

**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

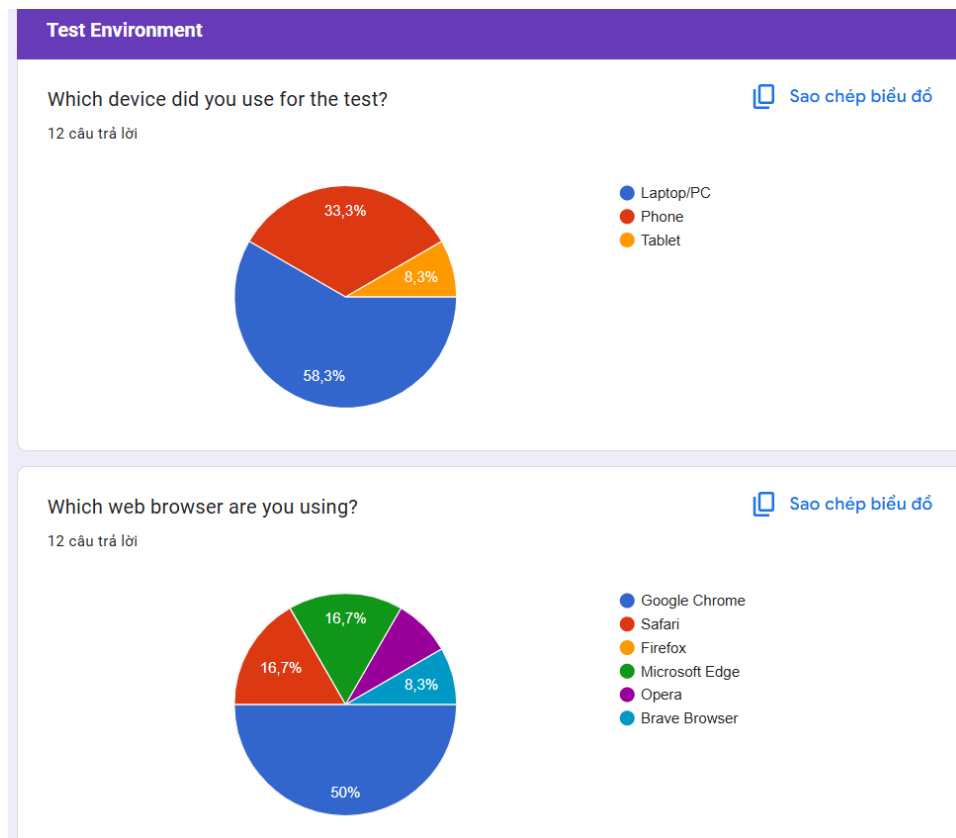
- **Questions:** *Describe any bugs? Where were you confused? Suggestions for improvement?*
- **Rationale:** To capture detailed bug reports that the Yes/No questions might miss (the specific "Oops" error message behavior) and to allow users to express frustration in their own words, providing context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

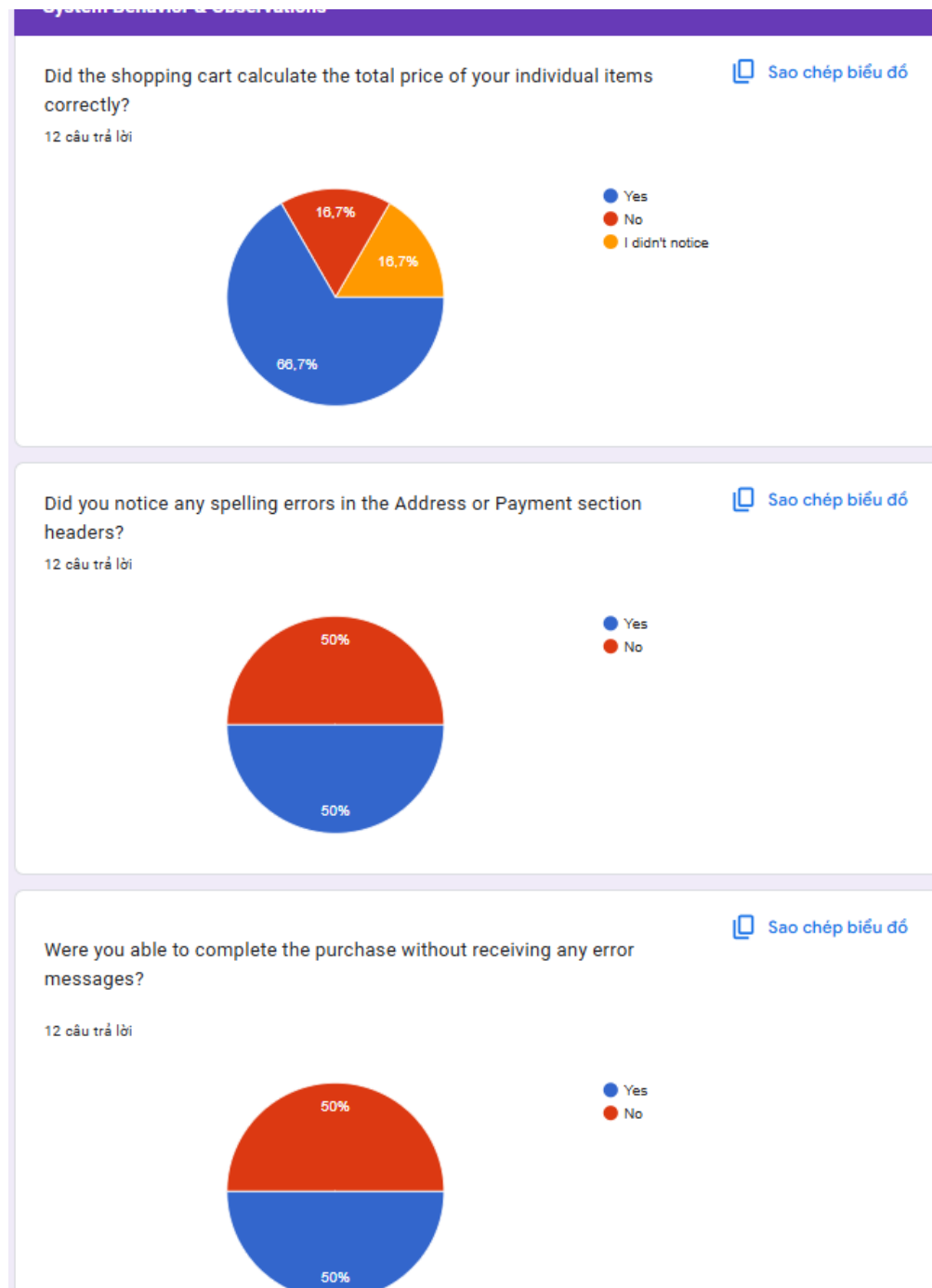


### B. Quantitative Analysis

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.

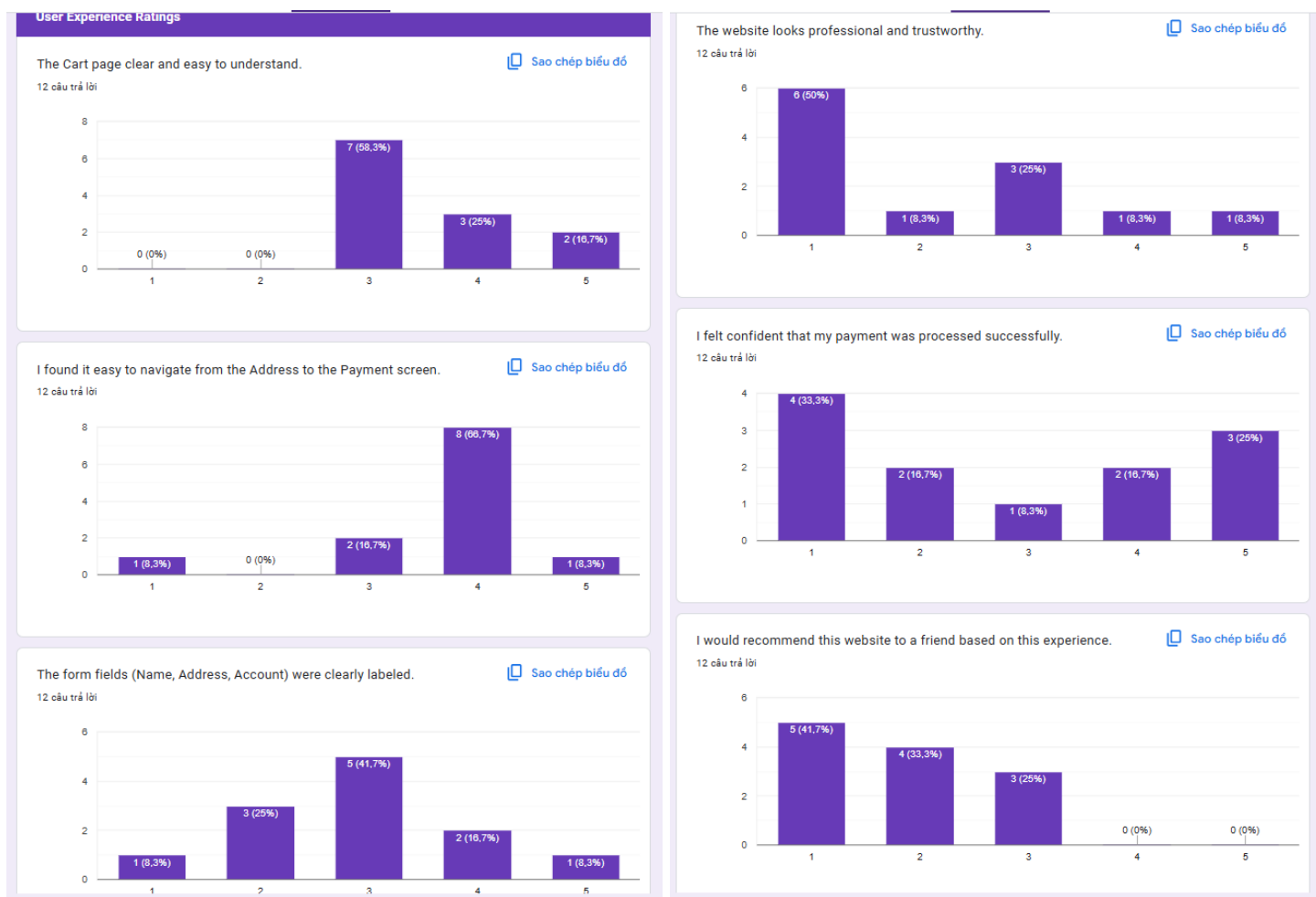


### C. User Experience Ratings (Likert Scale 1-5)

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).

If you noticed a bug or error, please describe it briefly:

12 câu trả lời

missing words in the green box from address to payment and spelling errors "Blliling Adress"

Press "add cart" button raise an error "Oóp something went wrong"

When I select add to cart, the UI shows an error, I had to try 3 times before the product was added to the cart

The total price of an item is always \$00.00.

- Typos: Blliling Adress, Contact  
 - Strange things:  
 + I succeeded in adding the item to the cart but an error message still appeared saying there was an error with adding the item  
 + The button to move from Address to Payment does not have any text on it. I guess it is "Continue" or "Next"?  
 + The Payment fields do not make any sense to me. I see an option "Error ..." something in the payment method. I also don't understand what I should input to account number and name because I choose Cash On Delivery.  
 + The total price in the cart is correct but the total price per item is wrong (mine is always 0).



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

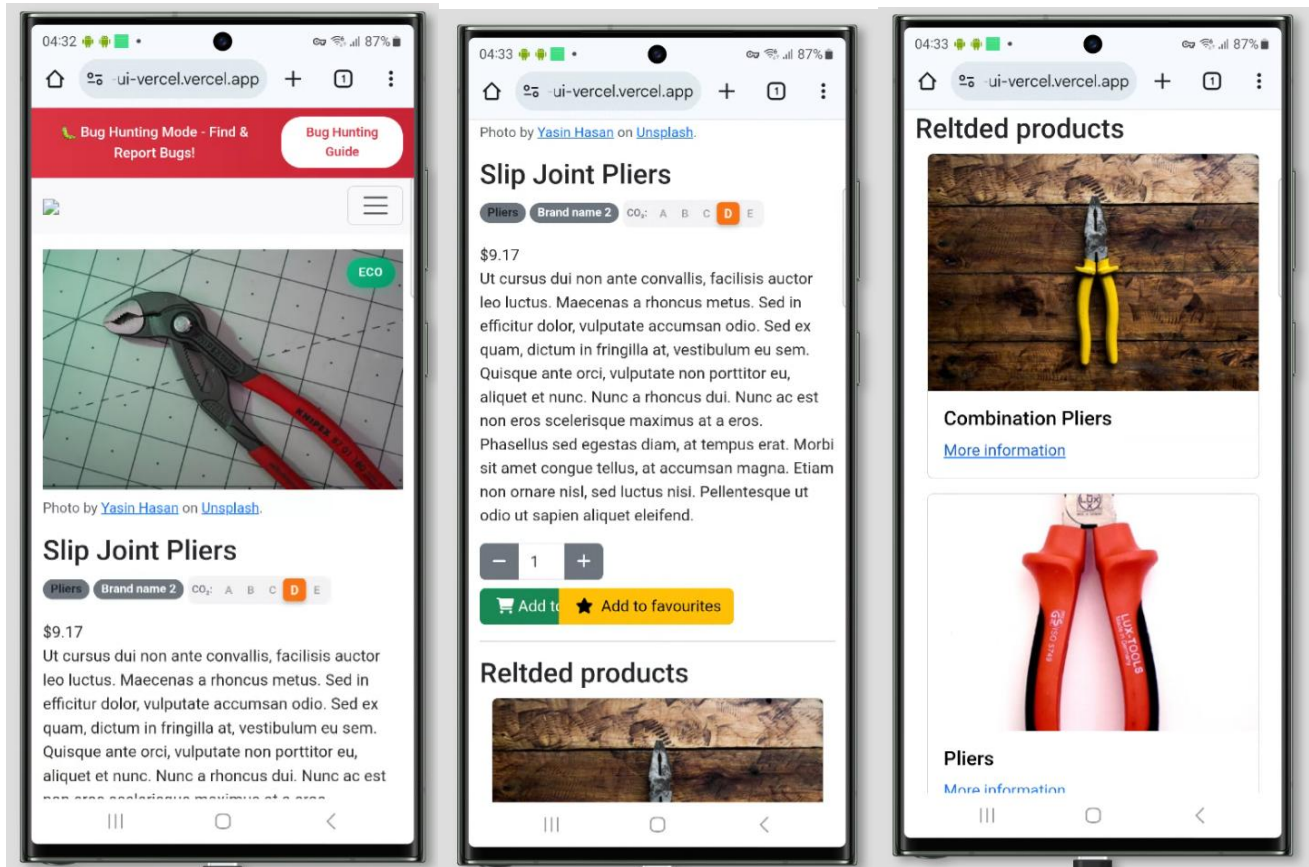
To complete this task, the following steps were executed:

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.

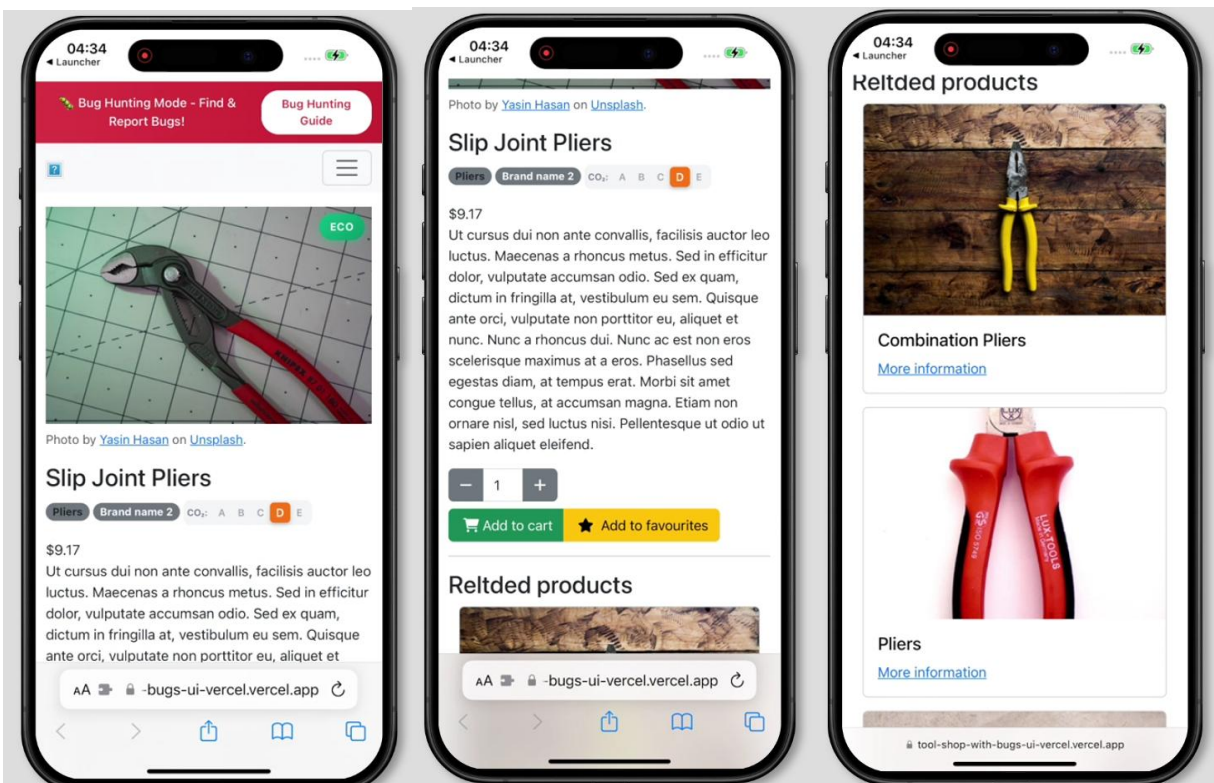
### 4. Results & Screenshots

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

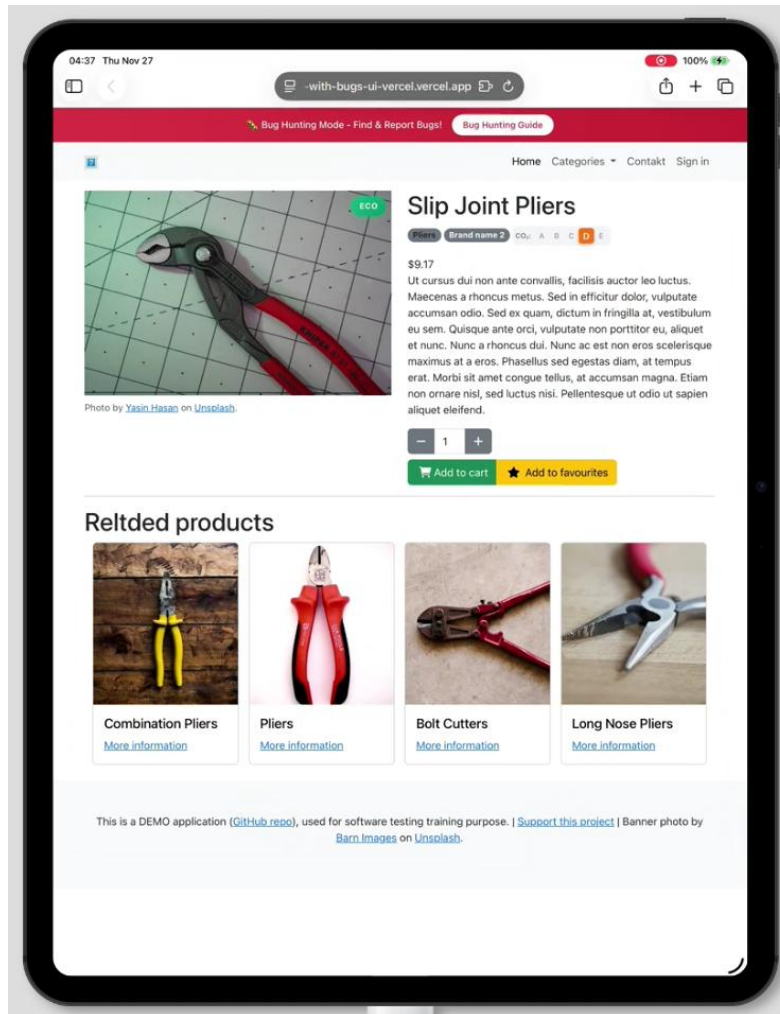
- [Samsung S23 Ultra View]



- [iPhone 15 Pro View]



- [iPad Pro View]





- [Windows 11 Firefox View]

Practice Software Testing - Tool X

tool-shop-with-bugs-ui-vercel.vercel.app/#/product/5

Bug Hunting Mode - Find & Report Bugs! Bug Hunting Guide

Home Categories Kontakt Sign in

## Slip Joint Pliers

Pliers Brand name Z CO<sub>2</sub> A B C D E

\$9.17

Ut cursus dui non ante convallis, facilisis auctor leo luctus. Maecenas a rhoncus metus. Sed in efficitur dolor, vulputate accumsan odio. Sed ex quam, dictum in fringilla at, vestibulum eu sem. Quisque ante orci, vulputate non porttitor eu, aliquet et nunc. Nunc a rhoncus dui. Nunc ac est non eros scelerisque maximus at a eros. Phasellus sed egestas diam, at tempus erat. Morbi sit amet congue tellus, at accumsan magna. Etiam non ornare nisi, sed luctus nisi. Pellentesque ut odio ut sapien aliquet eleifend.

1

Add to cart Add to favourites

Photo by [Yasin Hasan](#) on [Unsplash](#).

### Related products

Combination Pliers [More information](#)

Pliers [More information](#)

Bolt Cutters [More information](#)

Long Nose Pliers [More information](#)

This is a DEMO application ([GitHub repo](#)), used for software testing training purpose. | [Support this project](#) | Banner photo by [Barn Images](#) on [Unsplash](#).

tool-shop-with-bugs-ui-vercel.vercel.app/#/product/1

- [macOS Edge View]

Edge File Edit View History Favorites Profiles Tab Window Help

Practice Software Testing - Tool x +

https://tool-shop-with-bugs-ui-vercel.vercel.app/#/product/5

Bug Hunting Mode - Find & Report Bugs! Bug Hunting Guide

Home Categories Contact Sign in

## Slip Joint Pliers

Pliers Brand name 2 CO2: A B C **D** E

\$9.17

Ut cursus dui non ante convallis, facilisis auctor leo luctus. Maecenas a rhoncus metus. Sed in efficitur dolor, vulputate accumsan odio. Sed ex quam, dictum in fringilla at, vestibulum eu sem. Quisque ante orci, vulputate non porttitor eu, aliquet et nunc. Nunc a rhoncus dui. Nunc ac est non eros scelerisque maximus at a eros. Phasellus sed egestas diam, at tempus erat. Morbi sit amet congue tellus, at accumsan magna. Etiam non ornare nisl, sed luctus nisi. Pellentesque ut odio ut sapien aliquet eleifend.

1

Add to cart Add to favourites

Photo by [Yasin Hasan](#) on [Unsplash](#).

### Reltded products

Combination Pliers [More information](#)

Pliers [More information](#)

Bolt Cutters [More information](#)

Long Nose Pliers [More information](#)

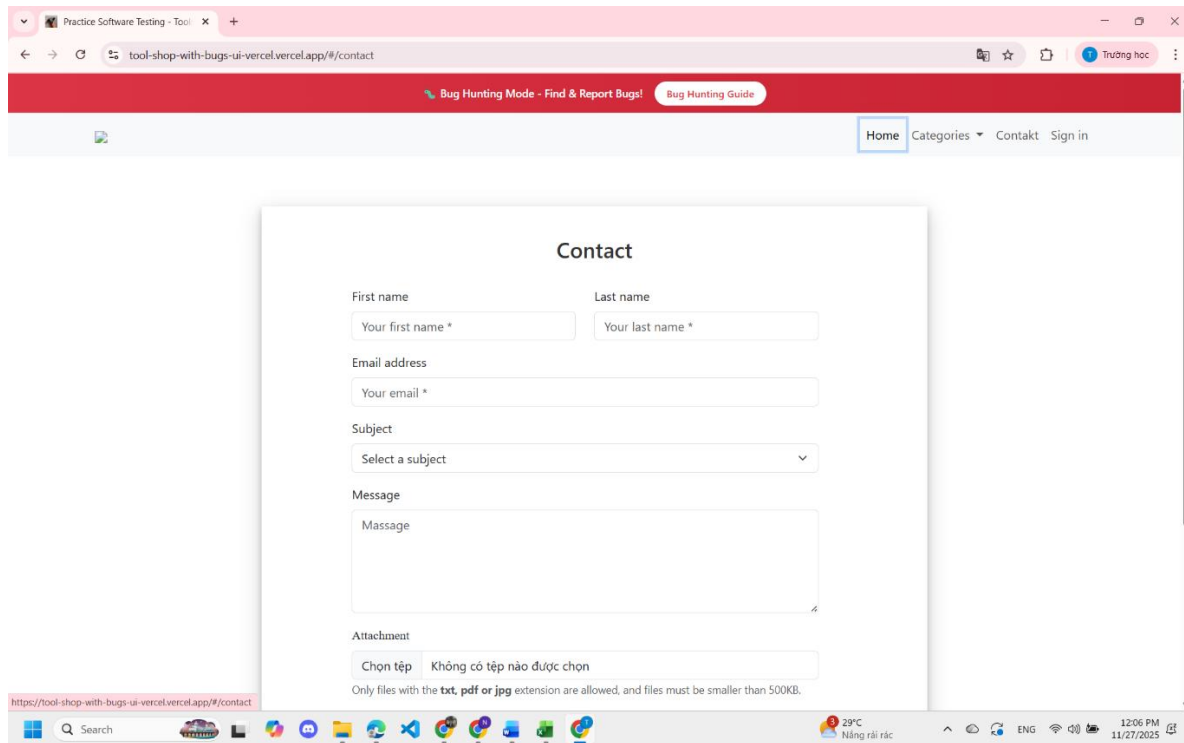
This is a DEMO application ([GitHub repo](#)), used for software testing training purpose. | [Support this project](#) | Banner photo by [Barn Images](#) on [Unsplash](#).

## 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

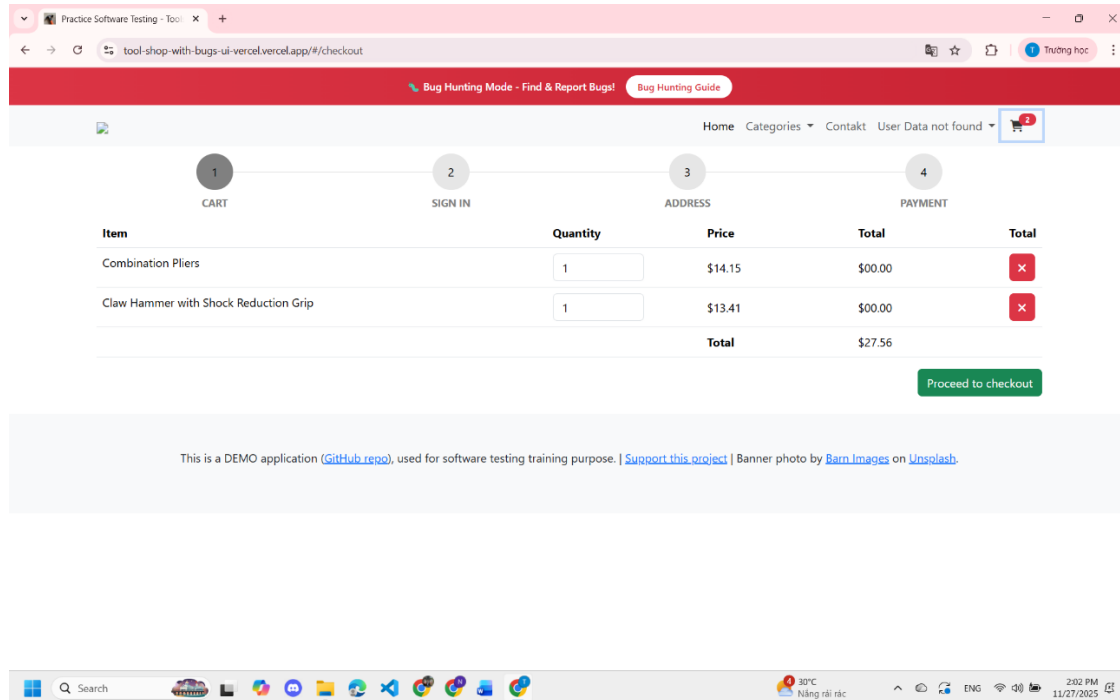
- **Source:** Task 1 (GUI Checklist Item 1.1.1)
- **Summary:** "Home" link in breadcrumb incorrectly redirects to "Contact" page.





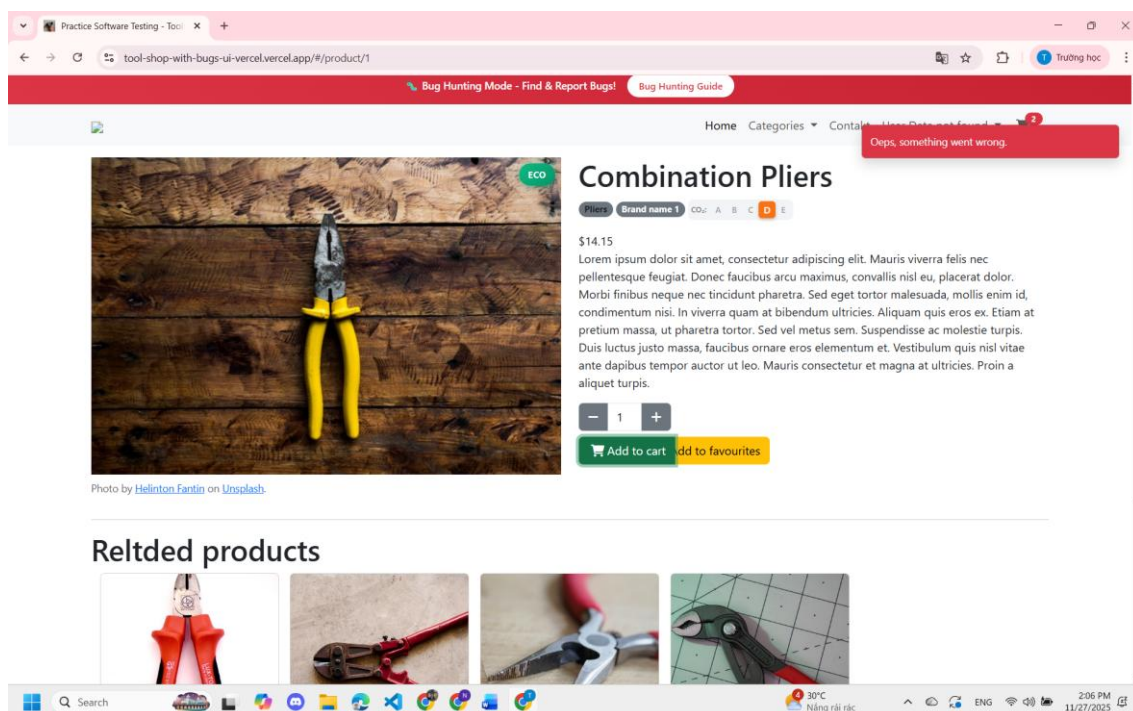
## Bug 2: Cart Calculation Error

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



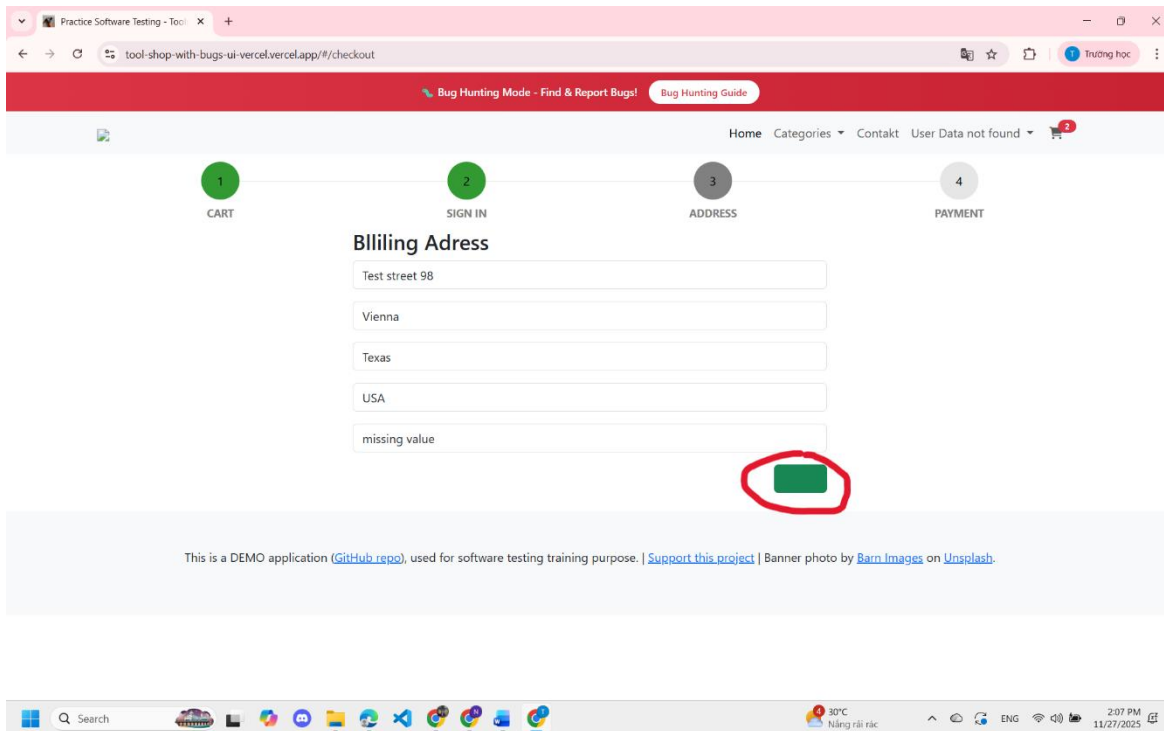
## Bug 3: False "Oops" Error on Add to Cart

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

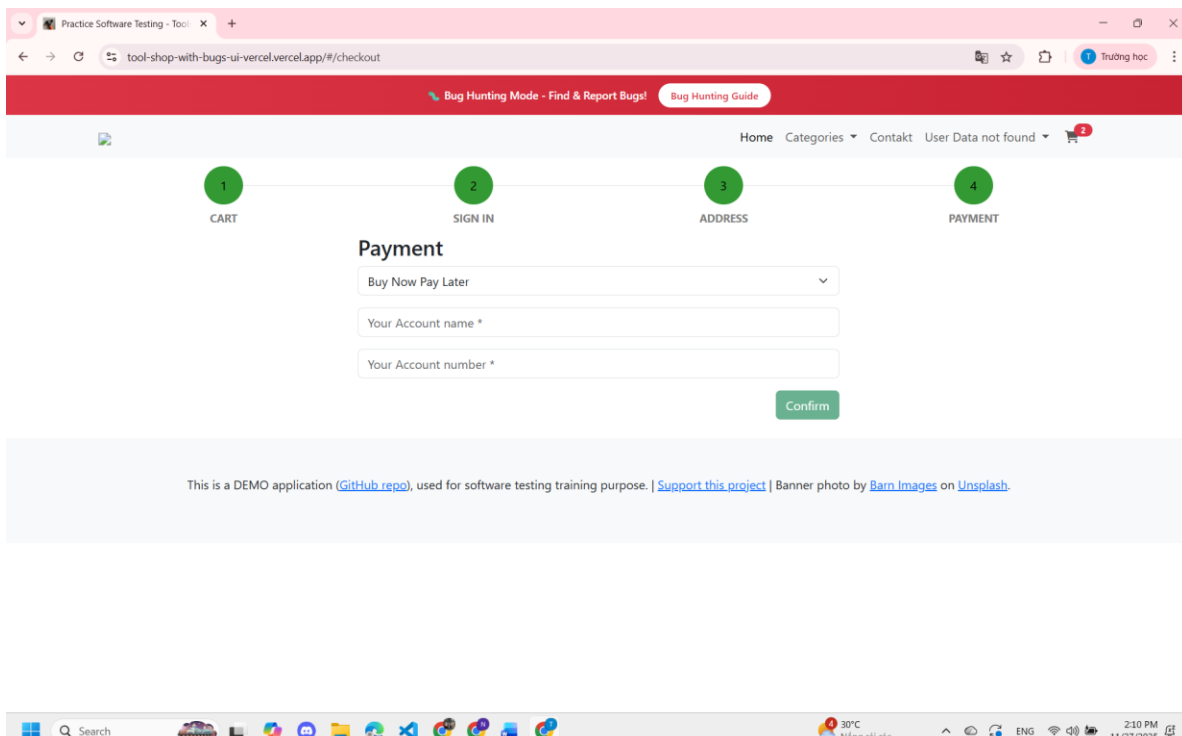


**Bug 4: Missing Button Label on Address Page**

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

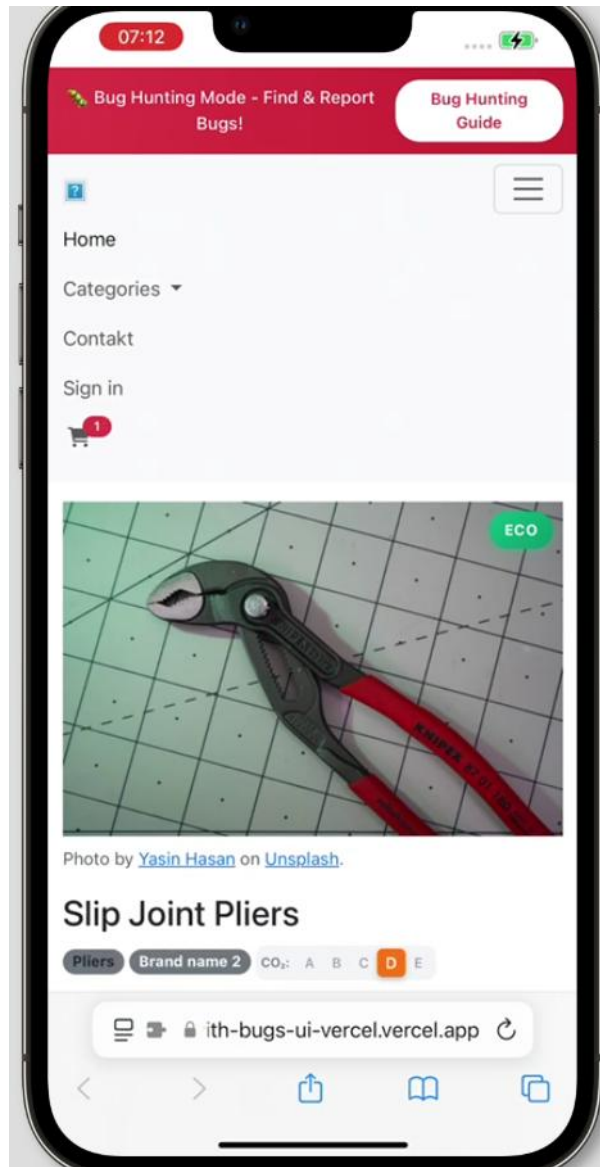
**Bug 5: Payment Form Logic Error**

- **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.

The screenshot displays a web application interface for a tool shop. The top navigation bar includes a 'Bug Hunting Mode - Find & Report Bugs!' button and a 'Bug Hunting Guide' link. The main content area shows a product page for 'Slip Joint Pliers' with a price of \$9.17 and a description. Below the product image, there are 'Add to cart' and 'Add to favourites' buttons. The 'Add to favourites' button is highlighted with a red box. Below the product page, there is a section titled 'Related products' showing four images of different tools. The bottom of the page features a footer with a disclaimer: 'This is a DEMO application (GitHub repo), used for software testing training purpose. | Support this project | Banner photo by Barn Images on Unsplash.'

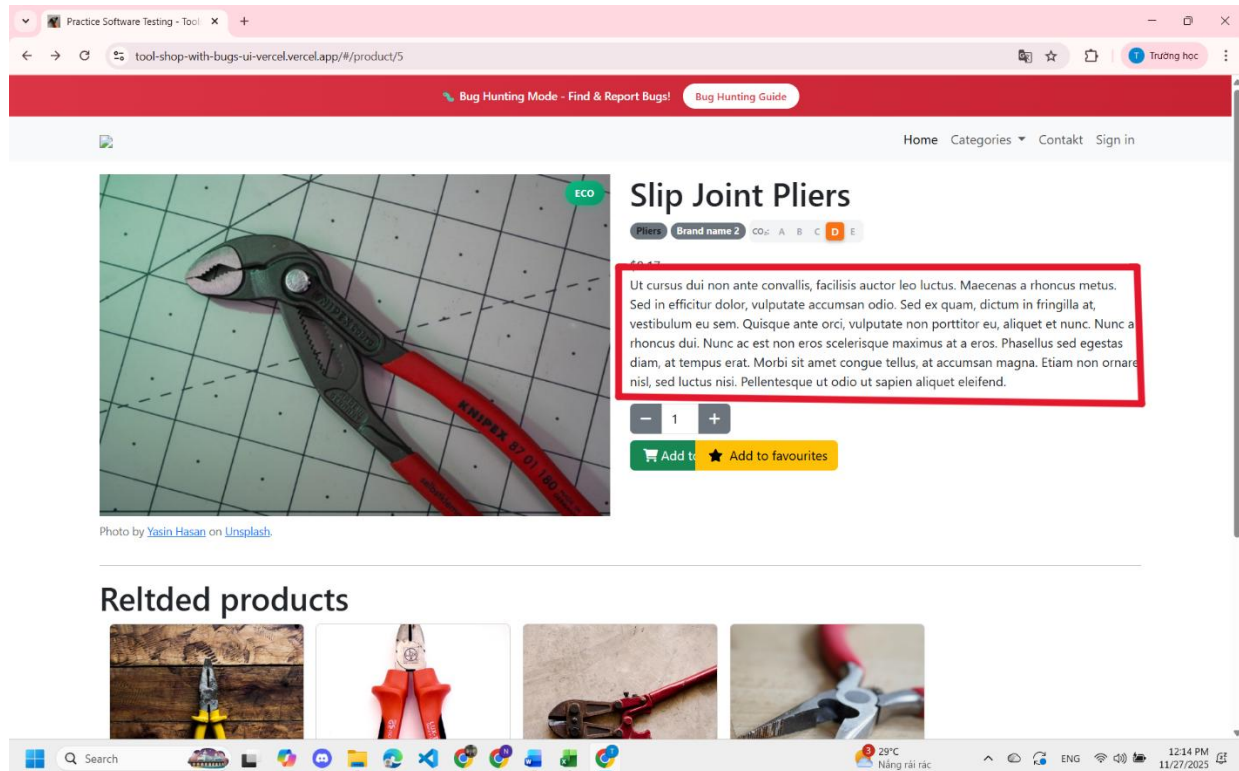
**Defects identified:**

- UI/Visual Defects:**
  - The 'Add to favourites' button is highlighted with a red box, indicating a visual issue.
  - The 'More information' link for the 'Pliers' product is highlighted with a red box, indicating a visual issue.
- Content Defects:**
  - The product title 'Slip Joint Pliers' is misspelled as 'Slip Joint Pliers' (should be 'Slip Joint Pliers').
  - The product description contains placeholder text: 'Ut cursus dui non ante convallis, facilisis auctor leo luctus. Maecenas a rhoncus metus. Sed in efficitur dolor, vulputate accumsan odio. Sed ex quam, dictum in fringilla at, vestibulum eu sem. Quisque ante orci, vulputate non porttitor eu, aliquet et nunc. Nunc a rhoncus dui. Nunc ac est non eros scelerisque maximus at a eros. Phasellus sed egestas diam, at tempus erat. Morbi sit amet congue tellus, at accumsan magna. Etiam non ornare nisl, sed luctus nisi. Pellentesque ut odio ut sapien aliquet eleifend.'
  - The 'Related products' section contains four images of tools, but the titles and descriptions are missing or incorrect:
    - 'Pliers' (image of red-handled pliers)
    - 'Bolt Cutters' (image of red-handled bolt cutters)
    - 'Long Nose Pliers' (image of long nose pliers)
    - 'Slip Joint Pliers' (image of slip joint pliers)

The screenshot shows a web application interface for a tool shop. The top navigation bar is red with the text "Bug Hunting Mode - Find & Report Bugs!" and a "Bug Hunting Guide" button. The main navigation bar is white with links for "Home", "Categories", "Contact" (circled in red), and "Sign in". The product page for "Slip Joint Pliers" features a large image of the tool, a price of \$9.17, and a description in Latin. Below the product image, there is a section titled "Related products" (circled in red) with four smaller images of different tools. The bottom of the page shows a Windows taskbar with various application icons and system information.

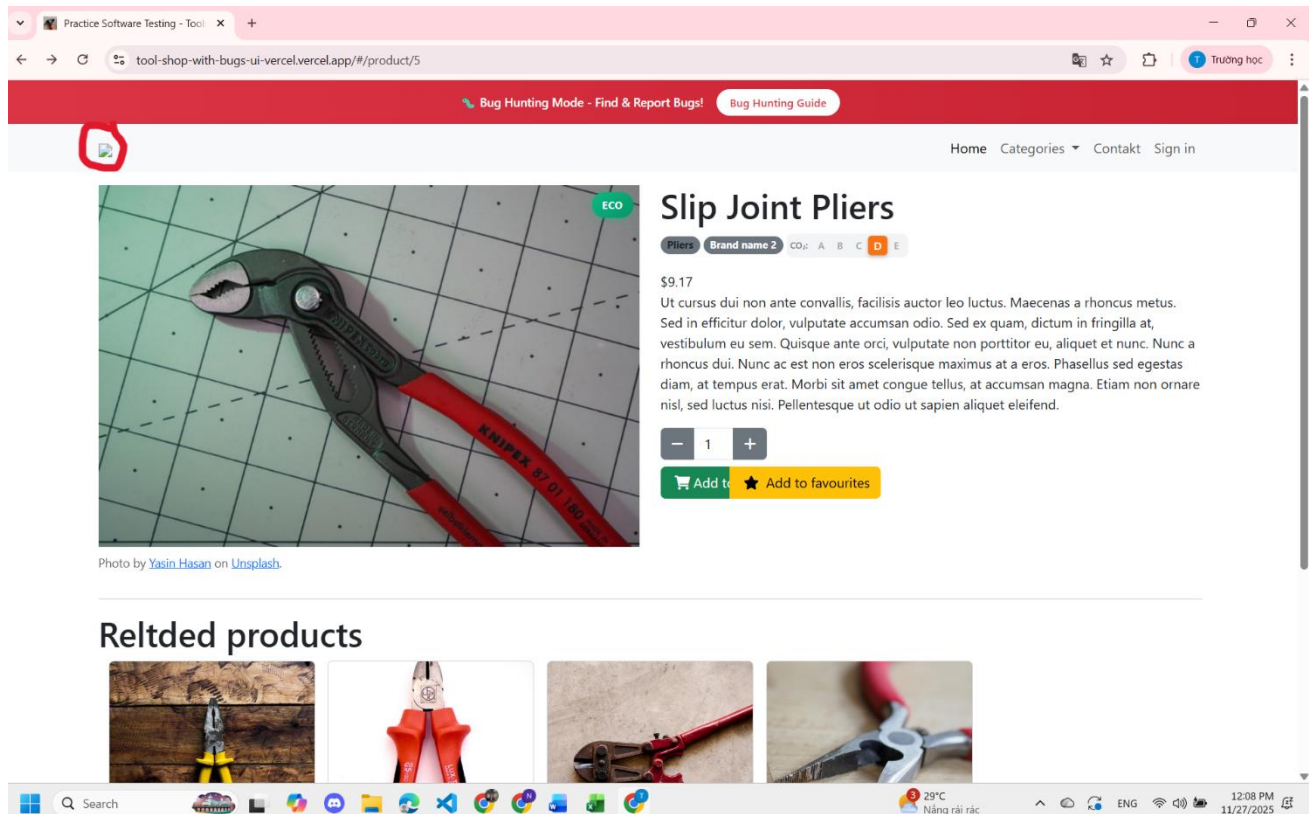
The screenshot shows a web application interface for a tool shop, specifically the checkout page. The top navigation bar is red with the text "Bug Hunting Mode - Find & Report Bugs!" and a "Bug Hunting Guide" button. The main navigation bar is white with links for "Home", "Categories", "Contact", and "User Data not found" (with a red notification icon). The checkout process is indicated by four numbered steps: 1. CART, 2. SIGN IN (circled in red), 3. ADDRESS, and 4. PAYMENT. The "SIGN IN" step is highlighted with a red circle. Below the steps, there is a form for "Billing Address" (circled in red) with input fields for "Test street 98", "Vienna", "Your State \*", "Austria", and "missing value". A green button is located below the form. The bottom of the page contains a footer with a disclaimer: "This is a DEMO application (GitHub repo), used for software testing training purpose. | Support this project | Banner photo by Barn Images on Unsplash." The bottom of the page shows a Windows taskbar with various application icons and system information.






## Bug 8: Broken Site Logo

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



*The updated bugs on Mantis*



Logged in as: 22T72.008.22125093 (Trần Nhật Thanh - reporter)2025-11-27 14:31 +07

[My View](#) | [View Issues](#) | [Report Issue](#) | [Change Log](#) | [Roadmap](#) | [My Account](#) | [Logout](#)

Issue #Jump

Recently Visited: 0056357, 0056359, 0056356, 0056354, 0056353

Unassigned [ ^ ] ( 1 - 10 / 96 )

0056359

HW05 - GUI Usability Testing] Broken Site Logo

[All Projects] APCS - 2025-11-27 14:30

0056356

HW05 - GUI Usability Testing] General UI, Visual, and Content Defects

[All Projects] APCS - 2025-11-27 14:29

0056357

HW05 - GUI Usability Testing] General UI, Visual, and Content Defects

[All Projects] APCS - 2025-11-27 14:28

0056354

HW05 - GUI Usability Testing] Mobile Cart Visibility

[All Projects] APCS - 2025-11-27 14:25

0056353

HW05 - GUI Usability Testing] Payment Form Logic Error

[All Projects] APCS - 2025-11-27 14:24

0056352

HW05 - GUI Usability Testing] Missing Button Label on Address Page

[All Projects] APCS - 2025-11-27 14:24

0056351

HW05 - GUI Usability Testing]

[All Projects] APCS - 2025-11-27 14:22

0056350

HW05 - GUI Usability Testing] Cart Calculation Error

[All Projects] APCS - 2025-11-27 14:21

0056347

HW05 - GUI Usability Testing] Navigation Redirect Error

[All Projects] APCS - 2025-11-27 14:20

0056169

Valid - COD Without Bank Details

[All Projects] APCS - 2025-11-05 11:32

Resolved [ ^ ] ( 0 - 0 / 0 )

Reported by Me [ ^ ] ( 1 - 10 / 19 )

0056359

HW05 - GUI Usability Testing] Broken Site Logo

[All Projects] APCS - 2025-11-27 14:30

0056356

HW05 - GUI Usability Testing] General UI, Visual, and Content Defects

[All Projects] APCS - 2025-11-27 14:29

0056357

HW05 - GUI Usability Testing] General UI, Visual, and Content Defects

[All Projects] APCS - 2025-11-27 14:28

0056354

HW05 - GUI Usability Testing] Mobile Cart Visibility

[All Projects] APCS - 2025-11-27 14:25

0056353

HW05 - GUI Usability Testing] Payment Form Logic Error

[All Projects] APCS - 2025-11-27 14:24

0056352

HW05 - GUI Usability Testing] Missing Button Label on Address Page

[All Projects] APCS - 2025-11-27 14:24

0056351

HW05 - GUI Usability Testing]

[All Projects] APCS - 2025-11-27 14:22

0056350

HW05 - GUI Usability Testing] Cart Calculation Error

[All Projects] APCS - 2025-11-27 14:21

0056347

HW05 - GUI Usability Testing] Navigation Redirect Error

[All Projects] APCS - 2025-11-27 14:20

0055752

Search: Input validation is broken and allows invalid queries.

[All Projects] APCS - 2025-11-04 18:30

Recently Modified [ ^ ] ( 1 - 10 / 96 )

0056359

HW05 - GUI Usability Testing] Broken Site Logo

[All Projects] APCS - 2025-11-27 14:30

0056356

HW05 - GUI Usability Testing] General UI, Visual, and Content Defects

[All Projects] APCS - 2025-11-27 14:29

0056357

HW05 - GUI Usability Testing] General UI, Visual, and Content Defects

[All Projects] APCS - 2025-11-27 14:28

0056354

HW05 - GUI Usability Testing] Mobile Cart Visibility

[All Projects] APCS - 2025-11-27 14:25

0056353

HW05 - GUI Usability Testing] Payment Form Logic Error

[All Projects] APCS - 2025-11-27 14:24

**Self – Assessment**

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