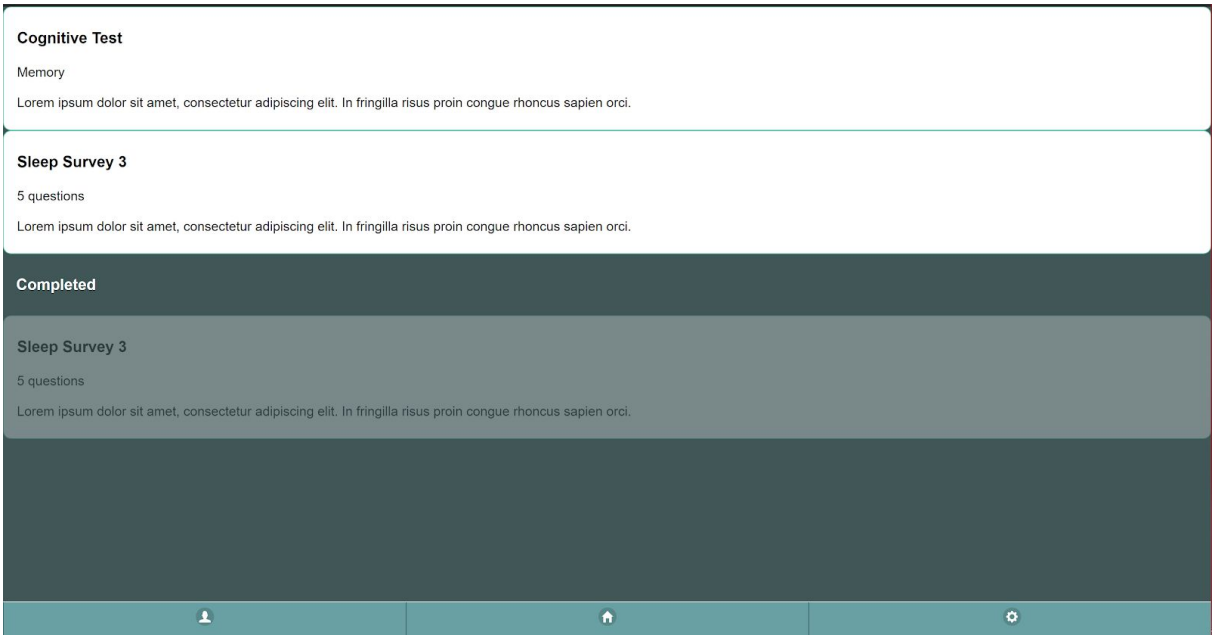

Fig 5. The main screen of the web app

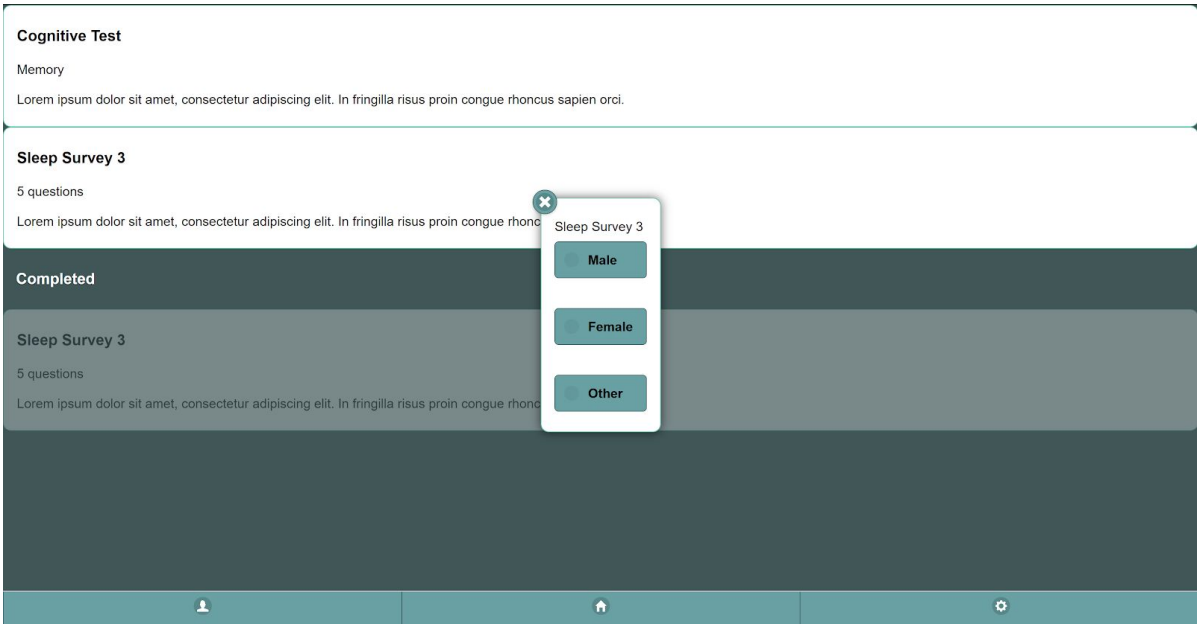

Fig 6. The popup when clicking on Sleep Survey 3

The navbar that can be seen at the bottom of the page in Fig. 5 and 6 was implemented in HTML with the following structure:

```
<div data-role="footer" data-position="fixed" class="ui-footer">
     <div data-role="navbar" class="ui-navbar" >
          <ul>
               <li><a href="a" data-icon="user"></a></li>
               <li><a href="a" data-icon="home"></a></li>
               <li><a href="a" data-icon="gear"></a></li>
          </ul>
     </div>
</div>
```

The different tests and surveys were implemented as simple div tags:

```
<div class="ui-body ui-body-a ui-corner-all">
       <H3>Cognitive Test</H3>
       <div  >
            <p>Memory</p>
            <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
In fringilla risus proin congue rhoncus sapien orci.</p>
       </div>
</div>
```

2.2 User test

Since we are new to the tools for this assignment, we did not have time to user test it. However, we are planning on testing it before implementing the Android prototype.

Link to our web app prototype github repository:
https://github.com/emilstahl97/Developing-Mobile-Applications-ID2216/tree/main/Project/A2%20Web%20App%20Prototype/sleep_app