

# **Human Computer Interaction - IT3060**

**Sri Lanka Institute of Information Technology**



## **Assignment 01**

**Project title: User Research Techniques**

**Group number:**

<b>Student No</b>	<b>Name</b>	<b>Workload Distribution</b>
IT23362376	J.A.A.S. Jayakody	Product listing page. View product page. Shop page.
IT23367258	W.D. Navanjana	Login and register page. User profile page. Dashboard page.
IT23367326	W.H.T.S. Soysa	View cart page. Checkout page. Place the order page. My orders page.
IT23362826	K.S.R. Hewapaulage	Home page. Contact us page. About us page.

## **Group Member Details**

<b>Reg.No</b>	<b>Name</b>	<b>workload distribution</b>
IT23362376	J.A.A.S. Jayakody	
IT23367258	W.D. Navanjana	
IT23367326	W.H.T.S. Soysa	
IT23362826	K.S.R. Hewapaulage	

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## **Project Description**

Multideal.lk is an e-commerce platform that offers a wide range of products, including electronics, home appliances, fashion items, and more, aiming to provide customers with convenient online shopping and competitive deals.

The purpose of this project is to evaluate the current usability of the Multideal.lk website and identify factors that may hinder a smooth and satisfying user experience. By conducting usability testing and analyzing user interactions, we aim to uncover design, navigation, and functionality issues that could affect customer satisfaction and conversion rates.

This initiative is not only to improve the overall user-friendliness of the website but also to enhance accessibility, efficiency, and visual appeal, ensuring that visitors can easily find, compare, and purchase products without unnecessary friction. Through this process, we seek to apply usability principles in practice, gain direct experience in UX evaluation, and propose actionable recommendations for improvement.

Website Link: <https://multideal.lk/>

## **Alternatives Considered**

Our group reviewed four websites with poor interfaces and experiences, compared their shortcomings, and selected the one that best represented the issues we aimed to address. Below are the links to the other websites.

Craigslist - <https://www.craigslist.org>

- Outdated, text-heavy design makes it visually unappealing.
- Poor navigation hierarchy, hard to quickly find desired categories.

Water Board Payment Portal - <https://ebis.waterboard.lk>

- Outdated and visually unappealing design.

Discount Beds Belfast - <https://www.discountbedsbelfast.co.uk/>

- Outdated, cluttered design, lacking clear visual hierarchy.
- Not mobile-optimized poor responsiveness.

LECO - <https://www.leco.lk>

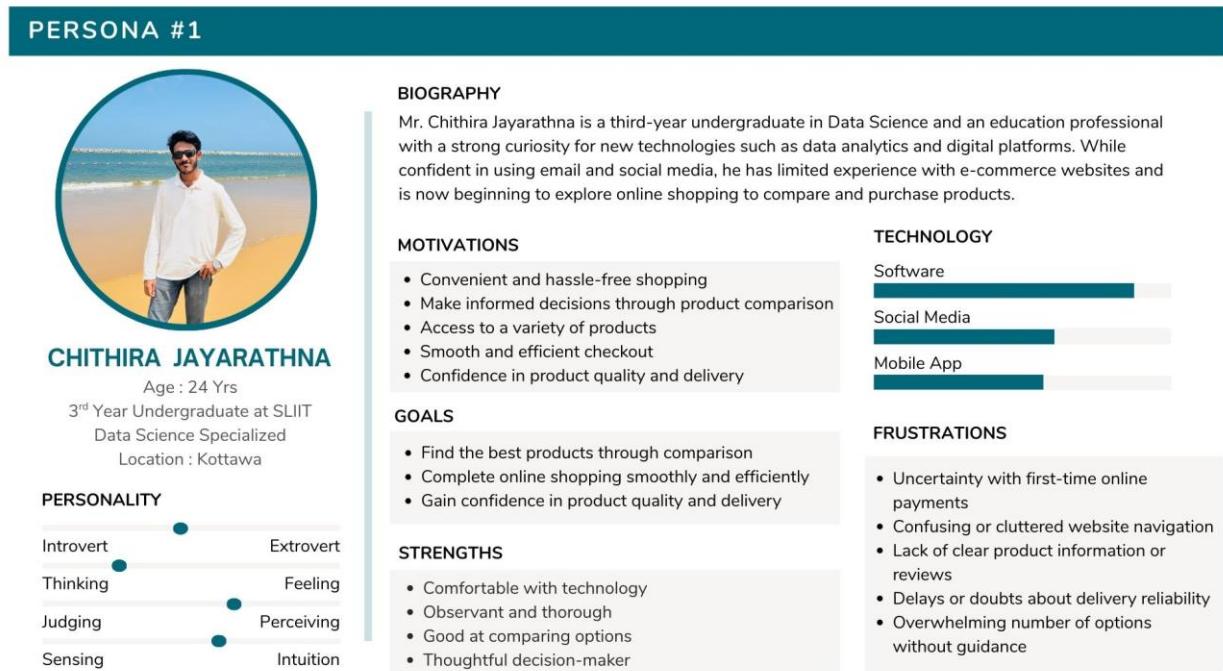
- Outdated visual design with unclear content grouping.

## User groups identified.

- First-Time Online Shopper (Novice User)
- Regular Shopper (Expert User)
- Small Business Owner (Bulk Buyer)

## Three Personas for selection

- First-Time Online Shopper Persona for Multideal.lk Website



➤ Regular Shopper Persona for Multideal.lk Website

**PERSONA #2**



**NISITHA FERNANDO**

Age : 25 Yrs

Front office agent at Cinnamon

Life Colombo

Location : Ragama

**PERSONALITY**



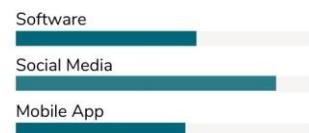
**BIOGRAPHY**

Mr. Nisitha Fernando is a 25-year-old front office agent at Cinnamon Life Hotel. He is an experienced online shopper who frequently browses e-commerce sites to save time and find good deals. He enjoys comparing products, exploring new arrivals, and staying updated on trends. Outside of work, he likes discovering convenient ways to shop and experimenting with digital tools.

**MOTIVATIONS**

- Quick and efficient shopping experience
- Access to product reviews and ratings
- Variety of products from trusted sellers
- Seamless checkout and payment options

**TECHNOLOGY**



**GOALS**

- Purchase desired products quickly
- Stay updated on new deals and offers
- Avoid delivery or quality issues
- Use advanced features.

**STRENGTHS**

- Experienced in online shopping
- Knows how to compare products and sellers
- Efficient in decision-making
- Comfortable with digital payments and apps

**FRUSTRATIONS**

- Finds it frustrating when product information is unclear or inconsistent.
- Dislikes slow-loading pages or complicated checkout processes.
- Gets annoyed by limited payment options or confusing navigation.
- Sometimes struggles to track past orders or compare prices efficiently.

➤ User expert/Buyer Persona for Multideal.lk Website

**Usability issues identified by the students.**

Student ID	Interface Name	Usability Issues
IT23367258	Login and Register page	<ul style="list-style-type: none"> <li>• Excessive blank space around the form.</li> <li>• Poor alignment between input fields and buttons.</li> <li>• No clear error message or feedback when credentials are incorrect.</li> <li>• Low contrast between text and background in input fields, reducing readability.</li> <li>• Duplicate “I agree to terms” checkboxes.</li> </ul>

	User profile page	<ul style="list-style-type: none"> <li>Profile fields are spread out with inconsistent spacing.</li> <li>Edit/Save buttons not clearly visible.</li> <li>No immediate confirmation message after updating profile details.</li> <li>Key details like contact info and addresses are not grouped logically.</li> </ul>
	My orders page	<ul style="list-style-type: none"> <li>Order status labels are not visually distinct.</li> <li>No filtering or sorting options for past orders.</li> <li>Clicking an order shows limited details.</li> <li>No quick option to reorder previously purchased items.</li> </ul>
IT23367326	View cart page	<ul style="list-style-type: none"> <li>Product images are small and unclear, reducing visual confirmation of items.</li> <li>No “Save for Later” option for items.</li> <li>Update quantity controls are not prominent or intuitive.</li> <li>Price breakdown is not easily visible.</li> <li>The removing item button is too small or poorly positioned.</li> </ul>
	Checkout cart page	<ul style="list-style-type: none"> <li>No progress indicator showing the steps.</li> <li>Form fields for address and contact details are lengthy and not auto filled.</li> <li>No real-time validation for incorrect input.</li> <li>Payment options are not displayed until late in the process, causing uncertainty.</li> </ul>
	Place order page	<ul style="list-style-type: none"> <li>Final order summary is cluttered and difficult to scan.</li> <li>No ability to go back and edit order details without losing progress.</li> <li>Order confirmation button blends with other page elements.</li> </ul>
IT23362826	Home page	<ul style="list-style-type: none"> <li>Cluttered navigation and Menu overload.</li> <li>Lack of visual hierarchy.</li> <li>Unclear contact and login information.</li> <li>Visual overload and lack of spacing.</li> </ul>
	Contact Us page	<ul style="list-style-type: none"> <li>Limited contact channels.</li> <li>No confirmation feedback.</li> </ul>

		<ul style="list-style-type: none"> <li>• If the business has a physical store, users often expect a Google Map embed with directions. Its absence reduces trust and accessibility.</li> <li>• Contact information (phone/email) may be buried below the form instead of being highlighted at the top.</li> <li>• Accessibility issues.</li> </ul>
	About Us page	<ul style="list-style-type: none"> <li>• Sometimes the “About Us” link is hidden at the bottom, not clear in the main menu.</li> <li>• Long paragraphs without headings or highlights make it boring and hard to read.</li> <li>• Text may not be well organized.</li> <li>• No photos of the company, team, or products, which reduces trust.</li> <li>• Missing details like years of service, customer reviews, or certificates.</li> </ul>
IT23362376	Product listing page	<ul style="list-style-type: none"> <li>• No sorting or filtering options.</li> <li>• Low quality or blurry product images.</li> <li>• Cannot hide the category dropdown.</li> <li>• Small and unclear images used for categories.</li> </ul>
	View product page	<ul style="list-style-type: none"> <li>• Cluttered product title.</li> <li>• Empty customer review section.</li> <li>• Low contrast category link and product title.</li> <li>• Quantity selectors and buy now buttons are unbalanced.</li> <li>• The share button on the top of the product title is not visually appealing.</li> </ul>
	Shop page	<ul style="list-style-type: none"> <li>• Cluttered visual layout.</li> <li>• Overcrowded with too many brand logos and names.</li> <li>• Product names and prices are not aligned.</li> <li>• It does not show any out-of-stock products.</li> <li>• Items seem to pack without enough whitespace.</li> <li>• Prices of the items are not highlighted enough.</li> </ul>

## **Scripts for contextual inquiry for three users**

User	Background Description of the user	Questions to be asked by the user	Tasks to be given to the user

<b>1. Regular Shopper (Expert user)</b>	<p>Mr. Nisitha Fernando is a 25-year-old employee who works at Cinnamon life hotel as a front office agent. He frequently shops online to save time and discover good deals. Being a active customer of Multideal.lk, he often visits the site to explore new product arrivals, take advantage of seasonal offers, and compare prices before making purchases.</p>	<p>Could you start by telling us how long you have been using this website for your purchases?</p> <p>Did you face any issues with page loading or incomplete content on this website?</p> <p>Was the logging process easy to find and complete?</p> <p>How easy was it to find products within your budget?</p> <p>Did you find it easy to add items to the cart and complete the checkout process?</p>	<p>Visit Multideal.lk and login to existing accounts.</p> <p>Find a kitchen appliance priced under Rs.5000.</p> <p>Add the item to your cart and proceed to checkout.</p>
<b>2. Small Business Owner (Bulk Buyer)</b>	<p>.</p> <p>Mr. Matheesha Siriwardhana is a 22-year-old undergraduate at SLIIT, is currently pursuing a degree in Business Management. Alongside his studies, he runs his own side business, where he purchases household equipment and resells them. Usually, he shop online to find bulk deals.</p>	<p>Were there issues with redundant links or cluttered navigation on the homepage?</p> <p>How easy is it to identify discounts without dedicated offer sections or filters?</p> <p>Did the reviews help you in deciding?</p> <p>What is your opinion about the shop page?</p> <p>What features do you wish Multideal.lk had to better serve business buyers like you?</p>	<p>Search for a specific bulk product on Multideal.lk.</p> <p>Identify any available bulk discounts.</p> <p>Check stock availability for a chosen product.</p> <p>Compare prices from different sellers or listings.</p> <p>Add multiple quantities of a product to the cart and review delivery details.</p>

<b>3. First-Time Online Shopper (Novice User)</b>	<p>Mr. Chithira Jayarathna is a 24-year-old 3rd-year undergraduate student at SLIIT, specializing in Data Science. He is a tech gadget enthusiastic. He visited the Multideal.lk website for the first time. As a first-time online shopper, he explored the product listings, compared options, and navigated through the checkout process. He then shared his experience with us regarding the website.</p>	<p>How often do you shop online?</p> <p>Have you ever used this website before?</p> <p>How do you usually decide whether to buy a product?</p> <p>As a first-time visitor, what was your first impression of the website's homepage design?</p> <p>How does the site's accessibility feature, such as font readability, color scheme, and image descriptions affect your experience?</p> <p>How easy was it to find products within your budget?</p> <p>What suggestions do you have to make the interface</p>	<p>Visit <a href="https://multideal.lk/">https://multideal.lk/</a> Website.</p> <p>Create an account to login.</p> <p>Find and items in the Electronics and devices section priced between Rs.2000 and Rs.3000</p>

		more user friendly for first time visitors?	
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### Three video links

- Regular user (Expert user)
  - [https://drive.google.com/file/d/1rwnnB7bJKfXtA86fx4RUFdheTGr\\_x6BE/view?  
usp=sharing](https://drive.google.com/file/d/1rwnnB7bJKfXtA86fx4RUFdheTGr_x6BE/view?usp=sharing)
- Small business owner (Bulk buyer)
  - [https://drive.google.com/file/d/1oIOKbqvFfpalXCKCpx1RRQJM3AcZ4DdU/vie  
w?usp=sharing](https://drive.google.com/file/d/1oIOKbqvFfpalXCKCpx1RRQJM3AcZ4DdU/view?usp=sharing)
- First time user
  - [https://drive.google.com/file/d/1RKwh2Opnhz5\\_1ZAeBtLZ8hhQCwH2tQ6V/vie  
w?usp=sharing](https://drive.google.com/file/d/1RKwh2Opnhz5_1ZAeBtLZ8hhQCwH2tQ6V/view?usp=sharing)

## Usability issues identified based on contextual inquiry.

Interfaces	Usability Issues
Login and Register page	Too much white space around the forms, fields and buttons are not lined up well, and the text is hard to read. The same “agree to terms” box is repeated, and there is no clear message when login fails. Both Login and Register forms are placed too close together.
Home Page	Feels crowded with too much text and images, and the layout does not guide the user to shop easily.
User Profile Page	The information is not well arranged, the edit and save buttons are hard to find, and there is no message to confirm changes were saved.
Contact Us Page	Contact info is buried in text, no clear form or quick way to send a message, and the page looks plain.
My Orders Page	Order status is not easy to see, there is no way to filter or sort orders, and details about orders are limited.
About Us Page	Just some plain text in there, and no clear highlights of the brand’s main points.
View Cart Page	Product pages feature limited visuals, dense text descriptions and lack interactive image functionality.
Checkout Cart Page	No step-by-step guide for checkout, no quick check for mistakes in forms, and payment choices appear too late.
Place Order Page	Order details are messy, the confirm button does not stand out, and no delivery date is shown.
Product Listing Page	Items are shown too close together, making it hard to focus. No filter or sort options, and some product names are too long and hard to read.
View Product Page	Product details are not arranged clearly, images are small, and important info like stock or delivery time is hard to find.
Shop Page	The layout is crowded with too many items at once, especially brand images, and there is no perfect way to search or narrow down choices.

## Ratings of the Usability problems as high medium and low

Website user	Usability issues	Rating the usability issue
Regular Shopper	<p>Duplicate “agree to terms” checkboxes in login/register form.</p> <p>No clear error message when login fails.</p> <p>Buttons are not visually clear.</p>	<p>Medium</p> <p>High</p> <p>Medium</p>
Visitor user	<p>The home page feels crowded and hard to navigate.</p> <p>Required fields in forms are not clearly marked.</p> <p>The product listing page has no filter or sort options.</p>	<p>Medium</p> <p>Medium</p> <p>High</p>
User expert	<p>Alignment of form fields and buttons is inconsistent.</p> <p>No step-by-step guide during checkout.</p> <p>Order confirmation details are cluttered and hard to scan.</p>	<p>Medium</p> <p>Medium</p> <p>Low</p>

## Gantt Chart

## References

- Understanding Personas for User Experience Research  
<https://www.interaction-design.org/literature/topics/personas>.
- Usability Principles and Evaluation Methods  
<https://www.nngroup.com/articles/ten-usability-heuristics/>.
- Common Usability Issues in E-commerce Websites  
<https://baymard.com/checkout-usability>.  
<https://baymard.com/blog/checkout-usability-mistakes>
- Searching poorly organized websites  
<https://multideal.lk/>  
<https://blog.hubspot.com/website/bad-website-design-examples>

## Appendix

### ➤ Interviews

We conducted one-on-one discussions with different Multideal.lk users, including sellers, frequent shoppers, and first-time visitors, to understand their experiences, challenges, and expectations. Open-ended questions helped us gather valuable feedback on navigation issues, product search difficulties, and checkout process frustrations. These insights highlighted specific pain points and improvement areas from the user's perspective.

### ➤ Usability Testing

Observing users while they navigate Multideal.lk helped us identify usability issues, gather honest feedback, and evaluate the overall user experience. Watching real-time interactions gave us practical insights that can be used to improve and optimize the website's design.

### ➤ **Persona Creation**

Based on our research, we created fictional user profiles representing several types of users such as a seller managing inventory, a bargain hunter browsing deals, and a casual visitor checking products. These personas reflected real user behaviors and goals, helping us design with their specific needs in mind.

### ➤ **Contextual Inquiry**

We explored how users interact with Multideal.lk in real-world situations, such as shopping from mobile devices with slow connections or managing orders during busy work hours. Combining observation with direct interaction gave us an understanding of the environmental factors and constraints affecting user behavior, leading to more practical design recommendations.

Together, these user research methods gave us a thorough insight of our users and how they interact with Multideal.lk. By combining multiple approaches, we ensured that our design recommendations were grounded in real user needs, resulting in a more user-friendly and effective shopping experience.