

**KATHMANDU UNIVERSITY**  
**Department of Computer Science and Engineering**  
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**A Mini Research Weekly Report (Week 4)**  
**on**  
**“Improving the UI/UX Design of Nepal Stock Exchange Trade Management**  
**System”**  
**[COMP 341]**  
**(For partial fulfillment of 3<sup>rd</sup> year/ 2<sup>nd</sup> semester on Computer Science)**

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## 4.1 Design a User Interface (UI) of your case based upon the paper prototypes and make it ready for the user evaluation.

⇒ This week, we began creating the user interface designs for the NEPSE TMS website in Figma. We took into account the various principles and laws we studied in our human-computer interaction class, aiming to create a design that is minimal and error-free. These designs are based on the final improved paper prototype from last week. Below are the original and the improved design iterations for the TMS website:

### Works:

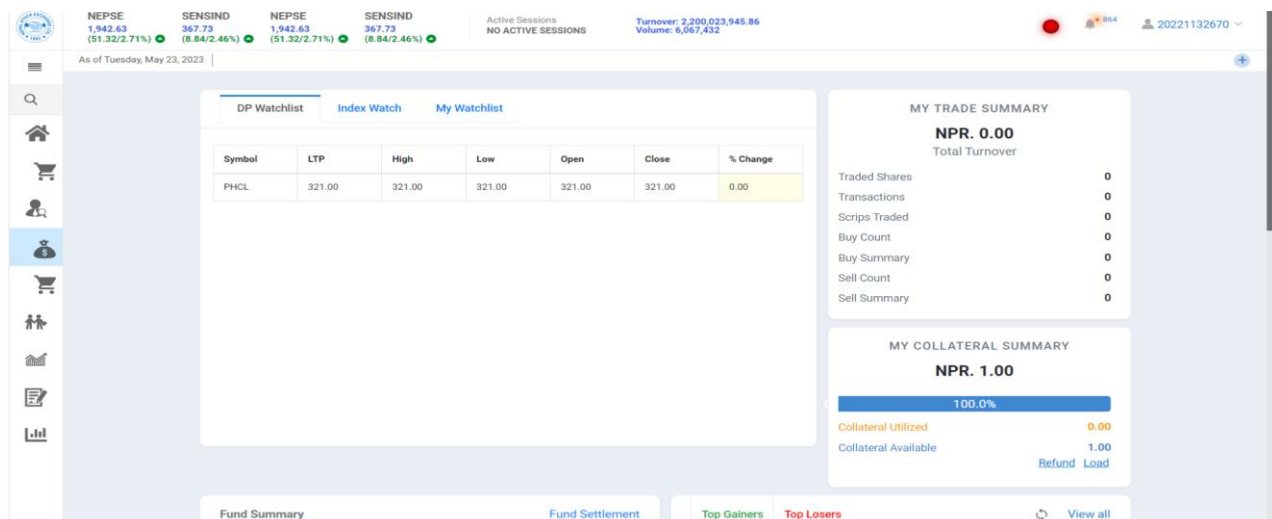


Figure i): unaligned icons on the left and two same icons

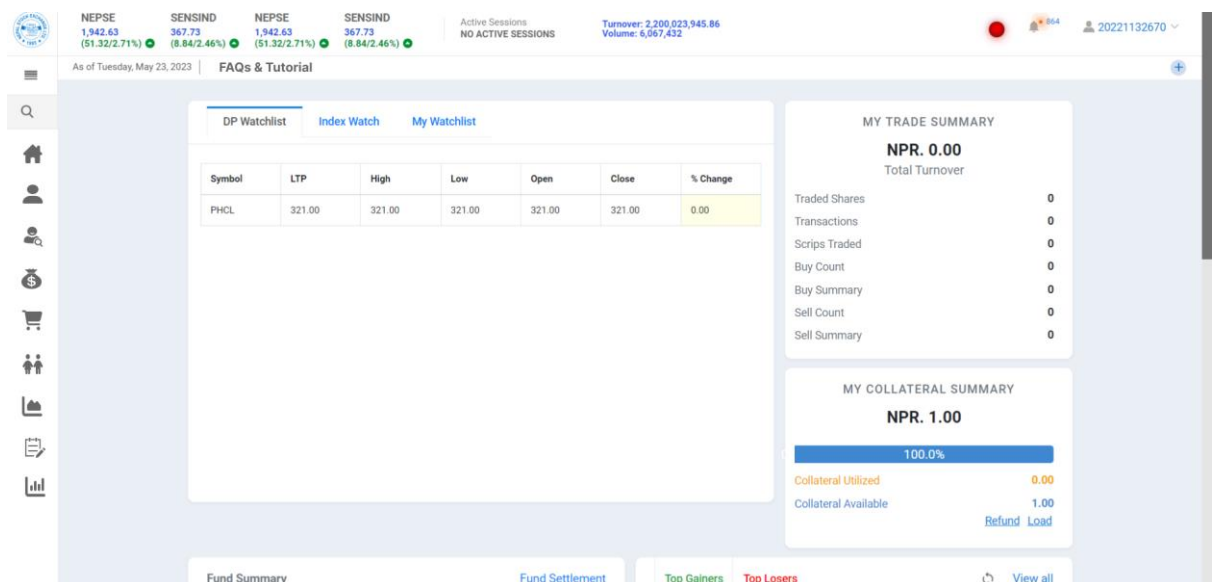


Figure ii: properly aligned icons, two different icons and FAQs \$ Tutorial  
link

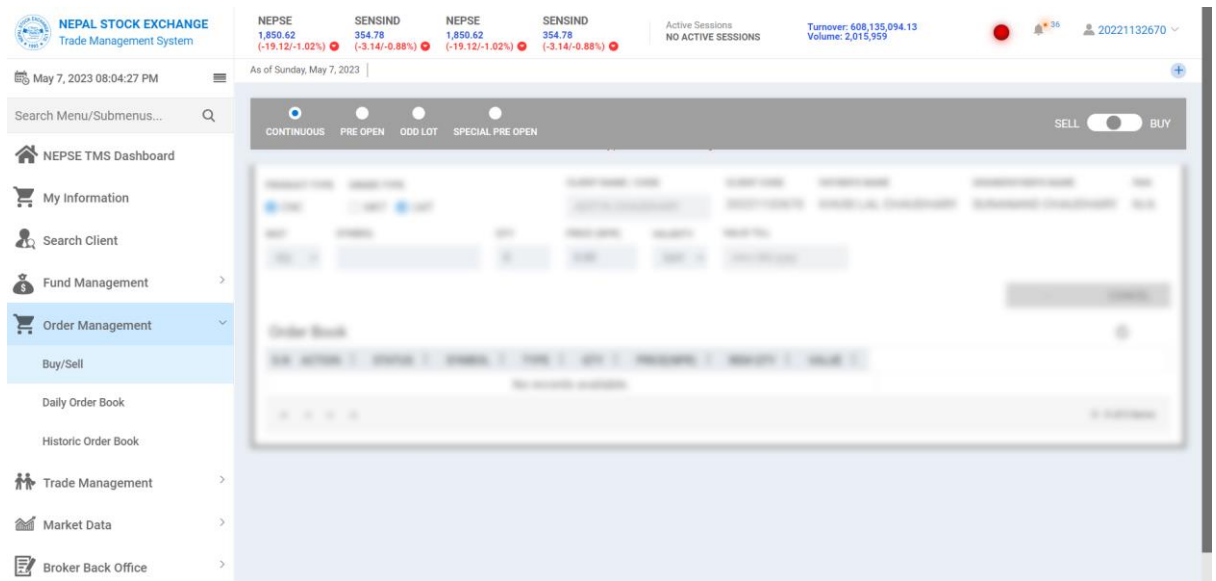


Figure iii: Not any dialog box or information why it is blur

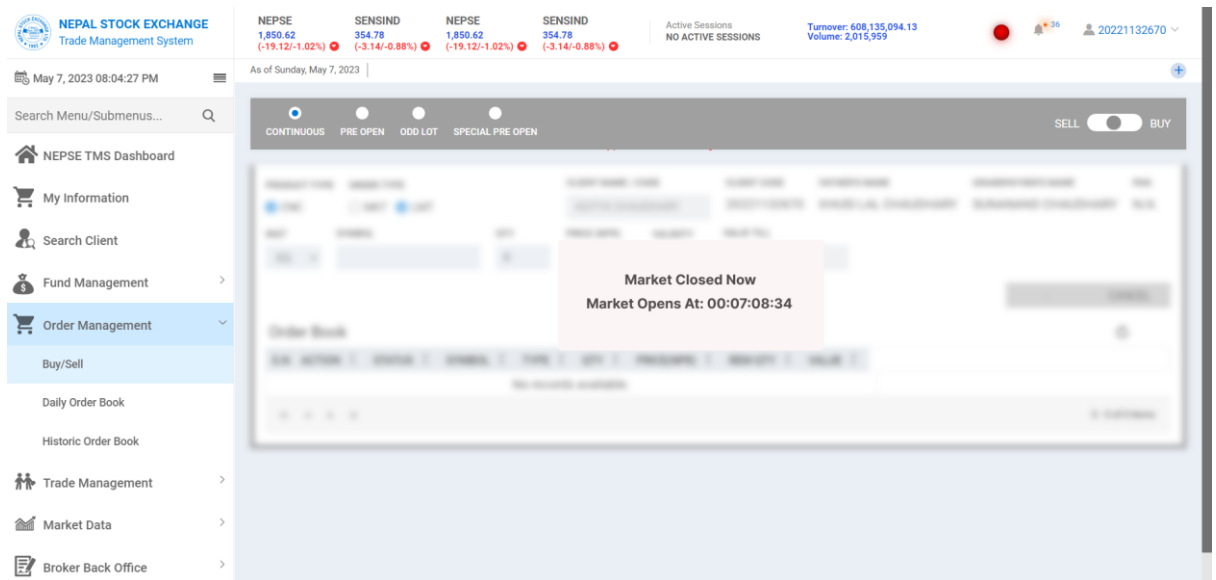


Figure iv: dialog box showing why the page is blur and showing countdown of market opening time

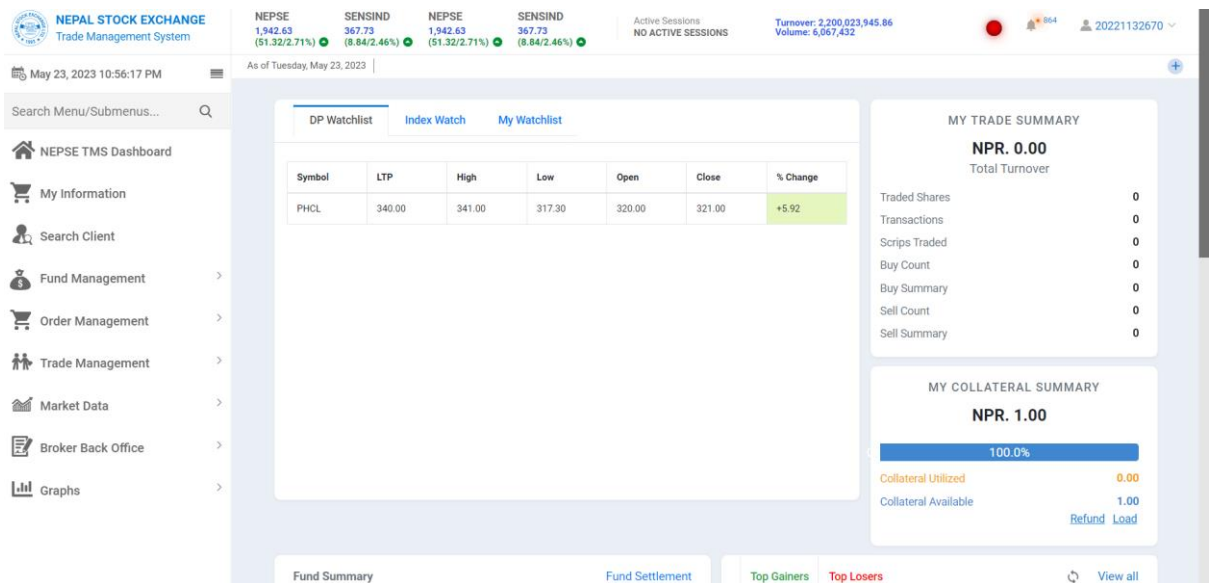


Figure v: The menu list does not show which page user is currently on

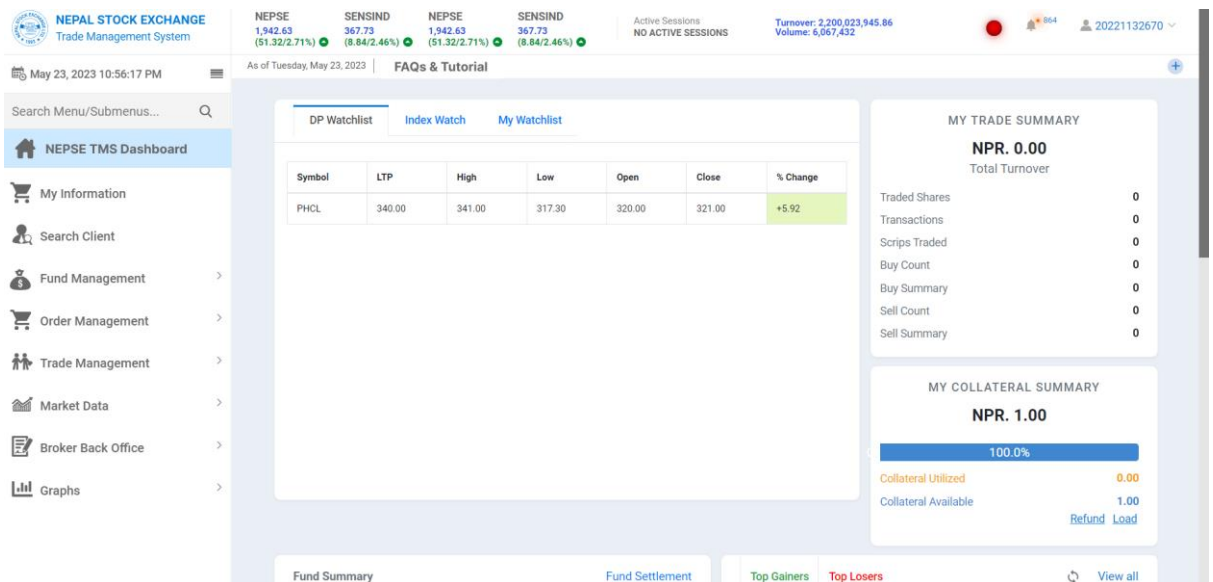
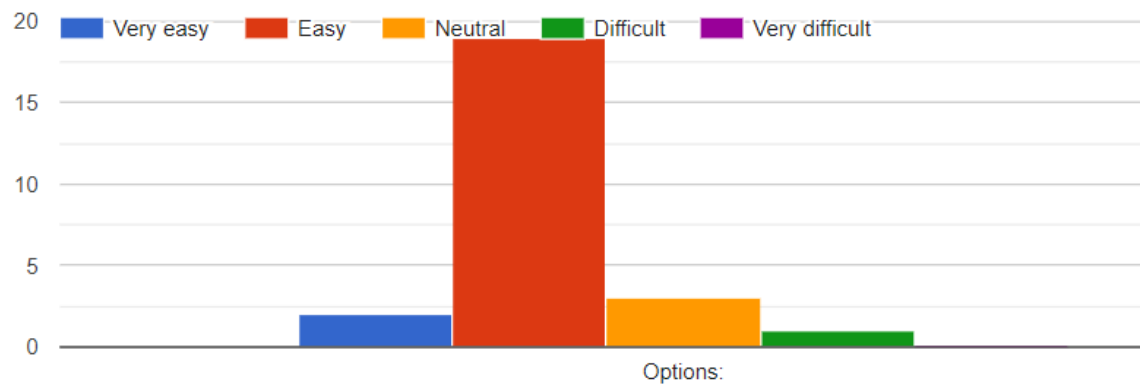


Figure vi: Shading of blue colour to indicate the user which page he is currently on.

## Survey responses after UI design:

1.

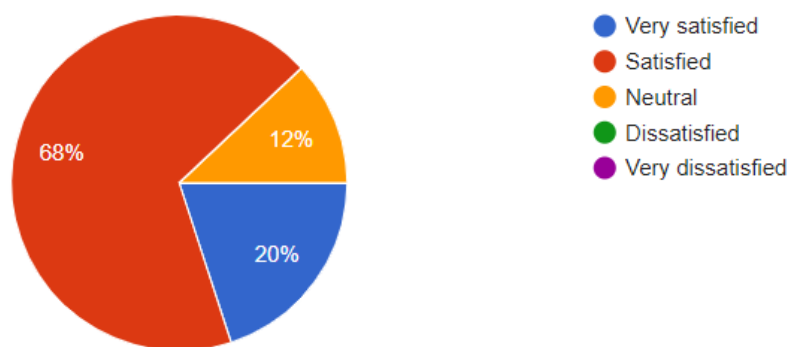
How easy is it for you to find the information you need on the Nepal Stock Exchange Trade Management System improved design?



2.

How satisfied are you with the new design of user interface of the Nepal Stock Exchange Trade Management System?

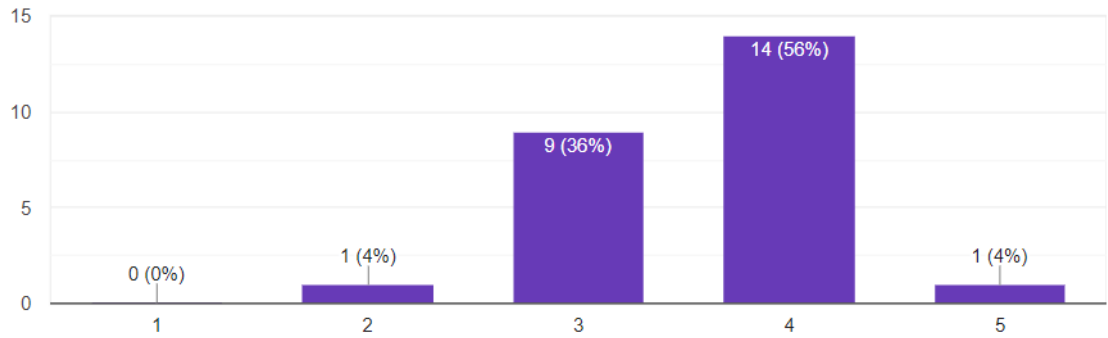
25 responses



3.

On a scale of 1-5, rate the visual consistency and feedback of the website.

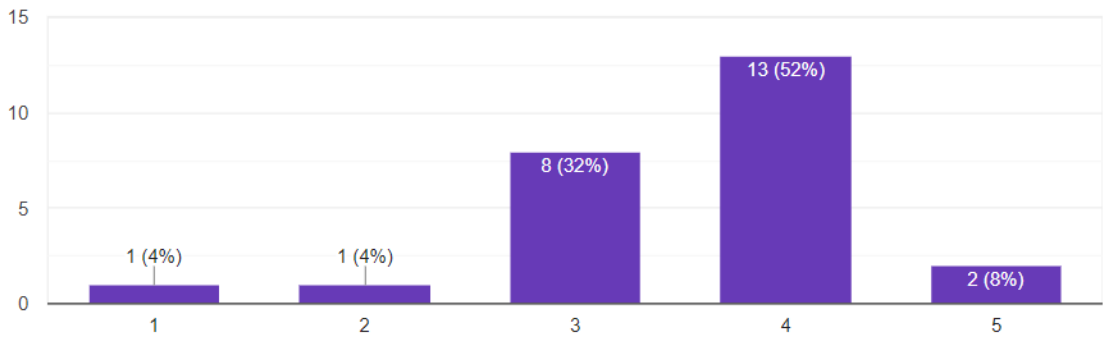
25 responses



4.

How would you rate the overall new design of the website?

25 responses

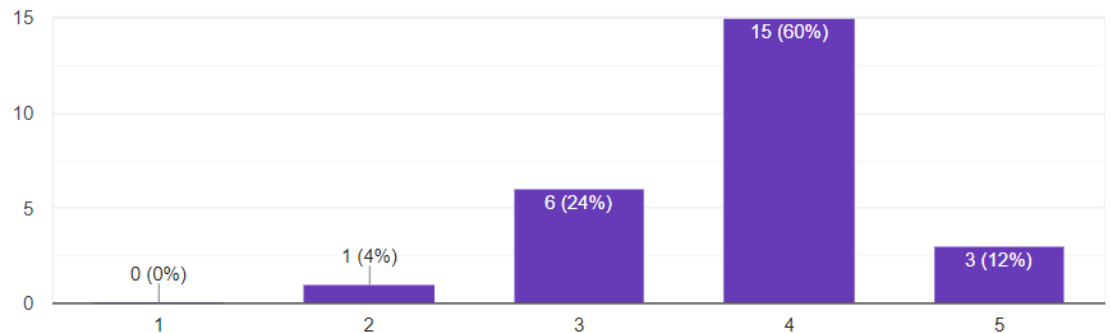


5.

How likely are you to recommend the website to others on the scale of 1-5?

 Copy

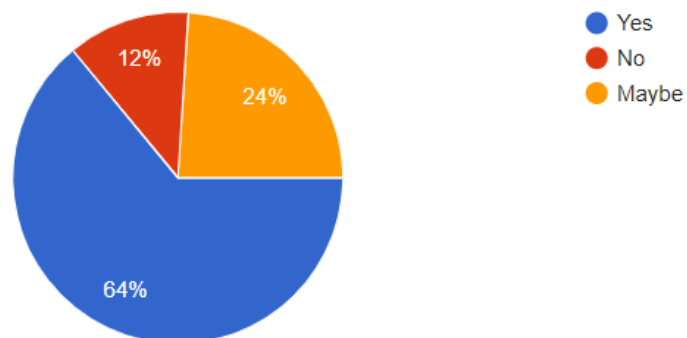
25 responses



Following the submission of our UI design for further evaluations, we received exclusively positive feedback, indicating that our website is a minimal viable product. Additionally, we conducted a survey to know users' interest in a dark mode feature, with 64 percent of respondents expressing a preference for it.

If TMS had dark mode feature, would you use it?

25 responses



Consequently, we incorporated a dark mode option into the TMS website, as shown in the provided visual representation.

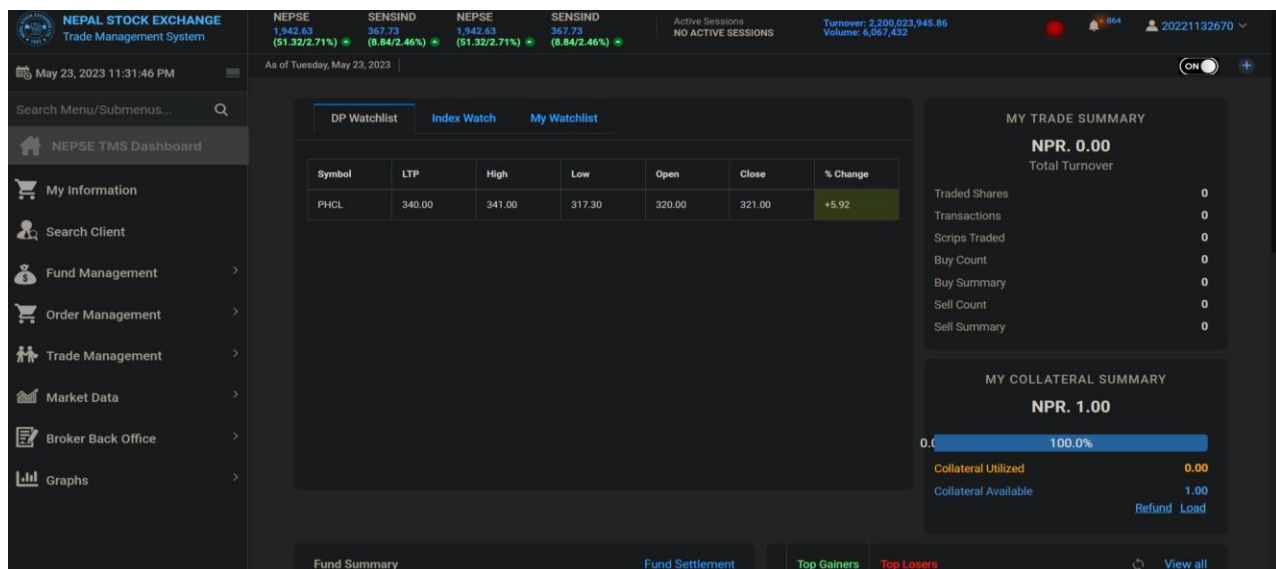


Figure vii: dark mode ui



## Heuristic Evaluation:

We evaluated “impact of interactive advertisements on user experience” UI design.



*Fig: Daraz before Scratching*

*Fig: Daraz after Scratching*

Here, we can see two different pictures of the Daraz website. We can see the scratch here button. Once we scratch a button, we can get immediate feedback from Daraz. We can see that the button is enlarged once we click on it.

The colour composition used in this advertisement is interactive. It seems like the advertisement is not boring and irritating.

Colour composition plays a crucial role in making advertisements effective by influencing human perception, emotions, and cognitive processing. When applied strategically and in line with Human-Computer Interaction (HCI) principles, colour composition can enhance the user experience and impact of advertisements. Here's how colour composition in advertisements can be effective and its relation to HCI principles:

1. **Attention and Visual Hierarchy:** Colour can be used to attract attention and guide users' focus within an advertisement. By using contrasting colours or vibrant hues for key elements such as headlines or call-to-action buttons, advertisers can create a visual hierarchy that directs users' attention to the most important information or desired actions. This aligns with the HCI principle of providing clear visual cues to guide user interaction.
2. **Brand Recognition and Consistency:** Consistent colour usage in advertisements helps establish brand recognition and association. By using a consistent colour scheme aligned with the brand's visual identity, advertisers can create a cohesive and recognizable brand presence across different advertisements and platforms. This supports the HCI principle of consistency, which promotes familiarity and ease of use for users.

By applying colour composition effectively in advertisements, considering HCI principles, advertisers can create visually appealing, emotionally impactful, and user-centred experiences. Understanding the psychological and cultural aspects of colour can help advertisers optimise their advertisements for maximum effectiveness, engagement, and resonance with the target audience.



*Fig : Daraz 3D product view*

Using 3D advertisements can offer several advantages that can make advertisements more effective and impactful. Here are some advantages of using 3D advertisements:

1. Enhanced Visual Appeal:

3D advertisements create a visually stunning and engaging experience. The depth, texture, and realism of 3D elements can captivate viewers and grab their attention, making the advertisement visually appealing and memorable.

2. Increased Attention and Recall:

The immersive nature of 3D advertisements tends to attract more attention compared to traditional 2D ads. The dynamic and interactive elements of 3D visuals can leave a lasting impression on viewers, increasing the chances of message retention and recall.

3. Product Visualisation:

3D advertisements excel in showcasing products and services in a visually compelling way. By presenting products in 3D, viewers can get a better understanding of their features, functionality, and design, leading to improved product comprehension and increased desire to make a purchase.

4. Stand Out from the Competition:

In a crowded advertising landscape, 3D advertisements can help brands stand out and differentiate themselves from competitors. The uniqueness and novelty of 3D visuals can capture viewers' attention and create a memorable impression, helping the advertisement cut through the clutter.

It is important to note that the effectiveness of 3D advertisements also relies on factors such as the quality of execution, relevance to the target audience, alignment with the brand message, and strategic placement. A well-crafted and thoughtfully implemented 3D advertisement can effectively capture attention, leave a lasting impression, and drive desired consumer behaviour.



*Fig : NCELL slider ad*

We can show multiple advertisements from a slider ad. The user doesn't have to visit different pages. We are showing multiple ads in a single page.

Here are the advantages of slider advertisements:

1. Space Efficiency:

Slider advertisements allow for multiple images or messages to be displayed within a limited space. HCI principles emphasise the importance of utilising screen real estate effectively. By incorporating a slider, advertisers can convey multiple promotional messages or showcase different products or features within a compact space, maximising the efficiency of the advertisement.

2. Visual Engagement:

HCI recognizes the significance of visual engagement to capture users' attention. Slider advertisements can use visually appealing images or graphics to create an engaging and dynamic experience. The movement of the slider can attract users' attention and encourage interaction, increasing the likelihood of users engaging with the advertisement's content.

## **Conclusion:**

This week has been productive and focused on designing a User Interface (UI) of TMS website based upon the paper prototypes and making it ready for the user evaluation. It was a worthy week conducting a heuristic evaluation of another group's work. We could explore more about HCI principles. Additionally, the heuristic evaluation of another group's work provided valuable insights into the usability and effectiveness of their design. Through a systematic and structured evaluation process, we identified strengths and weaknesses in their user interface design, allowing us to offer constructive feedback and suggestions for improvement. This evaluation exercise not only benefits the evaluated group but also enhances our own understanding of design principles and best practices. Overall, this week was fruitful for all team members. We could explore more about HCI principles.