

HCI2 – Final Project

Heuristic Evaluation of

Evaluators:

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4. Joel Kent Y. Bruzo
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System:

Description: This Inventory Management System was develop using PHP and MySQL Database. It is a simple system created using HTML, CSS design, JavaScript, Bootstrap, and Ajax. This Inventory management system is all about selling and buying products. It is a simple project that monitors the stock quantity. This system has a pleasant user interface and it is user-friendly. The system generates reports for the list of Items, Sales, Vendor, Customer, and Purchases. Each of these reports can be printed and exported to CSV, Excel, and PDF.

Features:

- User Registration
- User Login
- Item Management
- Purchases Management
- Sales Management
- Customer Management
- Generates Reports

Jacob Nielsen Usability Heuristics

- 1. Visibility of System Status: The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time. Does the design clearly communicate its state? Is feedback presented quickly after user actions?**
 - a. Angel:

- i. Issues: The functionalities that were required to be displayed were all visible, and all error messages and warnings were given in an understandable and unmistakable manner.
 - ii. Recommendation: In regards to this heuristic principle, I have no recommendations.
- b. China:
 - i. Issues: Everything the user needs to see is easy to find. The system does a good job of showing notifications and error messages clearly and quickly.
 - ii. Recommendation: I see that there is no need for improvements necessary for this area
- c. Ivan:
 - i. Issues: No real-time stock updates when purchases or sales are added.
 - ii. Recommendation: Show dynamic stock counts that update as transactions are made.
- d. Mica:
 - i. Issues: There was no issues in the visibility of the functions that were needed to be presented all notifications and error messages was clearly presented and are not misleading.
 - ii. Recommendation: I have no recommendation regarding this heuristic principle.
- e. Kent:
 - i. Issues: There is a lack of general overview of the whole system. The user cannot look at the system as a whole. There are also no display of the total number of each sector like the products or customers.
 - ii. Recommendation: Create a home page showing a summary of the whole inventory or sidebar indicating number per sector.

2. Match Between System and the Real World: The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order. Will user be familiar with the terminology used in the design? Do the design's controls follow real-world conventions?

- a. Angel:
 - i. Issues: various customers might not identify the new terms used in various parts of the error messages, such as "DB" or Database. There are grammatical errors in certain messages.
 - ii. Recommendation: I advise the developers to refrain from using developer jargon and correct the grammar in several messages.
- b. China:
 - i. Issues: Some of the messages include terms like "DB" that might not make sense to regular users. A few messages also have grammar mistakes.
 - ii. Recommendation: would help if the wording were simpler and more user-friendly. Fixing the grammar would also make the messages look more professional.
- c. Ivan:
 - i. Issues: Technical jargon like "DB" in messages.
 - ii. Recommendation: Use real-world terms
- d. Mica:

- i. Issues: Some parts of the error messages have unfamiliar terms that some users may not recognize example is the term "DB" or Database. Some messages are grammatically incorrect.
 - ii. Recommendation: Some parts of the error messages have unfamiliar terms that some users may not recognize example is the term "DB" or Database. Some messages are grammatically incorrect.
- e. Kent:
 - i. Issues: During an error in adding an item, the error message mentioned that the item has been added to the "DB" as in database which is technical jargon to a normal user.
 - ii. Recommendation: Use simple, understandable terms like "Item already exists."

3. User Control and Freedom: Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process. Does the design allow users to go back a step in the process? Are exit links easily discoverable? Can users easily cancel an action? Is Undo and Redo supported?

- a. Angel:
 - i. Issues: Although there is a clear button that enables users to remove the data they have entered, there is no confirmation pop-up that lets users confirm or cancel an activity.
 - ii. Recommendation: Pop-up messages that give consumers the option to revoke an action are something I suggest.
- b. China:
 - i. Issues: There's no confirmation prompt when a user tries to clear the data, so it's easy to delete everything by accident.
 - ii. Recommendation: A simple confirmation pop-up before clearing the data would give users a chance to stop if they clicked by mistake.
- c. Ivan:
 - i. Issues: No "Undo" for deleting an item or sale.
 - ii. Recommendation: Add Undo or soft-delete (trash bin) features.
- d. Mica:
 - i. Issues: There is no confirmation pop up that allows user to confirm or cancel an action although there is a clear button that allows users to clear the data that they inserted.
 - ii. Recommendation: I recommend that there should be pop up messages that allows users to have the freedom to cancel an action.
- e. Kent:
 - i. Issues: When doing an action like adding, deleting, or updating entries, there are no confirmation message to confirm whether or not the user indeed do the action. The user could mistakenly press delete and permanently delete the item without intending to do so.
 - ii. Recommendation: For every weighted action, provide a confirmation message to confirm the users action.

4. Consistency and Standards: Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions. Does the design follow industry conventions? Are visual treatments used consistently throughout the design?

- a. Angel:
 - i. Issues: Only a small number of jargon terms that are foreign to regular users were present.
 - ii. Recommendation: Only a small number of jargon terms that are foreign to regular users were present.
- b. China:
 - i. Issues: Some words used in the system might be unfamiliar to everyday users — they feel more like developer terms.
 - ii. Recommendation: Try to stick with terms that most people would understand. Consistency in wording goes a long way in making the system easier to use.
- c. Ivan:
 - i. Issues: Different naming conventions across modules (e.g., “Customer ID” in one place, “Client ID” in another).
 - ii. Recommendation: Audit and standardize naming conventions system-wide.
- d. Mica:
 - i. Issues: There were just a few jargons that are unfamiliar for normal users.
 - ii. Recommendation: I recommend avoiding using these jargons.
- e. Kent:
 - i. Issues: There are grammatically incorrect statements. The name and address inputs are not normalized. It simply requests for the string value of the entire name or address. This would cause non-standard and inconsistent records.
 - ii. Recommendation: Fix grammatical errors. Create different input boxes for different parts of a name or address.

5. Error Prevention: Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions, or check for them and present users with a confirmation option before they commit to the action. Does the design prevent slips by using helpful constraints? Does the design warn users before they perform risky actions?

- a. Angel:
 - i. Issues: It is difficult to see the user's mistakes right away because the error messages are at the top.
 - ii. Recommendation: I suggest that pop-up messages be positioned precisely where the mistakes have been committed.
- b. China:
 - i. Issues: Error messages appear at the top of the screen, so they're easy to miss, especially when the issue is somewhere else on the page.
 - ii. Recommendation: It would be better to show the error messages right next to the input fields where the problems happened, so users can spot and fix them faster.
- c. Ivan:

- i. Issues: Allows duplicate item entries without warning.
 - ii. Recommendation: Use duplicate detection mechanisms and alert users.
- d. Mica:
 - i. Issues: The error messages are located on the top making it hard to immediately see what errors the user had done.
 - ii. Recommendation: I recommend the error be pop up messages placed exactly where the errors have been made.
- e. Kent:
 - i. Issues: The error message is placed in one place only, no matter where or what the error is. This makes it difficult for the user to identify in which action or input the error is in, or sometimes even miss the error. There are also no instructions given for the processes.
 - ii. Recommendation: Display a short instruction on what to do in that process window. Display the error message under the input box or as a noticeable pop-up that also notifies which area has an error. It's also helpful if there are placeholders in the input boxes, be they examples or short instructions.

6. Recognition Rather Than Recall: Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable when needed. Does the design keep important information visible, so that users do not have to memorize it? Does the design offer help in-context?

- a. Angel:
 - i. Issues: The system was simple to use and intuitive, so I had no problems using it.
 - ii. Recommendation: Regarding this, I have no suggestions.
- b. China:
 - i. Issues: No real problems here — the layout is clean, and users can find what they need without having to remember anything complicated.
 - ii. Recommendation: Nothing to fix here; this part of the system is working well.
- c. Ivan:
 - i. Issues: Users must memorize field requirements (e.g., what format for product codes?).
 - ii. Recommendation: Display format hints near input fields (e.g., “e.g., PROD-001”).
- d. Mica:
 - i. Issues: I found no issues with this as the system was minimalist and easy to navigate.
 - ii. Recommendation: I have no recommendations for this.
- e. Kent:
 - i. Issues: Aside from having no general overview of the inventory except for the search section, the input boxes for item number and customer number in the sales section do not have even a drop-down list of the items or customers, causing the user the need to remember or look back on the list, the item or customer number.

- ii. Recommendation: Have a homepage or an informative navbar showing the general overview of the inventory, like number of items etc.. Have a drop-down list of the items or customers to enable selection rather than number input from user's memory. Use names of items or customer rather than id numbers to help searching for the specific record.

7. Flexibility and Efficiency of Use: Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions. Does the design provide accelerators like keyboard shortcuts and touch gestures? Is content and functionality personalized or customized for individual users?

- a. Angel:
 - i. Issues: Keyboard shortcuts were not mentioned.
 - ii. Recommendation: For ease of usage, I suggest adding keyboard shortcuts.
- b. China:
 - i. Issues: There aren't any keyboard shortcuts or quick actions to help experienced users work faster.
 - ii. Recommendation: Adding some shortcuts or time-saving tools would make the system more efficient for people who use it often.
- c. Ivan:
 - i. Issues: No "favorite" or "frequently used" list for common items or vendors.
 - ii. Recommendation: Let users pin frequently used vendors/items.
- d. Mica:
 - i. Issues: There were no keyboard shortcuts indicated.
 - ii. Recommendation: I recommend to add keyboard shortcuts for efficiency of use.
- e. Kent:
 - i. Issues: There is no dark mode. Users that have problems with light sensitivity might have difficulties with the system. When the website is resized, the sidebar simply stays there instead of being minimized or converted to a menu, causing the user to scroll down to the process window.
 - ii. Recommendation: Enable dark-mode design, make the sidebar react responsively

8. Aesthetic and Minimalist Design: Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility. Is the visual design and content focused on the essentials? Have all distracting, unnecessary elements been removed?

- a. Angel:
 - i. Issues: Because of the system's simple design, I didn't find any problems with it.
 - ii. Recommendation: I have no recommendations.
- b. China:
 - i. Issues: The design is simple and focused — there's nothing unnecessary that gets in the way.

- ii. Recommendation: No changes needed here. The minimalist design is one of the system's strengths.
- c. Ivan:
 - i. Issues: Cluttered interface with too many fields or buttons visible at once.
 - ii. Recommendation: Group related fields; use tabs or accordion-style sections.
- d. Mica:
 - i. Issues: I found no issues with this as the system had a minimalist design.
 - ii. Recommendation: I have no recommendations.
- e. Kent:
 - i. Issues: It's too focused on the essentials. When you open the website, the "item" process window immediately greets you, almost suggesting you to do that work immediately, almost giving you no option to chose which you would do first, or have an overview of the current system status. Instead of aesthetic or minimalistic, it's stoic and prompts users to directly work.
 - ii. Recommendation: Display a minimalistic homepage first after successful login.

9. Help Users Recognize, Diagnose, and Recover from Errors: Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution. Does the design use traditional error message visuals, like bold, red text? Does the design offer a solution that solves the error immediately?

- a. Angel:
 - i. Issues: The absence of canceling features for the acts is my sole complaint.
 - ii. Recommendation: In order to provide people the flexibility to go back and correct any mistakes they may have made, I suggest including cancellation alternatives.
- b. China:
 - i. Issues: There's no way to cancel or undo certain actions, which could be frustrating if a user makes a mistake.
 - ii. Recommendation: Adding cancel or undo buttons would make the system more forgiving and user-friendly.
- c. Ivan:
 - i. Issues: No indication of which field caused the error.
 - ii. Recommendation: Highlight the problematic fields with inline messages.
- d. Mica:
 - i. Issues: The only issue I have is the lack of cancellation features for the actions.
 - ii. Recommendation: I recommend to put cancellation options so that users have the freedom to go back to there actions and undo mistakes if made.
- e. Kent:
 - i. Issues: An error alert uses the term DB which is technical jargon for normal users. The error message, other the color, is almost the same as a success message. The error message has no suggestion how to correct the error made.
 - ii. Recommendation: Use simple words, emphasize where the error is happening, and provide short instruction to recover from the error.

10. Help and Documentation: It's best if the system doesn't need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks. Is help documentation easy to search? Is help provided in context right at the moment when the user requires it?

- a. Angel:
 - i. Issues: The system did not have a Help and Documentation component.
 - ii. Recommendation: Even if the system is simple to use, I advise the developers to include assistance and documentation. This feature will be beneficial for those who are prone to forgetfulness.
- b. China:
 - i. Issues: There's no built-in help or support feature. While the system is easy to use, some users might still need a little guidance.
 - ii. Recommendation: Including a simple help section or guide could be a big help, especially for new or forgetful users.
- c. Ivan:
 - i. Issues: No help available for complex actions like generating inventory reports.
 - ii. Recommendation: Include tooltips, contextual help buttons (e.g., "?" icons), or a Help section.
- d. Mica:
 - i. Issues: There was no Help and Documentation feature present in the system.
 - ii. Recommendation: I recommend that the developers add help and documentation although the system is easy to understand this feature will be helpful for forgetful users.
- e. Kent:
 - i. Issues: There is no documentation, no help button, no instruction or written context about what the process is about, and no tooltips.
 - ii. Recommendation: Provide documentation, help button, instruction or written context, and tooltips.