University of Science – Vietnam National University
Faculty of Information Technology

CS423 – Software Testing

HW05 Report

GUI Usability Testing

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TASK 1: GUI TESTING

1. Objective

To verify the GUI of the "Product Detail Page" against a standardized checklist to ensure visual consistency, content accuracy, and navigation functionality.

2. Test Scope

- **URL:** Slip Joint Pliers
- **Page Tested:** Product Detail Page (Slip Joint Pliers).
- **Checklist Used:** See attached Excel file *(Web GUI Checklist)*. The checklist contains **54 items** covering Links, Colors, Content, Images, Forms, Navigation, User Convenience, and Compatibility.
- **Note on Customization:** *Some items from the original master checklist (specifically regarding printer compatibility, complex form inputs like radio buttons, and backend database validations) were omitted as they are not applicable to the specific UI elements present on the Product Detail Page.*

3. Key Findings

Upon execution of the GUI Checklist, the following visual and functional defects were identified:

1. **Navigation Error:** The "Home" link in the menu incorrectly redirects the user to the "Contact" page instead of the Homepage (Item 1.1.1).
2. **Broken Asset:** The main site logo in the header is not displayed (broken image icon), though the area is still clickable (Item 1.3.5).
3. **UI Layout Issue:** The text on the "**Add to cart**" button is partially covered, making it look unprofessional (Item 1.3.3).
4. **Inconsistent Visual Feedback:**
    - Visited link colors are not changed (Item 1.2.6).
    - The color shift on hover for links is barely visible, potentially affecting accessibility (Item 1.2.7).
5. **Spelling Errors:** Found "Contakt" in the menu and "Reltded products" in the footer (Item 1.3.12).
6. **Placeholder Content:** The product description contains "Lorem Ipsum" text instead of a valid English description (Item 1.3.11).

(Please refer to the attached Excel file (Web GUI Checklist) for the detailed status of all 54 items).

TASK 2: USABILITY TESTING

1. Objective

To evaluate the "Checkout Flow" (from adding items to the cart through to payment confirmation) to assess ease of use, system reliability, and user trust.

2. Methodology

- **Tool:** Google Forms.
- **Participants:** 12 Users.
- **Test Scenario:** Users were asked to add a random item to the cart, proceed to checkout, log in, and complete the payment process using provided dummy credentials.

3. Survey Design

The survey was designed using a **mixed-method approach**, combining quantitative data (Likert scales, Yes/No) with qualitative data (open-ended text). The questions were specifically selected to isolate known issues in the "Sprint 5-with-bugs" build.
The survey was divided into four strategic sections:

Section A: Test Environment

- **Questions:** *Device used? Browser used?*
- **Rationale:** To identify if reported bugs are specific to a platform (layout issues on Mobile vs. Desktop). This ensures that negative feedback is contextualized by the user's environment.

Section B: System Behavior

- **Questions:**
  - *Did the cart calculate the total correctly?*
  - *Did you notice spelling errors?*
  - *Did you encounter error messages?*
- **Rationale:** These "Fact-Check" questions were designed to verify if users **noticed** the critical bugs present in this build (specifically the $00.00 pricing error and the "Blliling Adress" typo). This distinguishes between a user simply disliking the design versus a user objectively witnessing a system failure.

Section C: User Experience Ratings

- **Questions:** *Likert Scale (1-5) on Ease of Navigation, Clarity of Forms, Trustworthiness, and Payment Confidence.*
- **Rationale:**
  - **Trustworthiness:** Included specifically to measure the impact of the spelling errors and broken logos on user confidence.
  - **Payment Confidence:** Included to assess the confusing design of the Payment page (which lacks instructions).
  - **Navigation:** To measure the flow efficiency from Cart to Checkout.

Section D: Qualitative Feedback

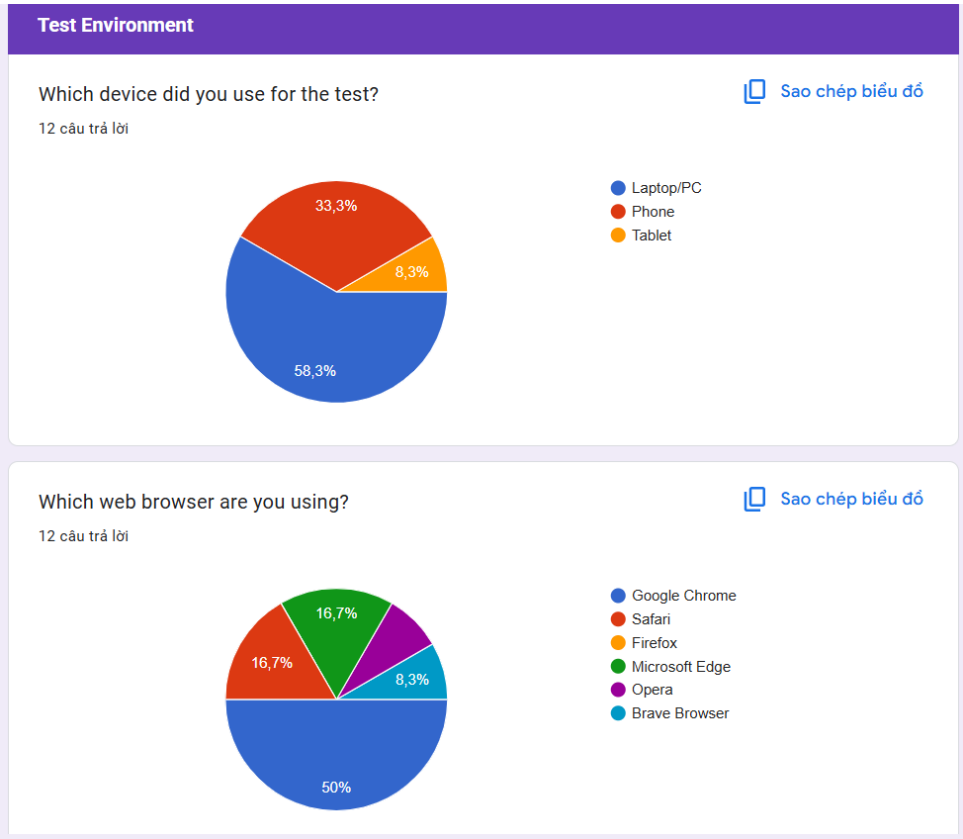
- **Questions:** *Describe any bugs? Where were you confused? Suggestions for improvement?*
- **Rationale:** To capture detailed bug reports that the Yes/No questions might miss (the specific "Oops" error message behavior) and to allow users to express frustration in their own words, providing context to the low Likert scores.

4. Analysis of Feedback

A. Test Environment

The participants used a mix of devices, ensuring coverage for both Desktop and Mobile responsiveness.

- **Devices:** 58.3% Laptop/PC, 33.3% Phone, 8.3% Tablet.
- **Browsers:** 50% Google Chrome, with the remainder split between Safari, Firefox, Edge, etc.

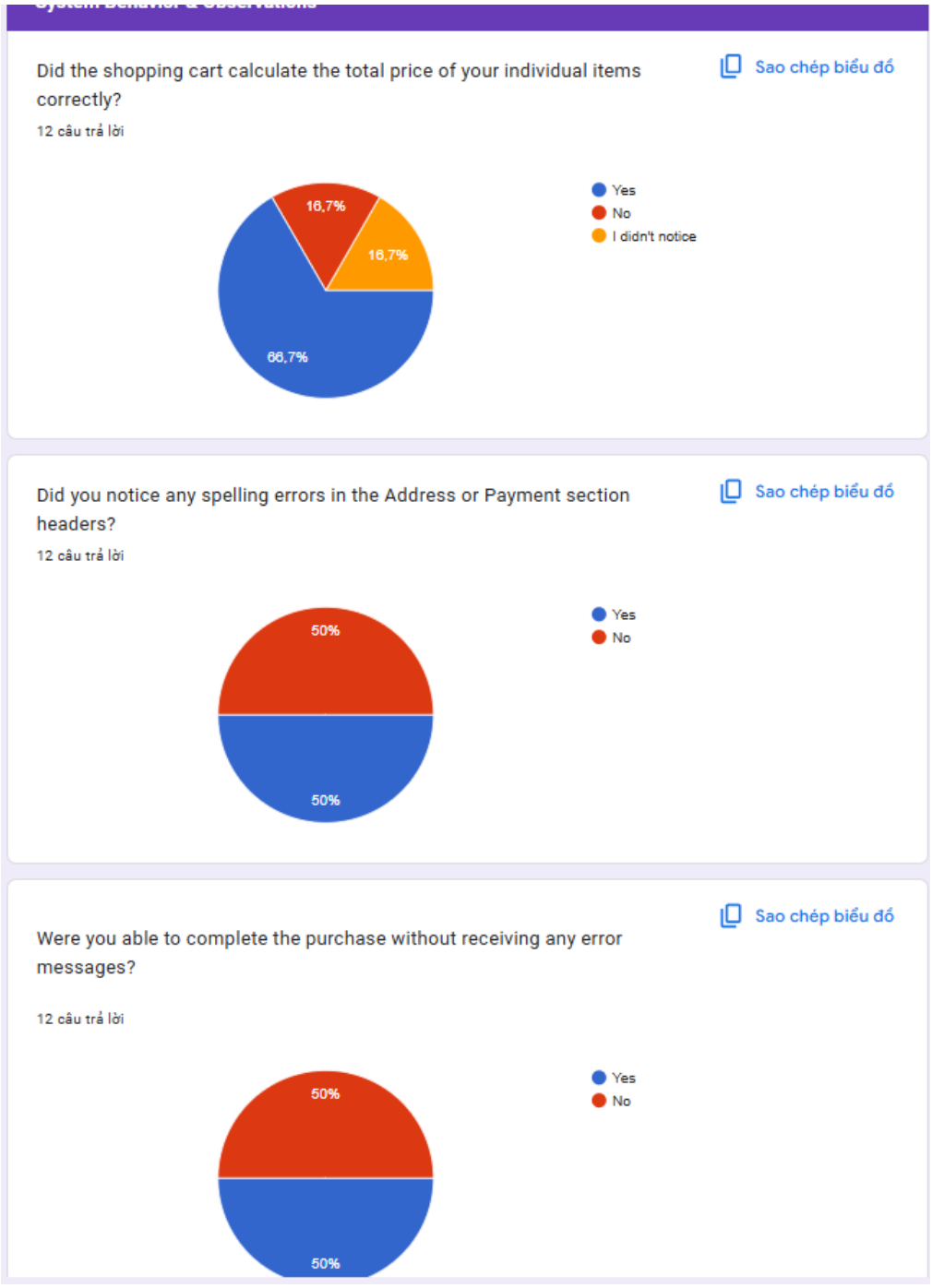


B. Quantitative Analysis

We asked users Yes/No questions to determine if functional errors occurred during their session. The results indicate significant system instability.

- **Shopping Cart Calculation:** 16.7% of users reported issues with the price calculation (specifically noting the $00.00 error). As this is a small detail, most of them missed or didn't notice.

- **Spelling & Typos:** 50% of users noticed the spelling errors ("Blliling Adress", "Contakt"), while the other 50% did not.
- **System Errors:** 50% of users encountered an error message during the flow, specifically when adding items to the cart.

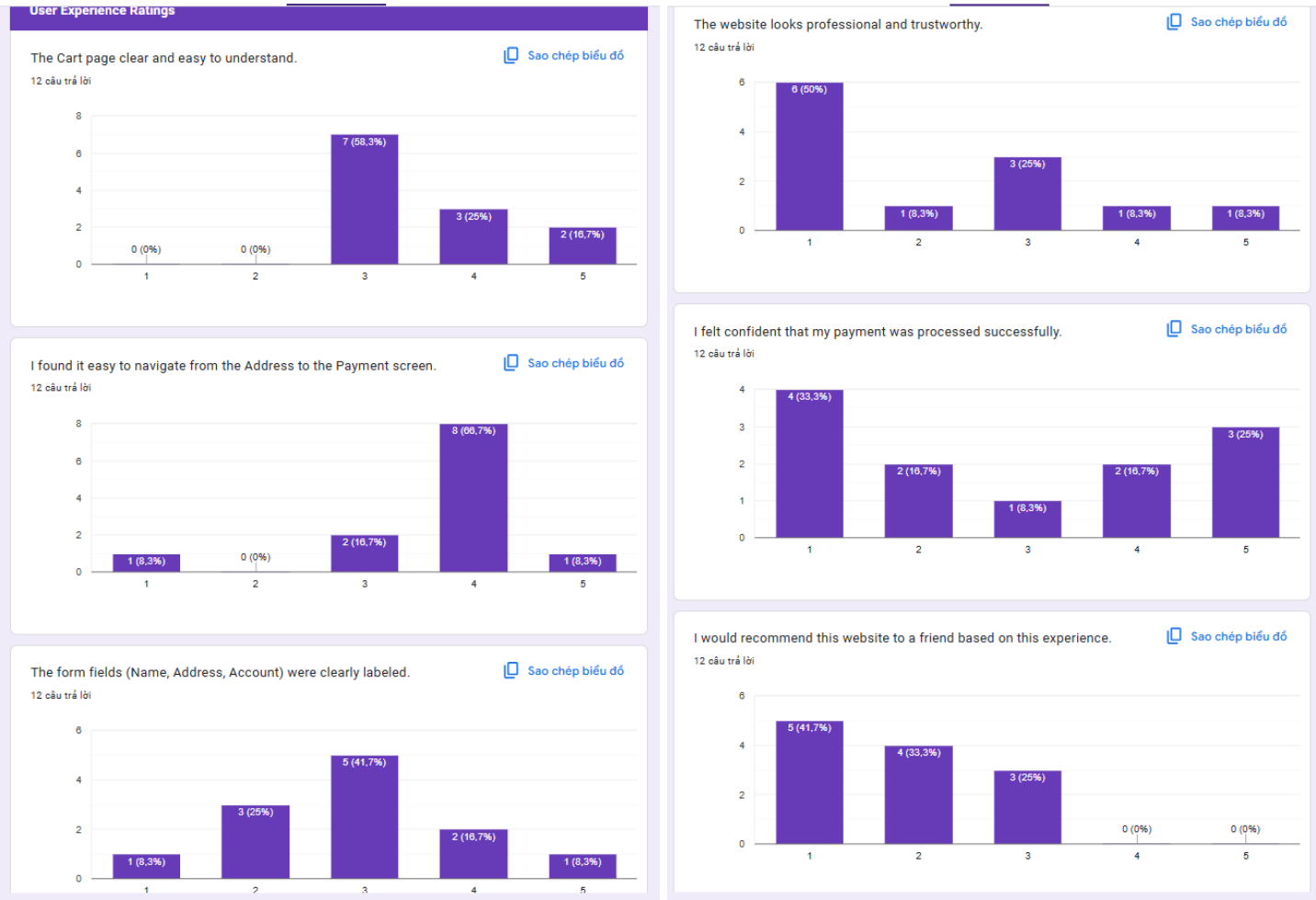


C. User Experience Ratings (Likert Scale 1-5)

Users rated their experience on a scale of 1 (Poor/Strongly Disagree) to 5 (Excellent/Strongly Agree).

Key Observations:

1. **Trust & Professionalism:** The majority of users rated the site's trustworthiness as **1, 2 or 3 out of 5**. This is a direct result of the visible typos and layout issues.
2. **Payment Confidence:** User confidence that the payment succeeded was spread (but mostly low), likely due to the lack of clear feedback or instructions on the payment page.
3. **Clarity:** While navigation received mixed scores (some high, some low), the "Form Label" clarity was rated as average (3/5).



D. Qualitative Analysis (Feedback & Bugs)

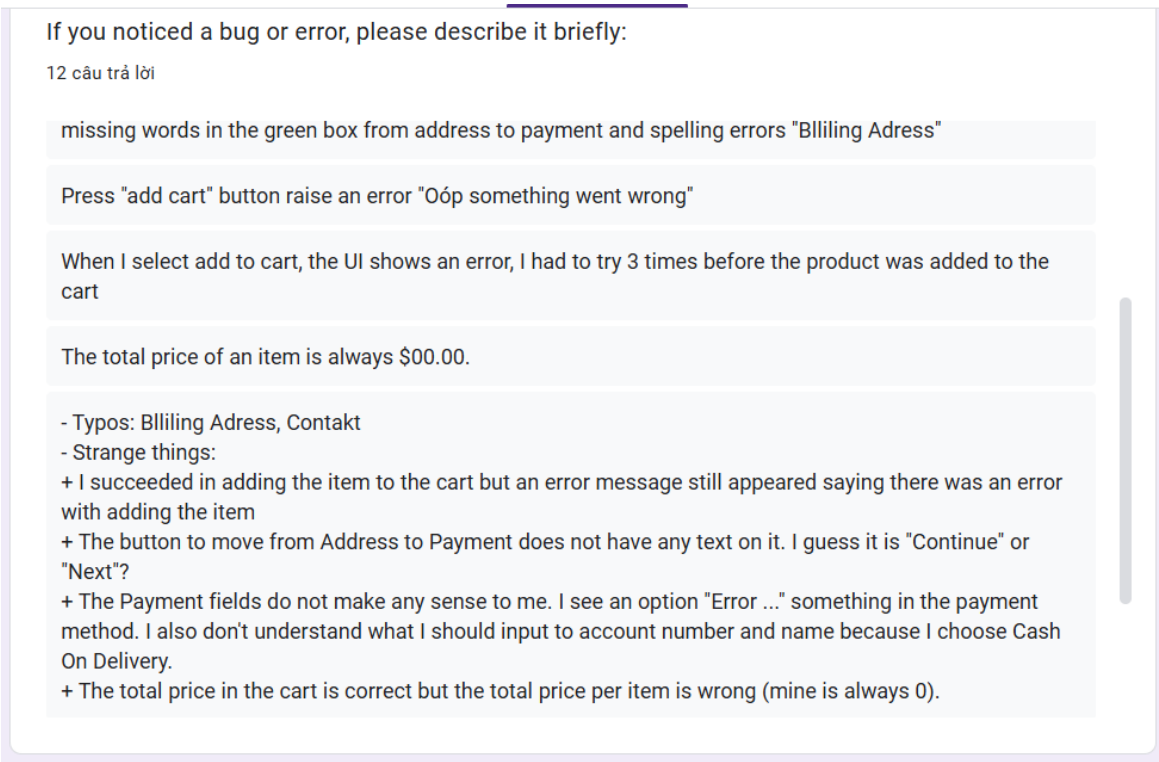
Participants provided detailed text feedback identifying critical functional bugs and usability blocks.

a) Identified Functional Bugs

- **The "False" Error Message:** Multiple users reported that pressing "Add to cart" triggers an error message ("Oops something went wrong") even though the item is successfully added to the cart.
- **Pricing Error:** Confirmed reports that the "Total" column for individual items displays **$00.00**.
- **Missing Button Text:** The "Proceed" button on the Address page has no label/text, confusing users on how to continue.
- **Logic Error:** When selecting "Buy Now Pay Later", the form still forces the user to enter Credit Card information.

b) Usability & Design Issues

- **Typos:** "Blliling Adress" and missing words in the green progress box.
- **Mobile Navigation:** Users testing on mobile devices reported difficulty finding the **Shopping Cart** to view their items. The cart icon is hidden inside the "Hamburger Menu" on mobile, rather than being permanently visible in the header, leading to frustration.
- **Payment Confusion:** Users felt the Payment page was poorly designed with no difference between payment methods and no instructions on what input is required.
- **Validation:** One user noted the Post Code field accepts any input (no number validation).



Was there any step where you felt confused or stuck?

12 câu trả lời

- Address
- Step: payment page
- I think in the address and payment page
- When I choose "Buy now pay later", the form still requires my credit information
- I see in the cart, there is a Total column that is showing $00.00 (in the item row), even though my product is $14.15
- The Address page proceed button does not have label text.
- I feel very confused with the payment page. There's no difference between each method.
- What do A, B, C, D stands for?
- - The post code: although i don't fill in with the numbers but it can go through

If you could change ONE thing about the checkout design to make it better, what would it be?

12 câu trả lời

- clarity of the form labels (input fields and submit/next button)
- fix the address
- I think you should change the payment page, add some icons on the shopping page, and give some instructions.
- I think payment page should be redesigned. For example, when I chose bank transfer, there was no information available to complete the payment
- Allow user to type in promotion code/invitation code
- I think adding some icons to the processing steps in the checkout process would look more good, besides, the process button in the address entry step has no text/
- Improve input validation of the Address page.
- Please redesign the payment page. At least give me some instructions what I should input like an example

5. Conclusion & Recommendations

The usability test reveals that while the core flow is technically possible to complete, the **User Experience is severely degraded** by functional bugs and lack of polish.

Here are my **Recommendations:**

1. **Fix the "Add to Cart" API Error:** This is the highest priority fix as it confuses every user immediately.
2. **Restore Button Labels:** Ensure the button on the Address page is labeled "Proceed to Payment".
3. **Correct Pricing Logic:** Ensure Unit Price * Quantity calculates correctly in the Cart view.
4. **Redesign Payment Page:** Hide irrelevant fields (like Credit Card info) when "Bank Transfer" or "Buy Now Pay Later" is selected.

TASK 3: CROSS-BROWSER COMPATIBILITY TESTING

1. Objective

To verify the layout and responsiveness of the "Product Detail Page" across different operating systems and browsers using **BrowserStack**.

2. Tools & Platforms Used

- **Tool:** BrowserStack Live
- **Target Devices:**
    1. Samsung Galaxy S23 Ultra (Android) - Chrome
    2. iPhone 15 Pro (iOS) - Safari
    3. iPad Pro 13" (iOS) - Safari
    4. Windows 11 - Firefox
    5. macOS Sonoma - Microsoft Edge

3. Step-by-Step Procedure

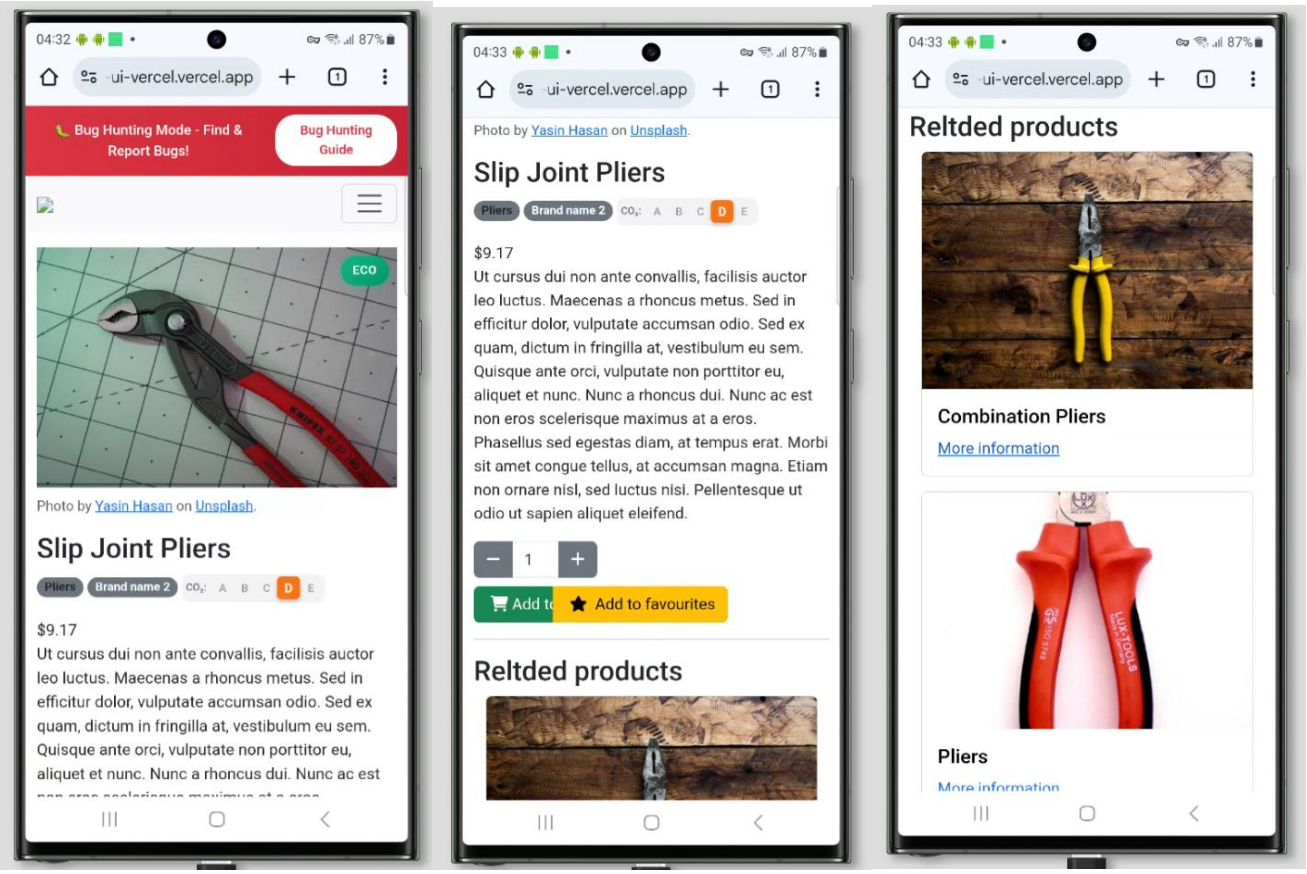
To complete this task, the following steps were executed:

1. **Account Setup:** Logged into the BrowserStack "Live" dashboard using a Free Plan account.
   *Note: Due to the limitations of the free plan, testing was restricted to **1 minute per device**. Consequently, the focus was strictly on rendering verification and rapid screenshot capture.*
2. **URL Input:** Entered the target URL (Slip Joint Pliers) into the Quick Launch bar.
3. **Session 1 (Android):** Selected **Android > Samsung > Galaxy S23 Ultra > Chrome**. Verified the mobile layout stacking order. Captured screenshot.
4. **Session 2 (iOS):** Switched device to **iOS > iPhone 15 Pro > Safari**. Verified mobile menu rendering. Captured screenshot.
5. **Session 3 (Tablet):** Switched to **iOS > iPad Pro 13" > Safari**. Verified the layout in portrait mode. Captured screenshot.
6. **Session 4 (Windows):** Switched to **Windows 11 > Firefox**. Verified font rendering and column alignment. Captured screenshot.
7. **Session 5 (Mac):** Switched to **macOS > Edge**. Verified the footer alignment. Captured screenshot.

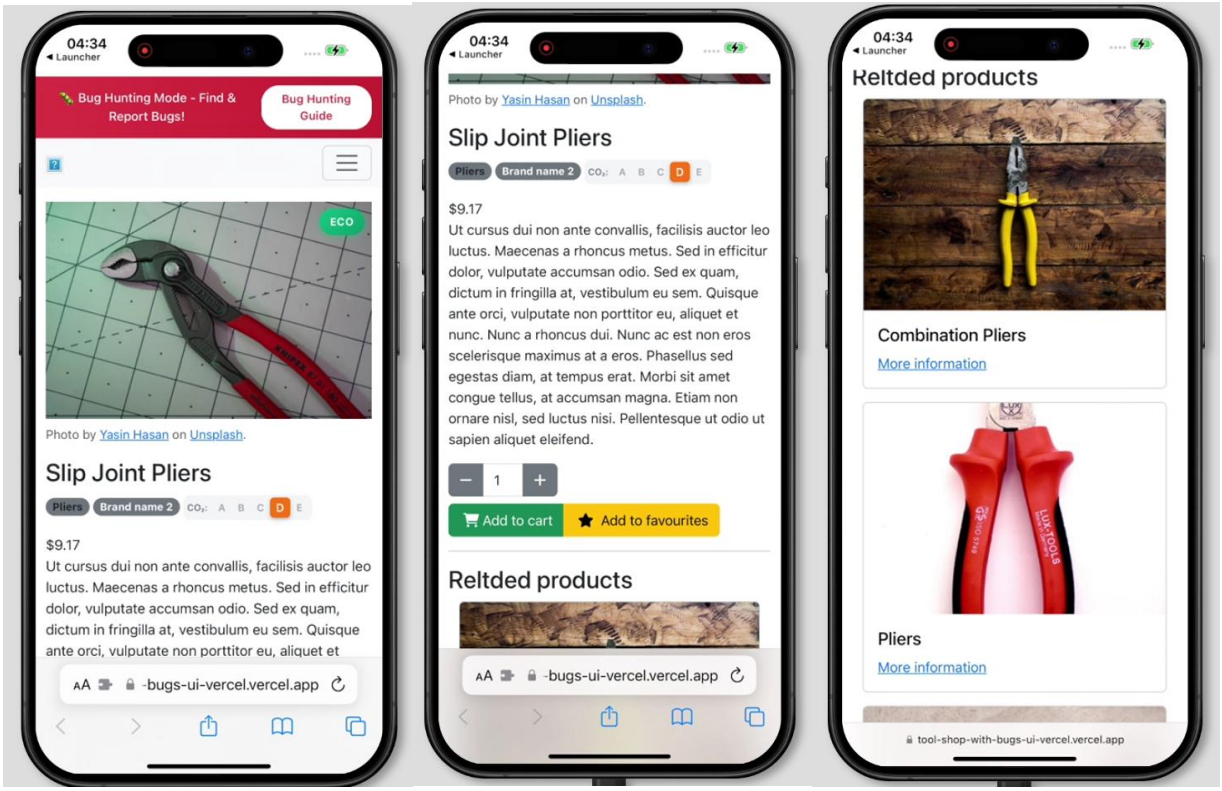
4. Results & Screenshots

All platforms displayed the content functionality, though the "Reltded" spelling error persisted across all devices.

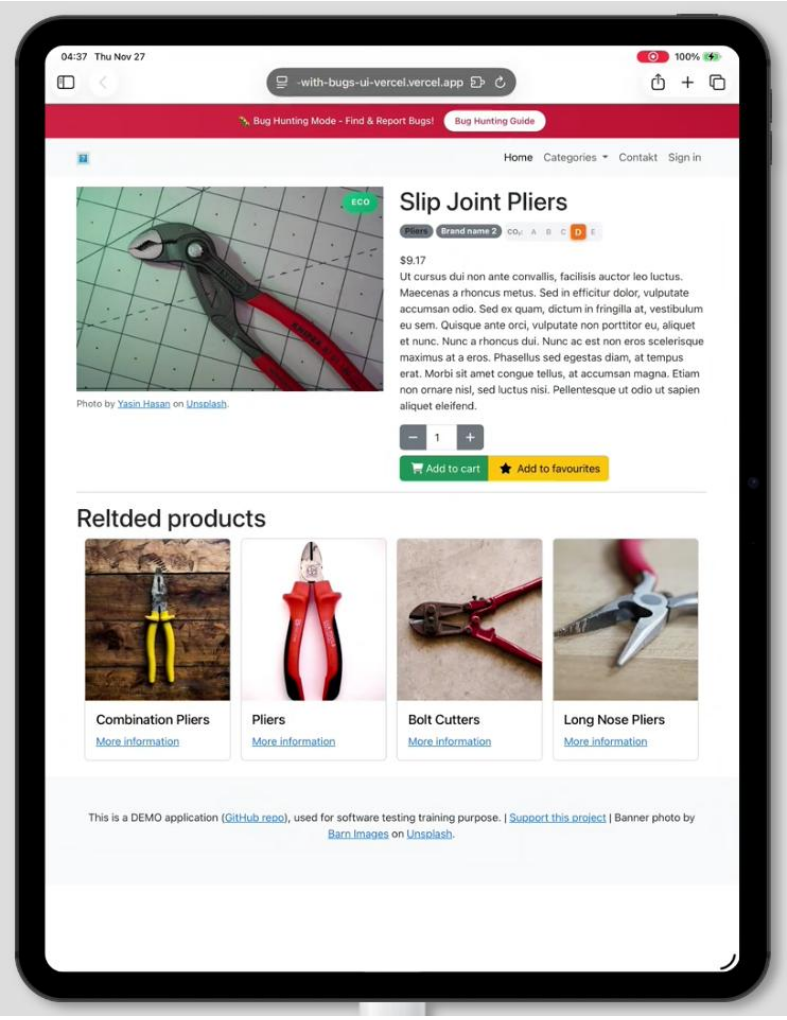
- [Samsung S23 Ultra View]



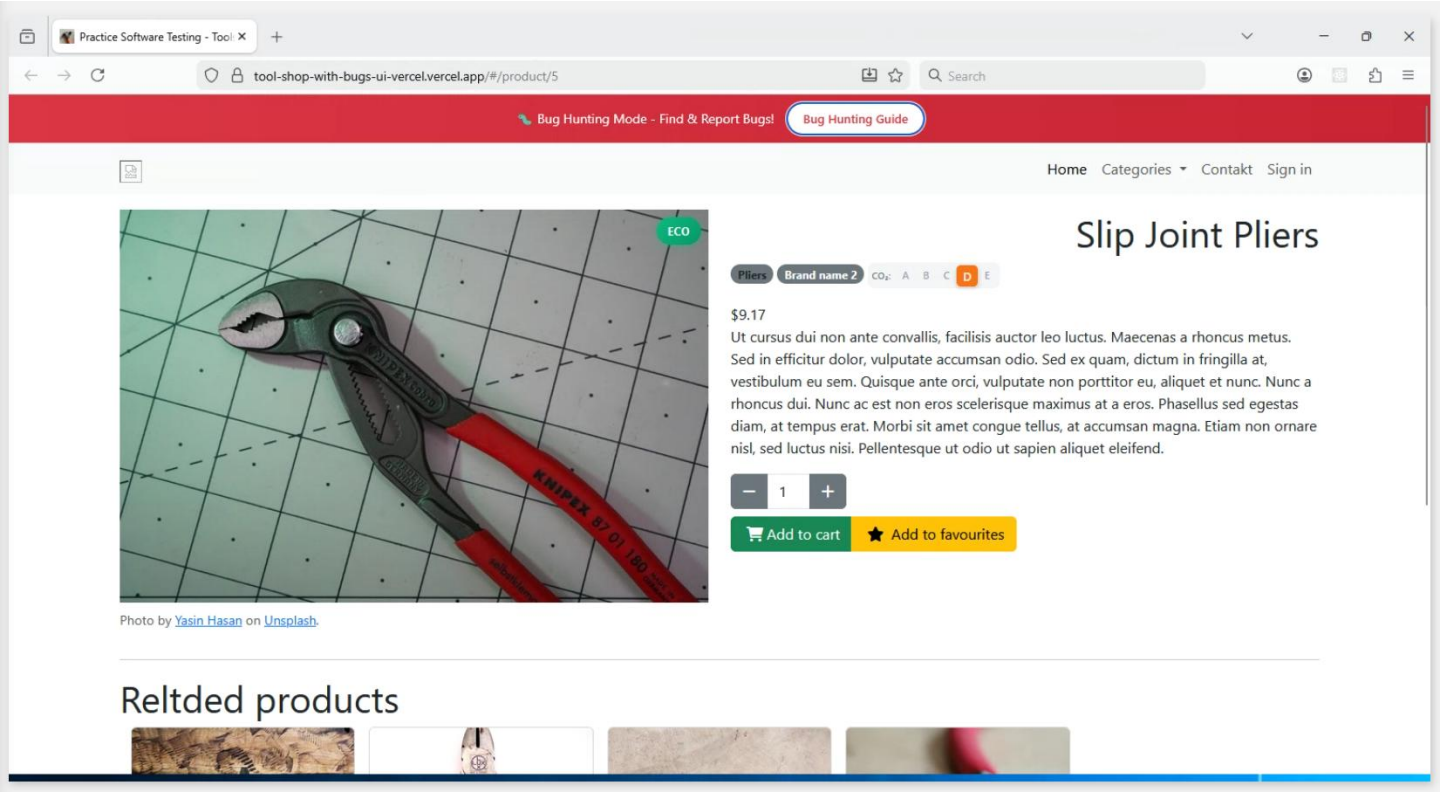
- [iPhone 15 Pro View]

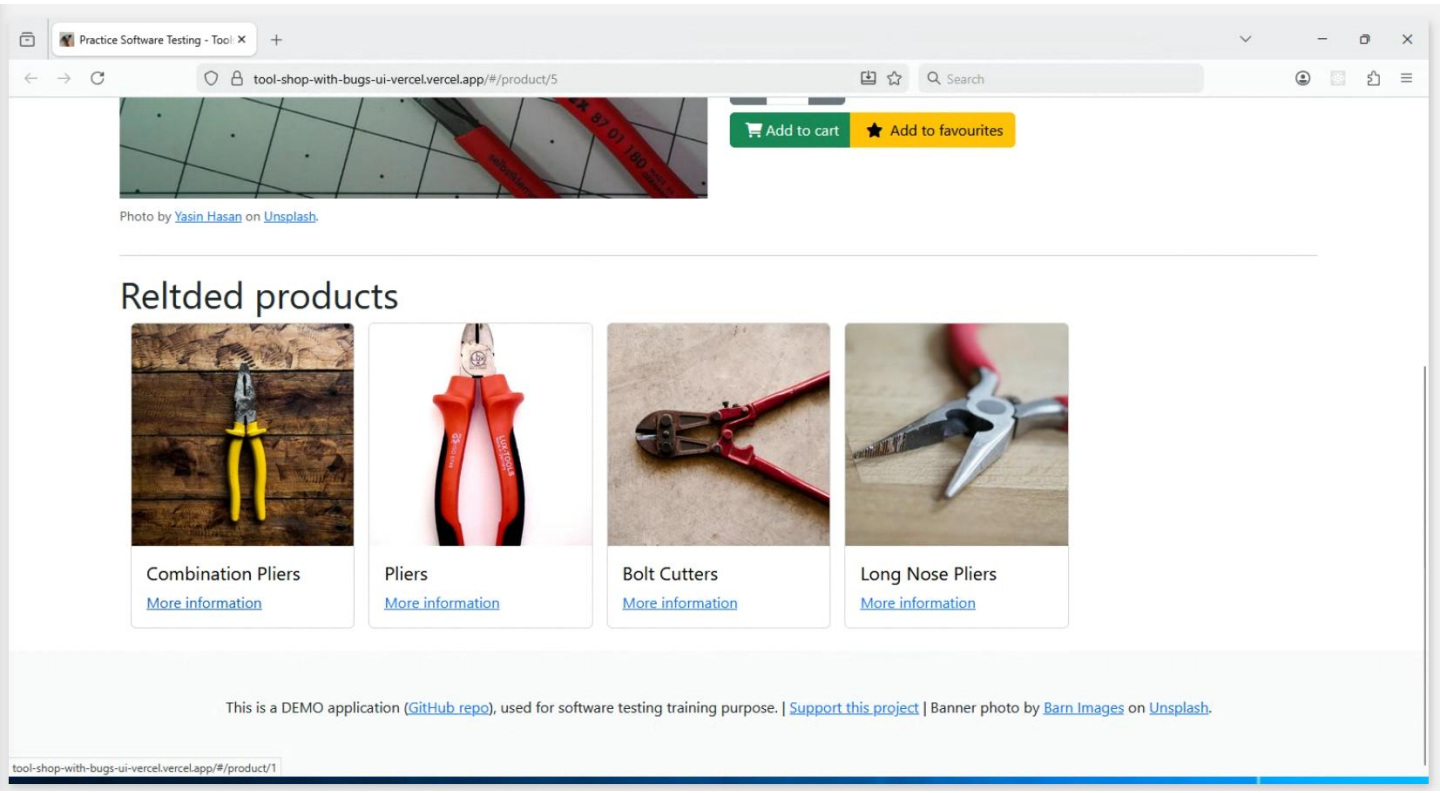


- [iPad Pro View]

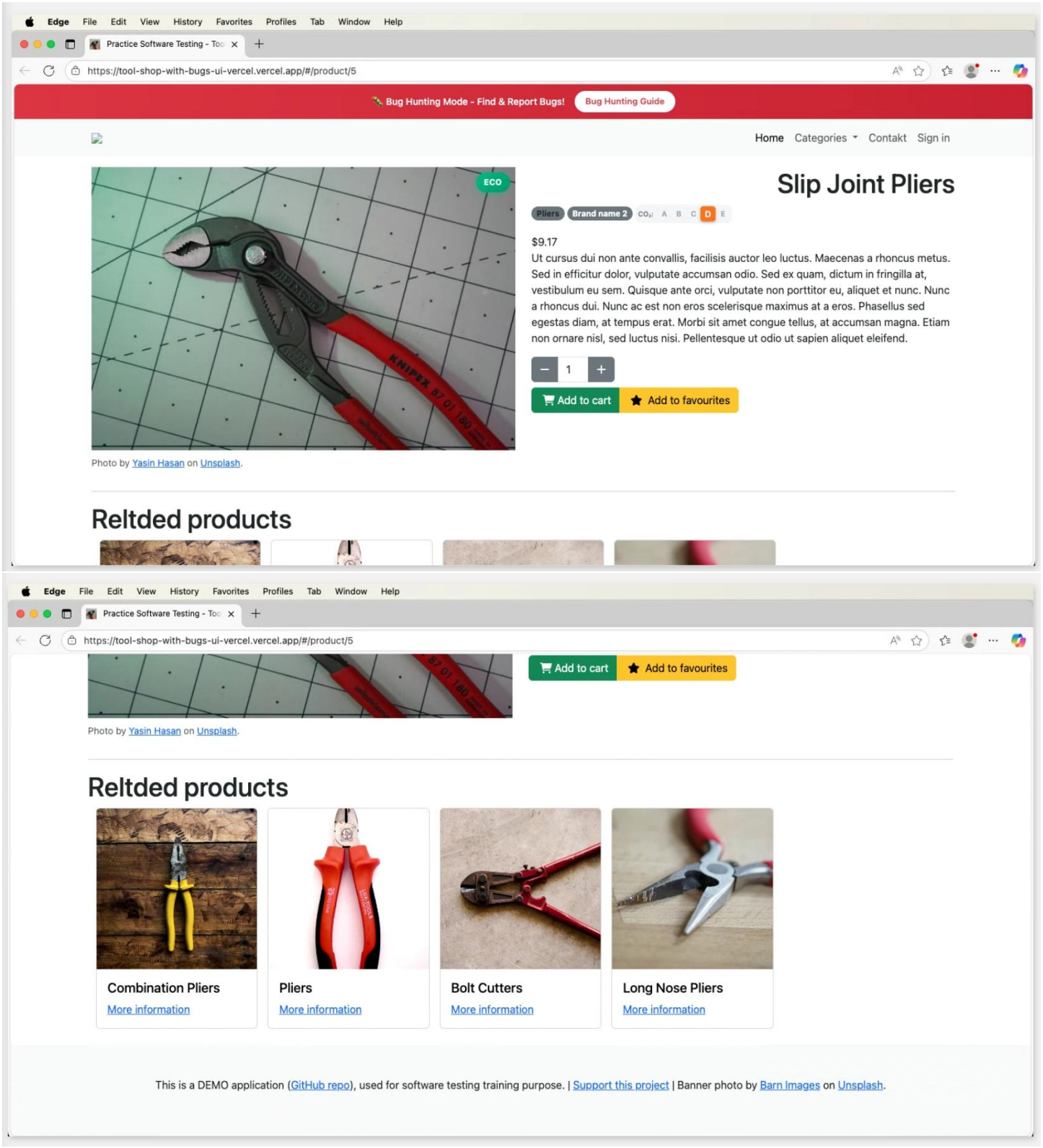


- [Windows 11 Firefox View]





- [macOS Edge View]

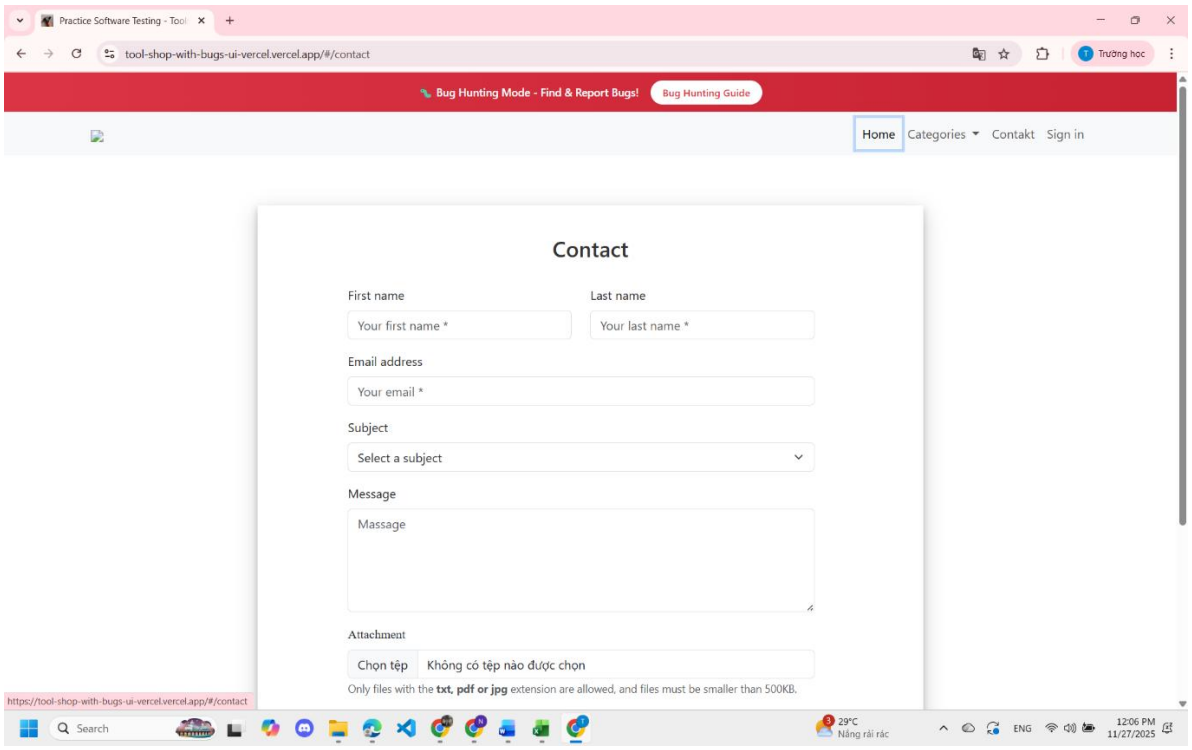


DEFECT REPORTING

The bugs identified in Task 1 (GUI) and Task 2 (Usability) have been reported on the Mantis Tracking Tool. This is just a summary and evidence.

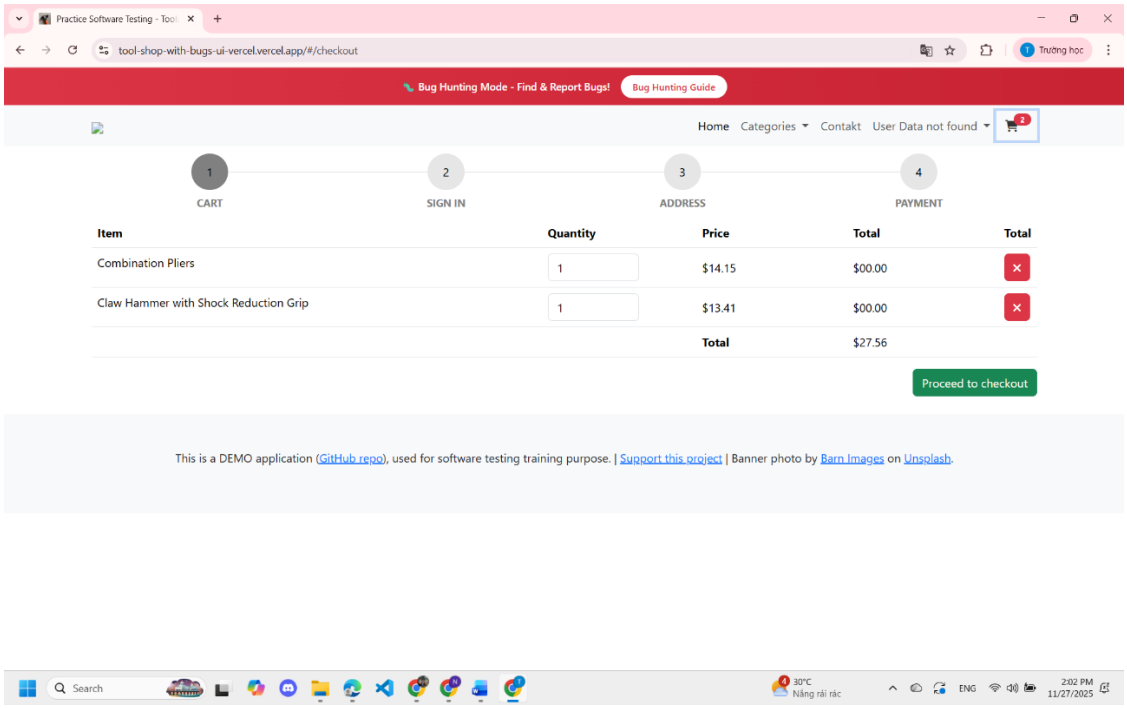
Bug 1: Navigation Redirect Error

- **Source:** Task 1 (GUI Checklist Item 1.1.1)
- **Summary:** "Home" link in breadcrumb incorrectly redirects to "Contact" page.



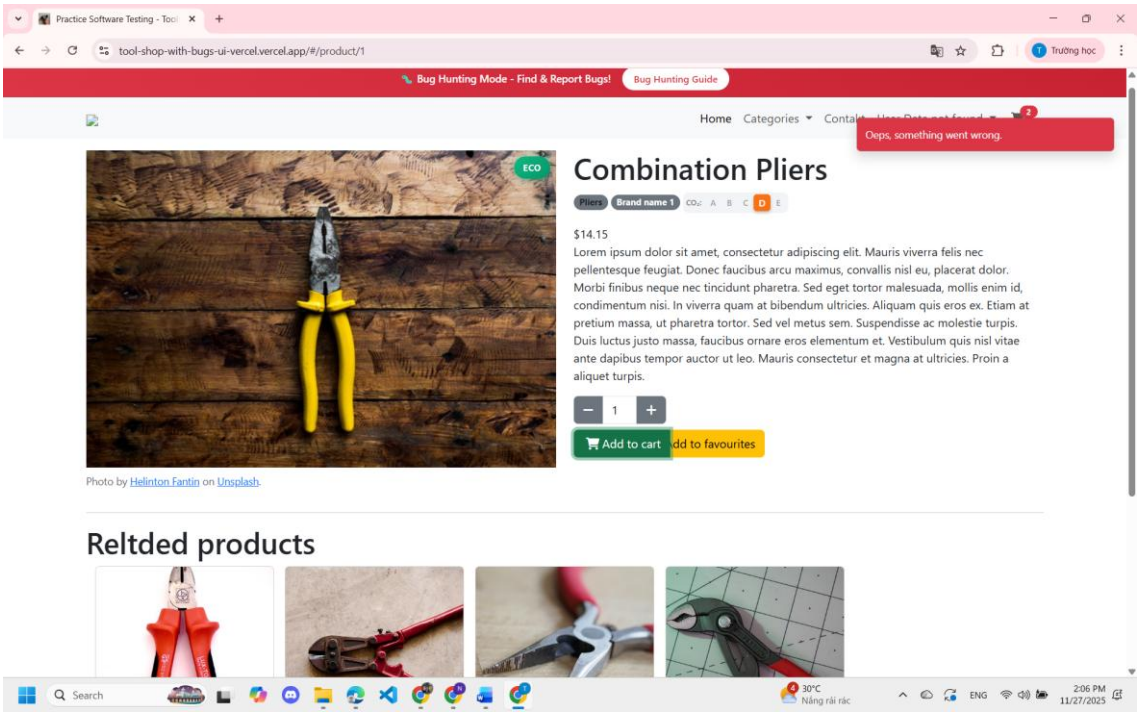
Bug 2: Cart Calculation Error

- **Source:** Task 2 (Usability Survey)
- **Summary:** Line item total displays as $00.00 in Cart.



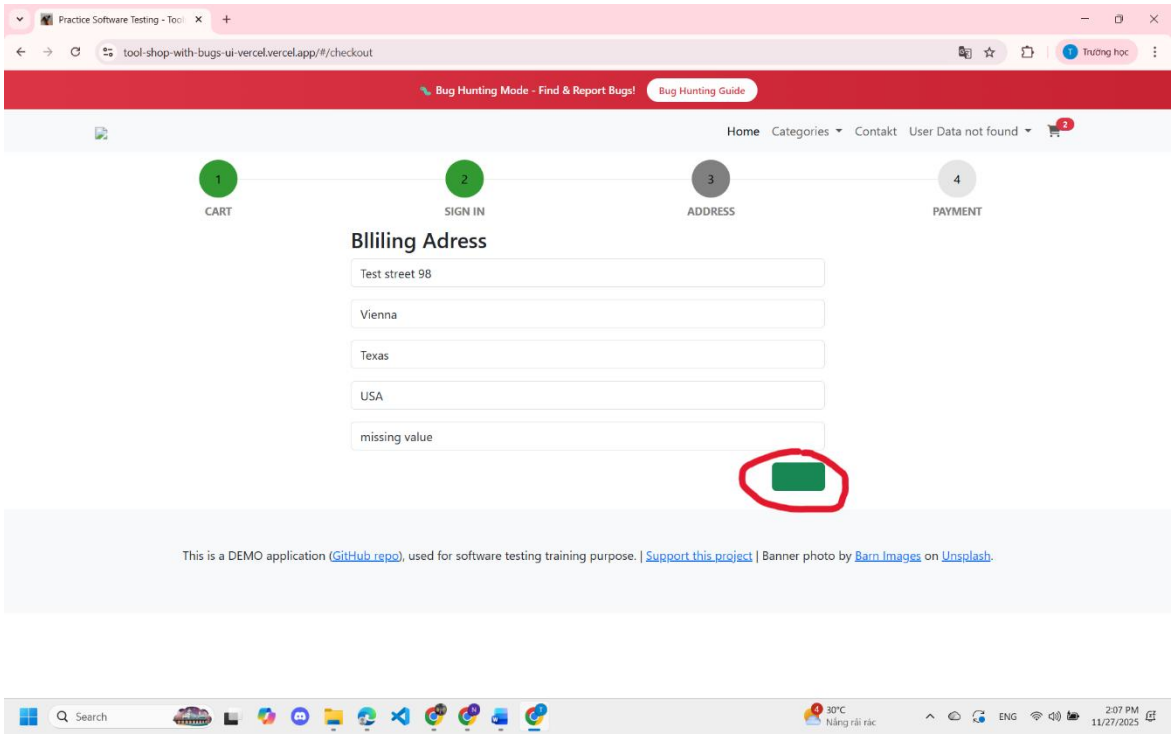
Bug 3: False "Oops" Error on Add to Cart

- **Source:** Task 2 (Usability Survey)
- **Summary:** "Oops! Something went wrong" error appears when adding items successfully.



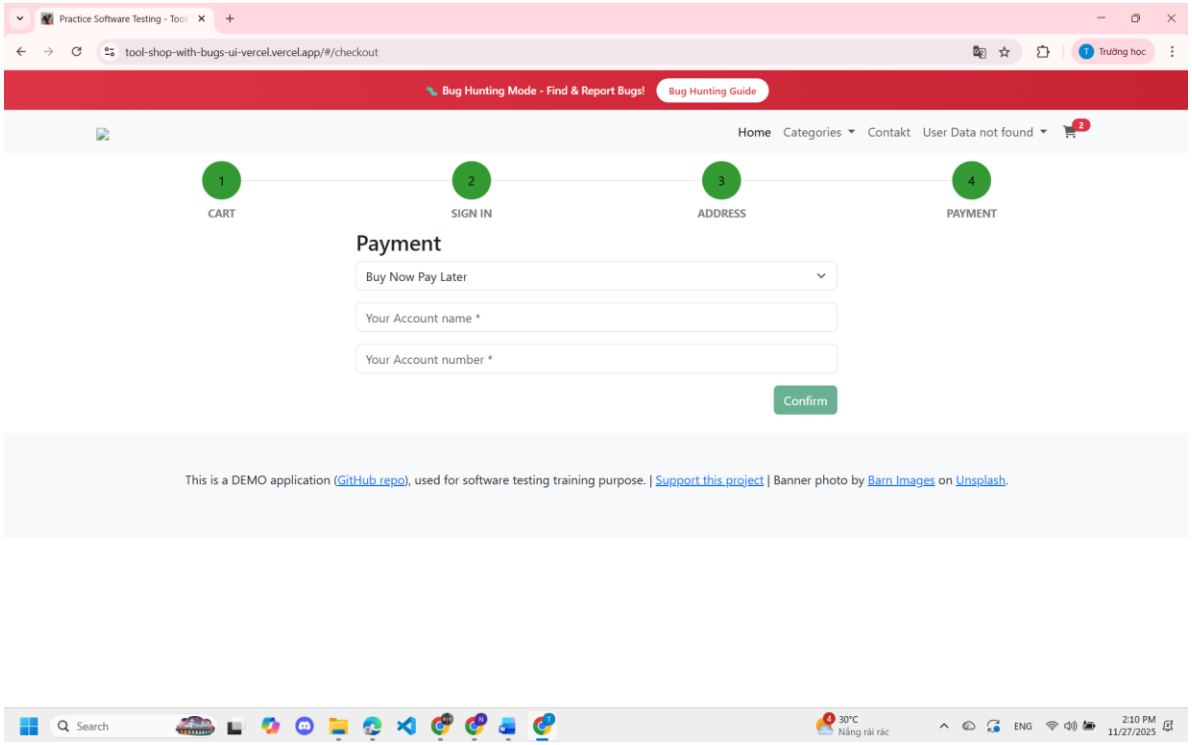
Bug 4: Missing Button Label on Address Page

- **Source:** Task 2 (Usability Survey)
- **Summary:** "Proceed" button on Address page has no text label.



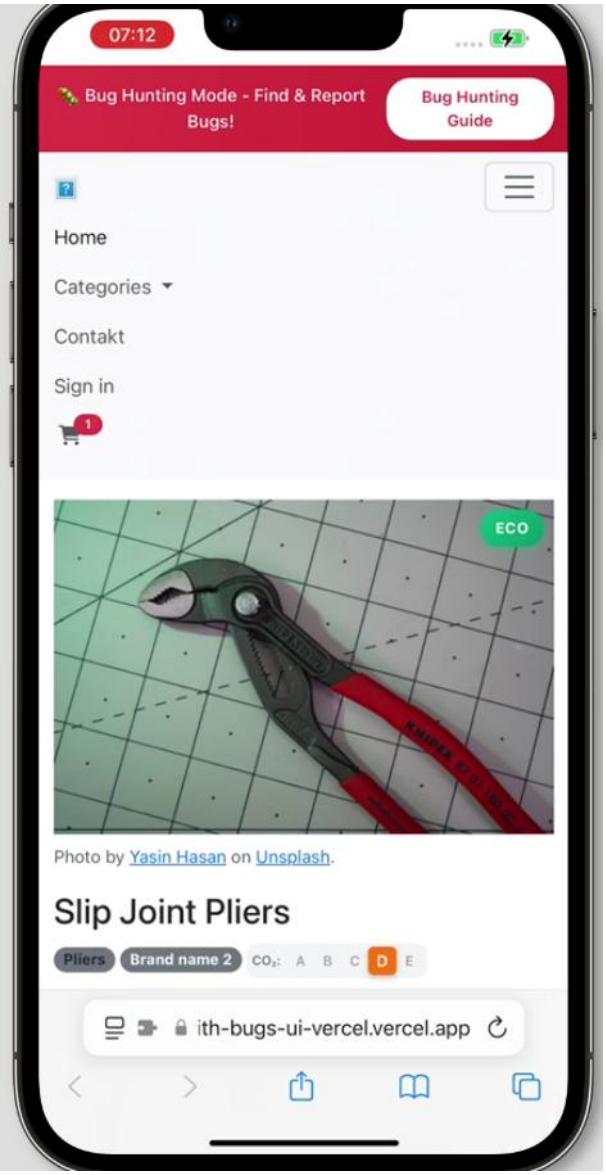
Bug 5: Payment Form Logic Error

- **Source:** Task 2 (Usability Survey)
- **Summary:** Credit Card fields required even for "Buy Now Pay Later".



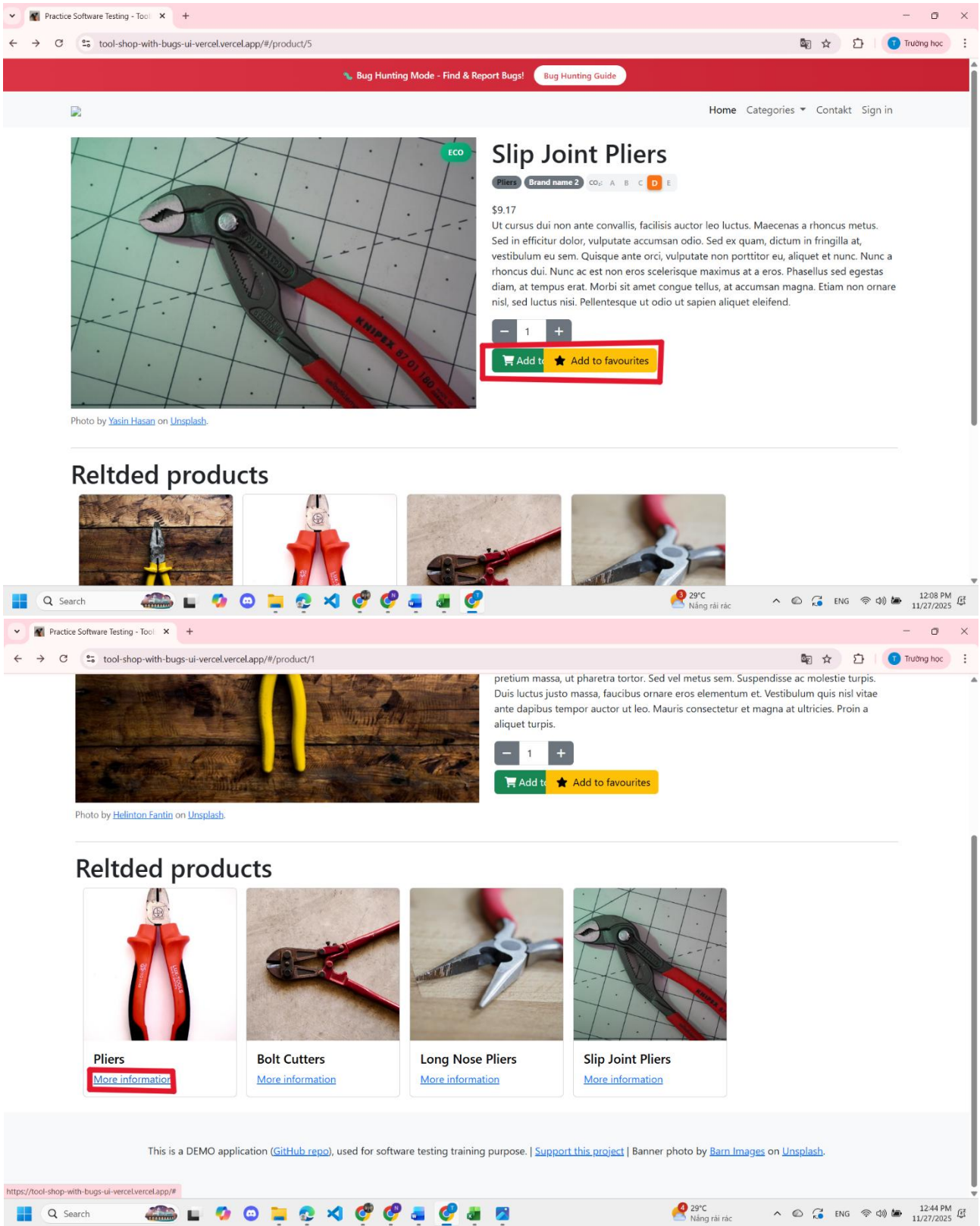
Bug 6: Mobile Cart Visibility

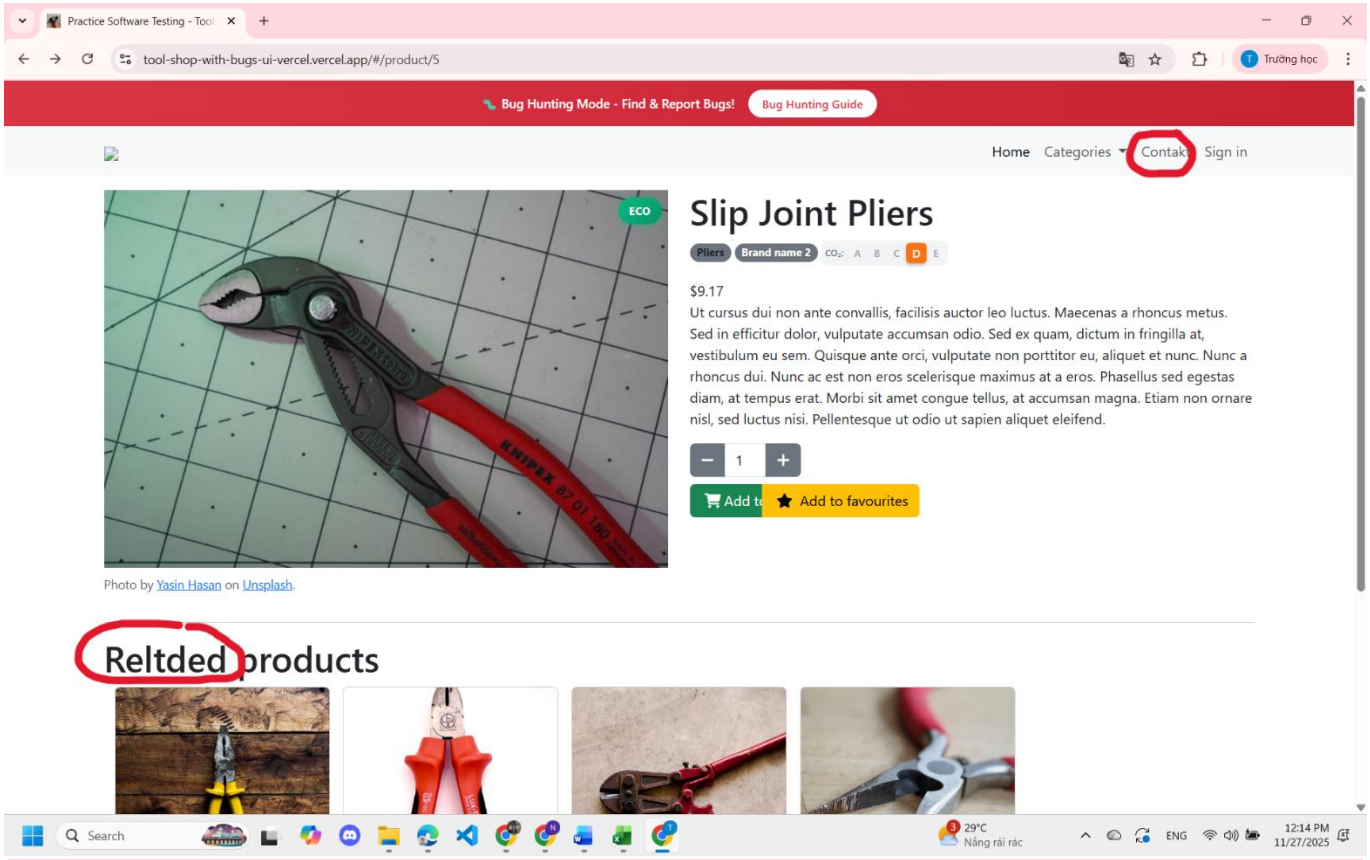
- **Source:** Task 2 (Usability Survey)
- **Summary:** Cart icon is hidden inside Hamburger menu on mobile.



Bug 7: General UI, Visual, and Content Defects

- **Source:** Task 1 (GUI Checklist) & Task 2
- **Summary:** Multiple UI Layout, Visual Feedback, and Content Errors.




Practice Software Testing - Tool
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Bug Hunting Mode - Find & Report Bugs!
Bug Hunting Guide
Home
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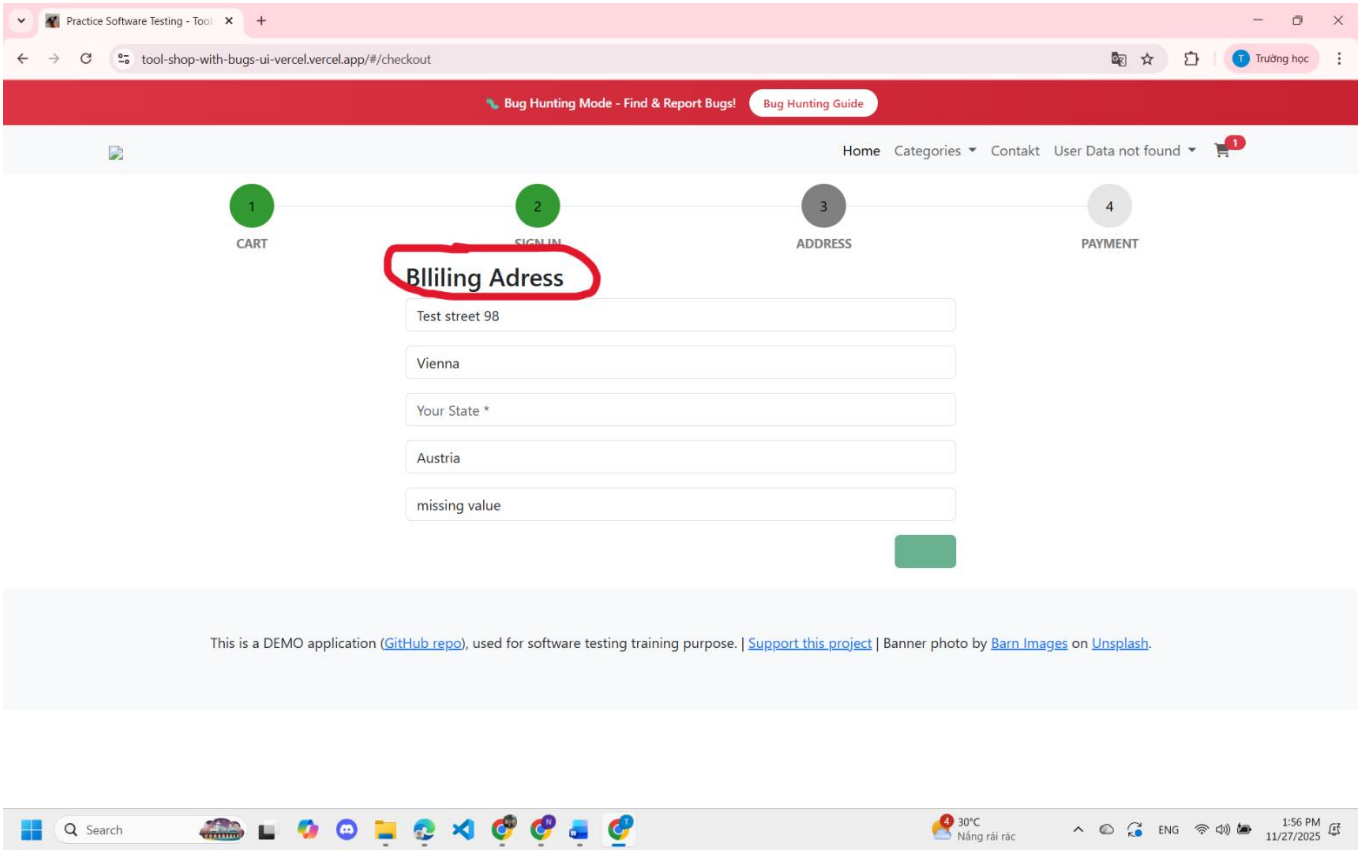
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Bug Hunting Mode - Find & Report Bugs!
Bug Hunting Guide
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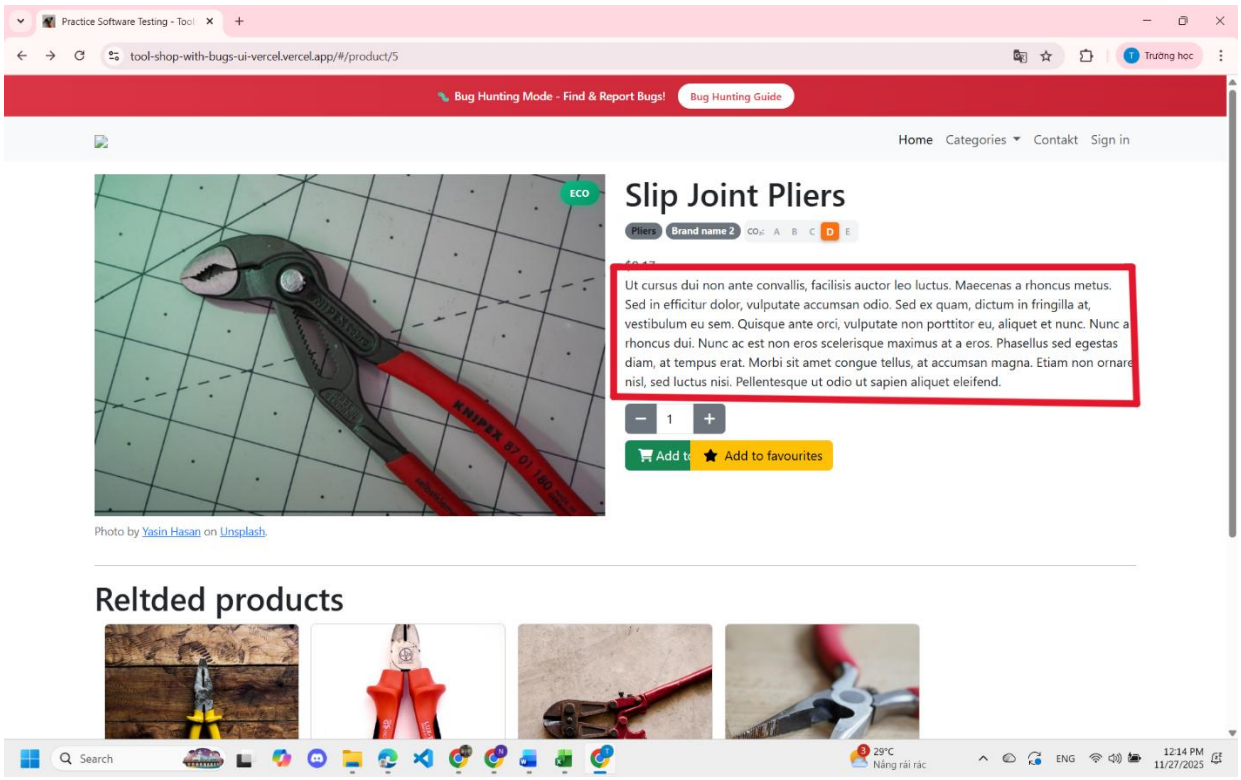
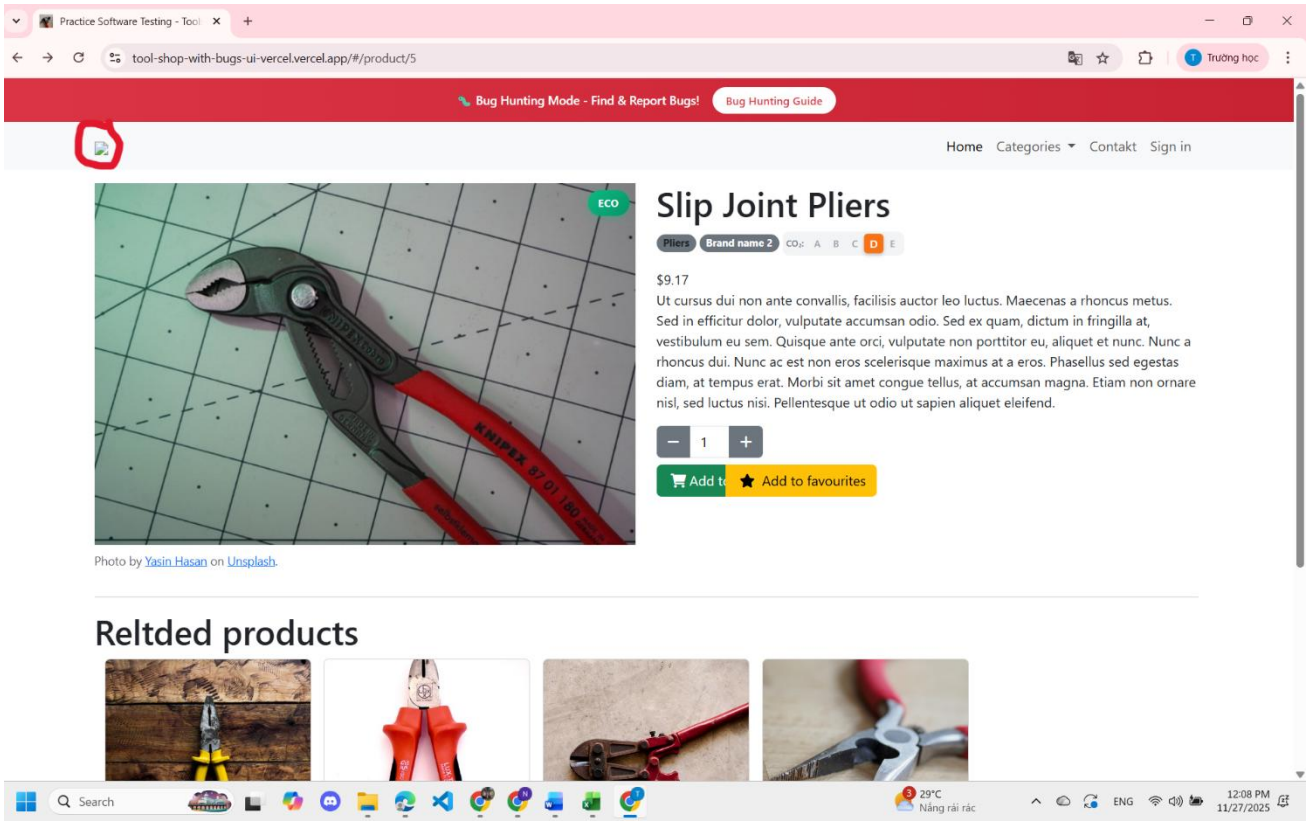
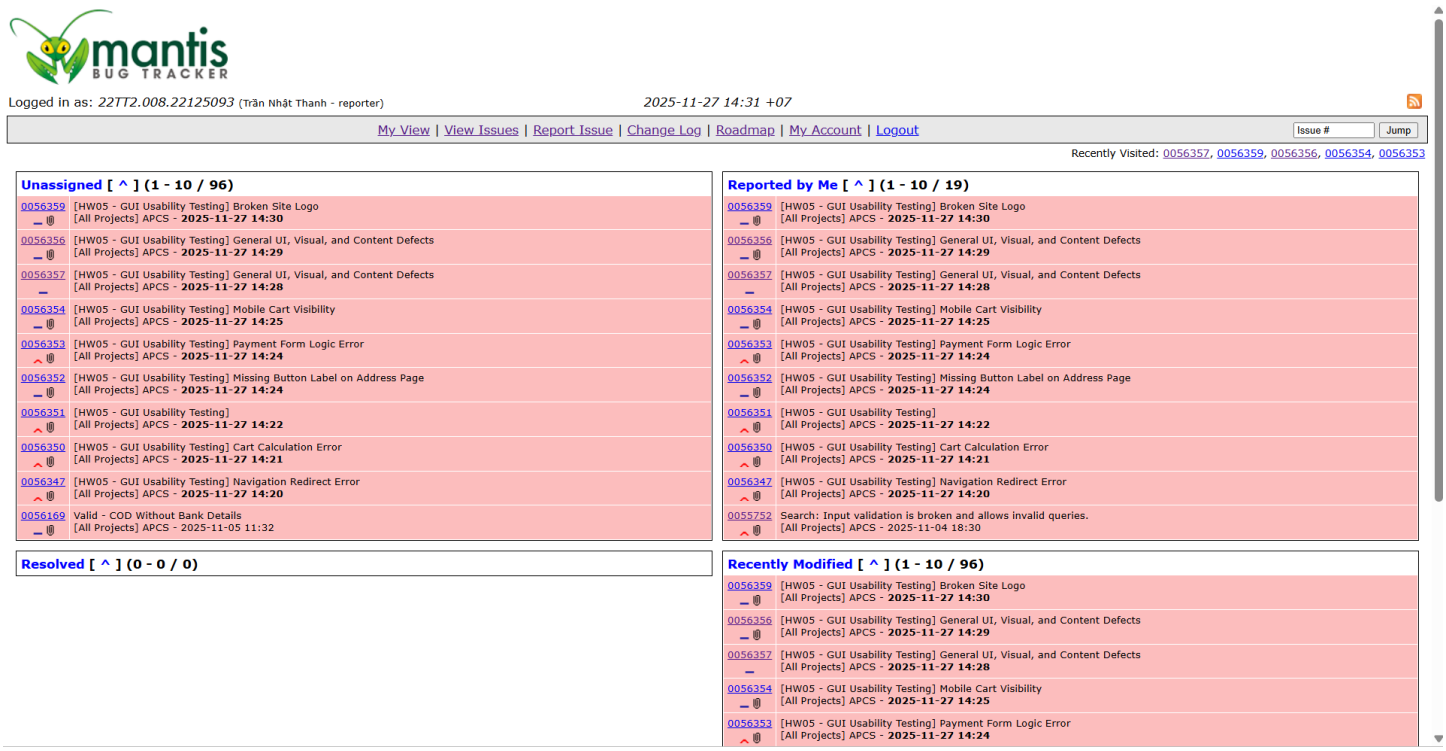


Bug 8: Broken Site Logo

- **Source:** Task 1
- **Summary:** Site logo image is broken/missing.



The updated bugs on Mantis



Self – Assessment

Criteria	Outcomes	Grade	Self-Assessed Grade
1	**Checklist of one GUI**	**50**	**50**
	1.1 Checklist (54)	30	30
	1.2 Bugs	20	20
2	**User survey and feedback**	**40**	**40**
	2.1 Questions (14)	10	10
	2.2 Feedback (12)	10	10
	2.3 Report	10	10
	2.4 Bug	10	10
3	**BrowserStack**	**30**	**30**
	Total	**120**	**120**