Heuristic Evaluation Synthesis (Group)

**Goal: Synthesize individual heuristic evaluations of the same prototype so that the corresponding team can fix the most important problems found.**

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## Assignment Overview

1. **Synthesize the violations found.** List each distinct problem with a unique number merging similar violations such that there are **no duplicates**. For such duplicates, you should list the issue only once in your report using the **best version** of the description and suggested fix.
2. **Agree on a severity rating for each violation**. Use these ratings defined in lecture: 0 = not a usability problem, 1 = cosmetic, 2 = minor, 3 = major, 4 = usability catastrophe
3. **Format and organize your synthesized violations** **list**. Organize the violations by task flow (e.g., all violations for task 1 grouped together). If the violation occurs across all tasks include these in an “All Tasks” section. If the violation occurs outside of a specific task, include this in a “Extra Violations” section. Your list of violations should be arranged in a logical order. For each violation, use the following format:

## Problem/ Prototype Description

We’re evaluating Group 8’s project, which includes a mobile application and website for an electrical store, featuring product browsing, searching, purchasing, AI chatbot recommendations to assist users in choosing electronic devices, and AR/VR functionality for enhanced decision-making.

## List of violations

|  |  |  |  |
| --- | --- | --- | --- |
| Task | No |  | Evaluator |
| 0[[1]](#footnote-2) | 1 | H4 Consistency and Standards/ Severity: 2  **Task**: All tasks  **Description**: The website displays inconsistent terminology and design elements across various sections, such as using different button labels for similar actions, inconsistent naming conventions in search results, and variations in error messages or interface feedback.  **Rationale**: Inconsistency can confuse users and disrupt their workflow, making it harder for them to understand the system's functionality and predict outcomes. This increases cognitive load and decreases overall usability.  **Fix**: Standardize all terminology, design elements, and interactions throughout the website. Define and follow a consistent style guide to ensure uniformity in button labels, language, and interface behaviors. | Trang |
| 0 | 2 | *H3: User Control & Freedom / Severity: 2*  **Task**: Choosing Orderlist in menu bar  **Description**: User can not choose the option Orderlist in the menu bar, or it will be slided to choose Account instead.  **Rationale**: Users may be frustrated and confused while cannot access an icon in the system  **Fix**: Add another page for Orderlist choice, or delete that choice from the bar | Hang |
| 0 | 3 | *H4: Consistency & Standards / Severity: 1*  **Task**: Visualize the menu bar  **Description**: In some page, the menu bar shows “Accout" choice, while showing “Account” for the other  **Rationale**: Users may be frustrated by spelling mistakes.  **Fix**: Fix all page to show “Account” option. | Hang |
| 0 | 4 | *H8: Aesthetic & Minimalist Design / Severity: 1*  **Task**: Visualize the page  **Description**: The shop’s icon is not consistent by place on every page  **Rationale**: Users may be frustrated.  **Fix**: Fix the place of the icon on each page. | Hang |
| 0 | 5 | *H7: Flexibility & Efficiency of Use / Severity: 3*  **Task**: Visualize the option in “Account” page  **Description**: The “Account” page has a lot of options that cannot be chosen  **Rationale**: Users may be frustrated while trying to choose the option  **Fix**: Add a page for each option/ Reduce the inactive options | Hang |
| 0 | 6 | *H3: User Control & Freedom / Severity: 4*  **Task**: Scrolling on main page  **Description**: The application automatically scrolling down as users trying to choose the icon from the top  **Rationale**: Users will be frustrated.  **Fix**: Fix the scrolling function of the page | Hang |
| 1[[2]](#footnote-3) | 1 | H4 Consistency and Standards / Severity: 2  **Task**: Open chatbot window  **Description**: The button for chatbot is at the page’s end, users would have to scroll all the way down to find it  **Rationale**: Users rarely find what at the bottom page interesting and never scroll that far  **Fix**: Make the below navigation bar stick with the bottom line of device | Huong |
| 1 | 2 | H10 Help & Documentation / Severity: 2  **Task**: Chatbot recommendation  **Description**: The chatbot lacks clear instructions on how to use it for product recommendations.  **Rationale**: Users may be unsure how to interact with the chatbot effectively.  **Fix**: Include a brief guide or prompts to assist users in utilizing the chatbot. | Trang |
| 1 | 3 | H7 Flexibility & Efficiency of Use / Severity: 0  **Task**: Chatbot recommendation  **Description**: The chatbot does not remember previous interactions, requiring users to repeat information  **Rationale**: Repetitive interactions can frustrate users and reduce efficiency.  **Fix**: Implement context retention in the chatbot to remember past interactions. | Trang |
| 1 | 4 | *H3: User Control & Freedom / Severity: 2*  **Task**: Chatbot  **Description**: The “Notification” and “Promos” choices cannot be chosen  **Rationale**: Users may be frustrated and confused while cannot access an icon in the system  **Fix**: Add another page for Notification and Promos choice or delete that choice from the top. | Hang |
| 2[[3]](#footnote-4) | 1 | H1 Visibility of 1 System Status/ Severity: 1  **Task**: Viewing product in 3D  **Description**: After pressing View in 3D, a new tab is opened. The tab only contains a single 3D model that is able to rotate.  **Rationale**: Without any description, users won’t know that this model is able to rotate by dragging.  **Fix**: Add instruction text “Drag to rotate” | Huong |
| 2 | 2 | H6 Recognition Rather Than Recall / Severity: 3  **Task**: Viewing product in 3D  **Description**: After pressing View in 3D, a new tab is opened. The tab only contains a single 3D model without any description about the product’s detail or product’s name.  **Rationale**: Users would have to switch back to the initial app to see what product they are viewing.  **Fix**: Add product’s name and a short description of that product. | Huong |
| 2 | 3 | H8 Aesthetic and Minimalist Design / Severity: 1  **Task**: See detail about products on product detail page  **Description**: After clicking the Detail button, the exit of that page is clicking the Detail button again or clicking the arrow at the top left  **Rationale**: The inconsistency can confuse user, also the Detail button looking like normal text can make user miss it  **Fix**: Delete the Detail button and display all information at the start | Huong |
| 2 | 4 | H8: Aesthetic & Minimalist Design/ Severity: 0  **Task:** Browsing Products  **Description:** The product browsing page displays excessive information, including long descriptions and multiple badges, leading to clutter.  **Rationale:** Overloading users with information can make it difficult to focus on key product details.  **Fix:** Simplify the design by showing essential information and using expandable sections for additional details. | Trang |
| 2 | 5 | H2: Matching Between System & Real World/ Severity: 0  **Task:** Browsing Products  **Description:** The detail product page display technical product names that may not align with common user terminology.  **Rationale:** Users may not understand technical jargon, leading to confusion.  **Fix**: Use user-friendly language in product names and descriptions. | Trang |
| 2 | 6 | H1: Visibility of System Status/ Severity: 2  **Task:** Browsing Products  **Description:** When loading product images, there is no indicator, causing users to think the page is unresponsive.  **Rationale:** Lack of feedback during loading can lead to user frustration.  **Fix**: Add loading indicators for product images. | Trang |
| 2 | 7 | H5: Error Prevention/ Severity: 2  **Task:** Browsing Products  **Description:** During checkout, users cannot easily edit their cart without restarting the process.  **Rationale:** Users need flexibility to modify their cart without losing progress.  **Fix**: Allow users to edit their cart during checkout without restarting. | Trang |
| 2 | 8 | *H3: User Control & Freedom / Severity: 2*  **Task**: Viewing product  **Description**: Cannot comeback to product after choosing “View in 3D”  **Rationale**: Users may be frustrated and confused while cannot turn back to the application  **Fix**: Add an “Back” choice in the 3D viewing interface | Hang |
| 2 | 9 | *H3: User Control & Freedom / Severity: 2*  **Task**: Viewing product  **Description**: Hide the “View in 3D” option and product name if users choose to see the detail  **Rationale**: Users may be confused first time using  **Fix**: Keep the “View in 3D” option and product name even when showing the detail | Hang |
| 3[[4]](#footnote-5) | 1 | H1 Visibility of System Status / Severity: 2  **Task**: Confirm information and place an order  **Description**: After pressing Confirm, users are led back to the home page immediately  **Rationale**:  **Fix**: Add message whether the order is successfully placed or encountering any error | Huong, Trang |
| 3 | 2 | H1 Visibility of System Status / Severity: 2  **Task**: Checkout  **Description**: After pressing Checkout, the app switch to login screen without any explanation  **Rationale**: User may be confuse since they don’t know that the checkout process requires login by entering their password  **Fix**: Add text “You need to login to continue” | Huong |
| 3 | 3 | H8 Aesthetic and Minimalist Design / Severity: 2  **Task**: Confirm information and place an order  **Description**: At the confirm page, there is a basket shape button that lead to the account page  **Rationale**: There is no purpose of that button  **Fix**: Delete that basket button | Huong, Hang |
| 3 | 4 | H3 User Control and Freedom / Severity: 3  **Task**: Login to confirm and place an order  **Description**: At the login screen, the only exit is pressing the app logo to go to the home page  **Rationale**: To those who don’t know that the logo is one kind of button, they cannot undo or go to the previous page at the login screen  **Fix**: Add an arrow at the top left corner to make canceling order more clearly | Huong |
| 3 | 5 | H3: User Control & Freedom/ Severity: 3  **Task:** Purchasing Product  **Description:** The "Add to Cart" button is active even when a product is out of stock, leading to potential purchase errors.  **Rationale:** Users may attempt to purchase unavailable items, causing frustration.  **Fix**: Disable the "Add to Cart" button for out-of-stock products and display an out-of-stock message. | Trang |

## Summarize the violation totals in a table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Category** | **# Viol. (sev 0)** | **# Viol. (sev 1)** | **# Viol. (sev 2)** | **# Viol. (sev 3)** | **# Viol. (sev 4)** | **# Viol. (total)** |
| H1: Visibility of Status | 0 | 1 | 3 | 0 | 0 | **4** |
| H2: Match Sys & World | 1 | 0 | 0 | 0 | 0 | **1** |
| H3: User Control | 0 | 0 | 4 | 2 | 1 | **7** |
| H4: Consistency & Standards | 0 | 1 | 2 | 0 | 0 | **3** |
| H5: Error Prevention | 0 | 0 | 1 | 0 | 0 | **1** |
| H6: Recognition not Recall | 0 | 0 | 0 | 1 | 0 | **1** |
| H7: Efficiency of Use | 1 | 0 | 0 | 1 | 0 | **2** |
| H8: Minimalist Design | 1 | 2 | 1 | 0 | 0 | **4** |
| H9: Help Users with Errors | 0 | 0 | 0 | 0 | 0 | **0** |
| H10: Help & Documentation | 0 | 0 | 1 | 0 | 0 | **1** |
| H11: Accessible Design | 0 | 0 | 0 | 0 | 0 | **0** |
| H12: Value Alignment & Inclusion | 0 | 0 | 0 | 0 | 0 | **0** |
| **Total Violations by Severity** | **3** | **4** | **12** | **4** | **1** | **24** |

*\*\* Note that all rows and columns in this table should add up as expected.*

## Analyze how well each evaluator did.

|  |  |  |  |
| --- | --- | --- | --- |
| **Severity/Evaluator** | **Evaluator A**  **Huong** | **Evaluator B**  **Hang** | **Evaluator C**  **Trang** |
| % Sev.0  Ex: Eval A count / total sevs 0 in table #3 | 0/3 | 0/3 | 3/3 |
| % Sev.1  Ex: Eval A count / total sevs 1 in table #3 | 2/4 | 2/4 | 0/4 |
| % Sev.2  Ex: Eval A count / total sevs 2 in table #3 | 4/12 | 5/12 | 5/12 |
| % Sev.3  Ex: Eval A count / total sevs 3 in table #3 | 2/4 | 1/4 | 1/4 |
| % Sev.4  Ex: Eval A count / total sevs 4 in table #3 | 0/1 | 1/1 | 0/1 |
| **Total (sev 3&4)**  Ex: Eval A count / total sevs 3&4 in table #3 | 2/5 | 2/5 | 1/5 |
| **Total (all severity levels)**  Ex: Eval A total count / total all sevs found by all in table #3 | 8/24 | 9/24 | 9/24 |

\*\* Note that the bottom 2 rows are NOT calculated by adding the numbers above

## Merge summarizing recommendations.

Through this heuristic evaluation, we identified several usability issues that significantly impact the user experience across the website and mobile application. A recurring problem is the lack of user control and freedom (H3), as users struggle to navigate smoothly due to unresponsive menu options and the absence of clear pathways back to the previous state. Navigation elements, such as the chatbot button being too hidden and the absence of an exit option on the login screen, further contribute to user frustration. Additionally, issues with visibility of system status, such as missing feedback when confirming orders, hinder user confidence and engagement.

Consistency and standards (H4) violations were also prevalent, with spelling errors, inconsistent icon placements, and buttons resembling plain text, which confuse users and diminish the interface's credibility. Aesthetic and minimalist design (H8) problems, along with poor flexibility and efficiency of use (H7), were evident in redundant or poorly implemented interface elements that add unnecessary complexity. For example, instructions for rotating 3D models were unclear, and irrelevant icons created clutter, detracting from the app's usability.

To address these issues, we recommend improving navigational controls, ensuring all buttons and menu options function correctly, and providing clear feedback to users. Inconsistencies in labeling and icon placement should be fixed to create a cohesive and professional interface. Simplifying design elements and removing redundancies will streamline the user experience, while standardizing the placement of key visual elements, such as the shop icon, across all pages will maintain a clean and predictable layout. Enhancing the visibility of system status and ensuring intuitive navigation will further improve the platform's usability.

By implementing these changes, the application and website will become more intuitive, efficient, and user-friendly, reducing frustration and increasing customer satisfaction and engagement.

1. All tasks [↑](#footnote-ref-2)
2. Simple task [↑](#footnote-ref-3)
3. Moderate task [↑](#footnote-ref-4)
4. Complex task [↑](#footnote-ref-5)