Noroff
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# Technical Report

## Interaction design

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## Contents

# 1. Interaction design

During the last three weeks of the study of Front-end development, I have been schooled in the theories regarding interaction design. This is a discipline that is “focused on the moment of interaction between a human and a product. The goal of interaction design is to make this process as smooth and as beneficial as possible” (Noroff, n.d., p. 2). In this task, I conducted research on my RainyDays website, trying to figure out how users interacted with it. This disclosed a few problem areas, which I then improved using Javascript, HTML and CSS.

# 2. Testing and research

Disclosing potential problem areas regarding the user experiences on my RainyDays website (user-friendliness and navigation and flow of website) was a two-phased process – a general, anonymous usability testing using Hotjar (quantitative data), followed by an in-person testing with a few selected representatives of the website`s target audience (qualitative data).

## 2.1.Usability testing through Hotjar

For this task, I was instructed to make use of Hotjar - “a popular behaviour analytics tool which allows stakeholders to collect data on real user interaction on their website” (Noroff, n.d., p. 4). Conducting a usability test with this software can be done in several manners – it can be open-ended sessions, or one can ask specific questions. Although Hotjar is described as “ideal for open-ended sessions” (Noroff, n.d., p. 4), I entered the task with a few concerns regarding the flow and navigation of my website. In addition to asking the participants to browse around the site as if they were shopping for rain wear, I therefore included three specific tasks for them to complete – directly addressing my concerns. These tasks were:

1. Buy one product of your desire
2. Find and visit the «about us»-page
3. Find and visit the «contact us»-page

The usability test was completed by 18 individuals, and the among the results were heatmaps illustrating where they had clicked, tapped, and scrolled on the website and recordings where I could see the actual users as they moved around the website (Noroff, n.d., p. 4).

Through this process I did find the Hotjar software to be a bit to general, and I had some difficulties drawing distinct conclusions from the data. Some insights were, however, gained. Only half of the participants visited the “about us” and “contact us”-sites. I interpreted this as an indication that the links to these sites were in the wrong locations and therefore difficult to access. The most important change I made from this remote usability test was thus to move these links from the footer to the header on all pages on the website.

### 2.2. In-person usability testing

Three persons participated in the in-person usability testing, and all three tests were independent from one another and conducted at different times. As the usability tests were conducted, I observed the participants and asked for feedback along in the process.

I gave the participants the same tasks as I did the participants in the Hotjar test session – a general, open-ended part where I instructed the participants to browse the website, followed by the three specific tasks, this time with a different placement of the “about us” and “contact us”-links (see 2.1).

During this usability test session, the participants immediately located the “about us” and “contact us”-links, and also confirmed in the following conversation that they usually looked for links to these pages in the header of the websites they visited. Thus, my deduction from the Hotjar data was correct, and the adjustments made did in fact improve the navigation of the website. The task of buying a product was easily completed by all participants.

Only one of the participants had some general feedback in the open-ended part of the session. She commented that the aesthetics of the website appeared a bit “bland” and described the website as too “one-dimensional”. To improve this, I changed the physicality

of the website by adding “box shadows” to the buttons and to the product “cards”. This gives a three-dimensional effect, making the said elements pop (Noroff, n.d., p. 4).

After completing these changes, I revisited the participant with these remarks, and asked for new feedback on the improved webpage. She was pleased with the changes. In addition, I had one more participant have a look at the website, asking for general feedback and to complete the three specific tasks. She did so without any problems and had no suggestions to further improvements on the website.

## 3. **Javascript improvements**

In addition to making changes according to the usability testing research, I was given some specific areas to update with Javascript – form validation and purchase/cart functionality.

Form validation is a mechanism that ensures the correct filling of forms, for instance that the e-mail addresses has the right structures (minimum one letter, following @, minimum one letter, following ., and then minimum one letter). The visitors of the RainyDays website encounters forms in two circumstances – when making an inquiry in the “contact us”-page and when purchasing a product. This task was easily achievable on both these forms through use of Javacript (Noroff, n.d.).

The starting point of the website in this process was that there was no functioning purchase/cart functionality. To improve this, I had to make use of Javascript. Firstly, I created an array of jackets. Furthermore, I duplicated the HTML based on how many objects there were in my array. I then created code which initiated the following processes: By clicking the button “read more” belonging to a specific product, the information regarding this product is passed to local storage. The product specific page then uses this information to generate the HTML. By clicking the “buy now”-button that product is stored in an array in local storage, enabling the website visitor to add more products in the same array. Lastly, the information is pulled from local storage and used to generate new HTML in the cart, thus creating a usable “buy now”-function.

However, I did not manage to do my last set objects in order to improve my purchase/cart functionality to the fullest, as I did not succeed in generating the necessary code for the following processes to work:

1. If you are to purchase two of one jacket type, the quanitity does not increase in the cart. Instead, the products stack – creating two identical lines with product information.
2. You cannot remove items from the cart.
3. You do not get an instant feedback when you click the «buy now»-button, you are just sent to the check-out page.

Creating the Javascript regarding form validation and the first part of the purchase/cart functionality improvement was time-consuming. Furthermore, there was no given solution to these problems in the course material. Even though I spent hours trying to make these processes work, both by myself and with developers in my circle of acquaintances, it still remains unsolved. I hope to gain some insights from the tutors in the study programme in order to master this.

# 4. Conclusion

During the weeks of interaction design I have learned many strategies that ensures user-friendliness, easy navigation and flow of the website. I have learned more about the behavioural patterns of website users, and how to target them effectively with specific design elements. Even though not completely satisfied with my own work, I have also obtained more knowledge in and skills to generate Javascript – a code language I find somewhat difficult. The importance of good UX design is becoming increasingly clear, and the words of the "Father of Visual Basic" comes to mind:

"If we want users to like our software, we should design it to behave like a likeable person: respectful, generous and helpful."

- Alan Cooper

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