

BITS F364- Assignment Report

Part-B

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Abstract

In this report, we attempt to summarize our findings from the user experiments we ran on e-commerce websites <https://www.flipkart.com/> and <https://www.snapdeal.com/>. We ran tests and tried to judge the ease of use of these websites using parameters like total number of clicks, number of times the user removes a product from cart and number of times a user clicks on the cancel button. Finally, we analyse our observations.

Methodology

1. We set up the environment to start recording user behaviour, making one project for Flipkart and one of Snapdeal. For each url, we ran tests with two kinds of users, two relatively inexperienced and one experienced user.
2. After observing the users, we decided what parameters could be used to indicate that the user got lost or confused while navigating. Then, we identified the commands that the Selenium IDE generated for these actions. We came up with three parameters-
 - a. Number of times the user clicked on the site logo (top left corner) to start afresh
 - b. Number of times the user had to remove an item from cart.
 - c. Number of times the user canceled an operation.
3. Apart from these, we also counted the total number of clicks it took a user to add a product to their cart. This is important because typically e-commerce websites have become very intuitive to use and hence, the number of clicks is a much more useful metric to determine whether a user is truly lost and confused.
4. To combine all these parameters and present them in an observable format, we piped commands and these parameters into a text file.

To run the script, use the command: *python3 analyse_session.py*

Observations

Some things to note here,

- We weren't able to capture the go back button and the reload button on the web browser as the Selenium IDE extension doesn't capture it on both Firefox and Chrome.

- Snapdeal doesn't provide the user with a cancel button to stop the "remove from cart" operation while flipkart does.
- Using remove from cart as a metric does come with the possibility that the user just changed their mind in a general scenario. However, in our case, this metric works as we had asked each user to add the book "The Design of Everyday Things" to their cart.

1. **Total clicks:** The general increase in clicks for different kinds of users was easy to notice. While an expert user clicked 3 times on Snapdeal to add the book to their cart, the inexperienced user took 21 and 19 clicks. For Flipkart, an expert user clicked 4 times to add the book to their cart, while an inexperienced user took 11 clicks and the 2nd inexperienced user took 12 clicks.
2. **Home Button Redirects:** On flipkart, one inexperienced user started afresh 1 time and 0 times on Snapdeal. The other inexperienced user started afresh 0 times on Flipkart and 2 times on Snapdeal. For the experienced user, we found that it was 0 for both websites.
3. **Remove from Cart Action:** On snapdeal, one inexperienced user clicked remove from cart once and once on Flipkart as well. This happened 0 times for the experienced user and the other inexperienced user.
4. **Cancel Operation:** This action was done 0 times in all cases for both the websites.

A point of caution is that the inexperienced users are not a monolith insofar as they have reasonable experience handling the Internet and hence might not be the closest proxy towards naive users.

Some other things we observed were-

1. Total time taken to add a product to cart was much longer for inexperienced users. This was to be expected as their use of the website was quite infrequent as compared to the other kind of users.
2. The number of mouseOver and mouseOut commands generated were also significantly more for inexperienced users. In general, the motion triggered drop down menus (which are captured by the above two commands) were quite obstructive and inhibited how all users navigated the website.
3. Sometimes a lag in the animation of the drop down menu led to wrong clicks by the user and the user had to backtrack their actions using the go back button on the browser. This wasn't captured by the Selenium IDE extension, but was observable.
4. Users were also confused by the sponsored/featured content and this caused misclicks as well.

The above data has been tabulated where Inexp refers to an inexperienced user and F and S refer to their interactions with Flipkart and Snapdeal respectively.

	Clicks	Home Button (proxy for restart)	Remove from Cart	Cancel Operation (proxy for lost in operation)
Inexp 1 - F	11	1	1	0
Inexp 2 - F	12	0	0	0
Exp - F	4	0	0	0
Inexp 1 - S	21	0	1	0
Inexp 2 - S	19	2	0	0
Exp - S	3	0	0	0

Usability

Through our testing we found that both the websites were quite similar in design. The dynamic menu popping up while navigating the website was an issue on both websites. Although, we did find that Snapdeal's menu was on the left extreme and was unintentionally triggered much less as compared to Flipkart, where it was positioned on the top because of which it happened more frequently. A shortcoming of Snapdeal was that there was no confirmation for the "remove from cart" action. Additionally, the product we searched for was way further down the list in case of Snapdeal and the page was littered with featured products (this could just be our particular case as well). For flipkart, the add to cart button's placement would have been better if it were on the right side as the user selects things like quantity and size on the right side and looks for the button over there. Hence, in a final concluding statement - Flipkart does seem to have a more user friendly and intuitive interface for novices to access. However, this must be precluded by the fact that Flipkart is also generally more accessed and hence our inexperienced users might have generated some level of familiarity with the platform via their day to day interactions. Snapdeal was seen to be more complicated for people to navigate through and is generally seen to be more cluttered and confusing for first time users to access. Hence, on a purely objective scale of rating - we feel that Flipkart supersedes Snapdeal in terms of ease of access, intuitiveness and speed of usage for novice users.