



**FACULTY OF COMPUTER AND MATHEMATICAL SCIENCE
BACHELOR OF INFORMATION SYSTEMS (HONS.) INFORMATION
SYSTEMS ENGINEERING**

CSC584 – ENTERPRISE PROGRAMMING

CAMPUS MARKETPLACE FOR STUDENTS USER MANUAL

SEMESTER OCTOBER – MARCH 2025

Group: CDCS2664A (GROUP 3)

Submit To:

MUHAMAD RIDHWAN MOHAMAD RAZALI

Prepared By:

NAME	NO MATRIKS
MUHAMMAD SYAHRUL BIN AHMAD BAZLAN	2025136721
MUHAMMAD SYAFIQ BIN SYAHROMSYAH	2025143763
AMIRA NAJWA BINTI ZULKIFLY	2025140181
NORAINA AISHAH BINTI ZULKIFLI ZAKI	2025190097

Submission Date: 21 JANUARY 2026

TABLE OF CONTENT

1.0 INTRODUCTION.....	3
2.0 PROBLEM STATEMENT.....	5
3.0 OBJECTIVE.....	5
4.0 DATABASE.....	6
5. System Architecture.....	7
5.1 Architectural Description.....	7
6.0 USER MANUAL.....	11
1. Register Account.....	12
2. Login Page.....	13
4. Navigation Bar & Footer.....	15
5. Home Page.....	17
6. Products.....	19
7. Message.....	22
8. Shopping cart.....	24
9. Seller Add, Edit, Delete.....	30
10. Manage order.....	35
11. Product review.....	37
12. Student profile.....	38
6.0 CONCLUSION.....	40

1.0 INTRODUCTION

The CampusHub system is a campus-oriented digital marketplace designed to support buying and selling activities among students in an organized, efficient, and secure manner. The system aims to address common challenges faced by students in acquiring affordable academic and personal items by providing a centralized platform that connects buyers and sellers within the same campus environment. By focusing exclusively on student users, CampusHub ensures that transactions remain relevant, trustworthy, and convenient.

CampusHub allows students to participate as sellers by listing second-hand items such as textbooks, electronic gadgets, uniforms, and other frequently used campus necessities. Each product listing includes essential information such as item name, category, condition, price, and a brief description to help potential buyers make informed decisions. At the same time, students can browse available products based on their needs and preferences, enabling efficient discovery of suitable items without relying on external platforms.

To enhance communication and transaction coordination, the system provides a built-in messaging feature that enables direct interaction between buyers and sellers. Through this feature, users can inquire about product details, negotiate prices, and arrange meet-ups within the campus. This structured communication process helps reduce misunderstandings and promotes smoother transactions while maintaining a controlled and student-focused marketplace.

In addition, CampusHub contributes to sustainable practices within the campus community by encouraging the reuse of items that are still in good condition. This approach helps reduce unnecessary spending, minimizes waste, and promotes responsible consumption among students. By integrating academic relevance, economic benefits, and sustainability, CampusHub serves as an educationally valuable system that enhances student convenience and fosters a collaborative campus culture.

1.1 TEAM CHARTER

	<p>NAME : MUHAMMAD SYAHRUL BIN AHMAD BAZLAN STUDENT ID : 2025136721 ROLE : LEAD DEVELOPER / PROJECT MANAGER</p>
	<p>NAME : MUHAMMAD SYAFIQ BIN SYAHROMSYAH STUDENT ID : 2025143763 ROLE : DATABASE ADMINISTRATOR</p>
	<p>NAME : AMIRA NAJWA BINTI ZULKIFLY STUDENT ID : 2025140181 ROLE : SYSTEM ANALYST / DOCUMENTER</p>
	<p>NAME : NORAINA AISHAH BINTI ZULKIFLI ZAKI STUDENT ID : 2025190097 ROLE : SYSTEM ARCHITECT</p>

2.0 PROBLEM STATEMENT

In today's campus environment, students often struggle to access affordable academic and personal items. Traditional methods of buying and selling are time-consuming and inefficient, and existing online platforms do not fully cater to campus-specific needs. This creates challenges in trust, communication, and sustainability within the student community.

Key problems include:

- Students face challenges in acquiring affordable academic and personal items through traditional methods.
- Existing platforms may not focus on campus-specific needs, leading to irrelevant or unreliable transactions.
- Lack of a centralized and secure platform makes buying, selling, and communication inefficient.
- Students often miss opportunities to reuse items, resulting in unnecessary spending and waste.

3.0 OBJECTIVE

The main objectives of the CampusHub system, which are designed to address student needs in buying and selling campus-related items while promoting efficiency, sustainability, and effective communication within the campus community.

- To provide a centralized marketplace connecting students within the same campus for buying and selling items.
- To facilitate efficient discovery of suitable products through organized listings with essential details.
- To enhance communication between buyers and sellers via a built-in messaging system.
- To promote sustainable practices by encouraging the reuse of items in good condition.
- To create a convenient, trustworthy, and student-focused platform that supports campus collaboration.

4.0 DATABASE

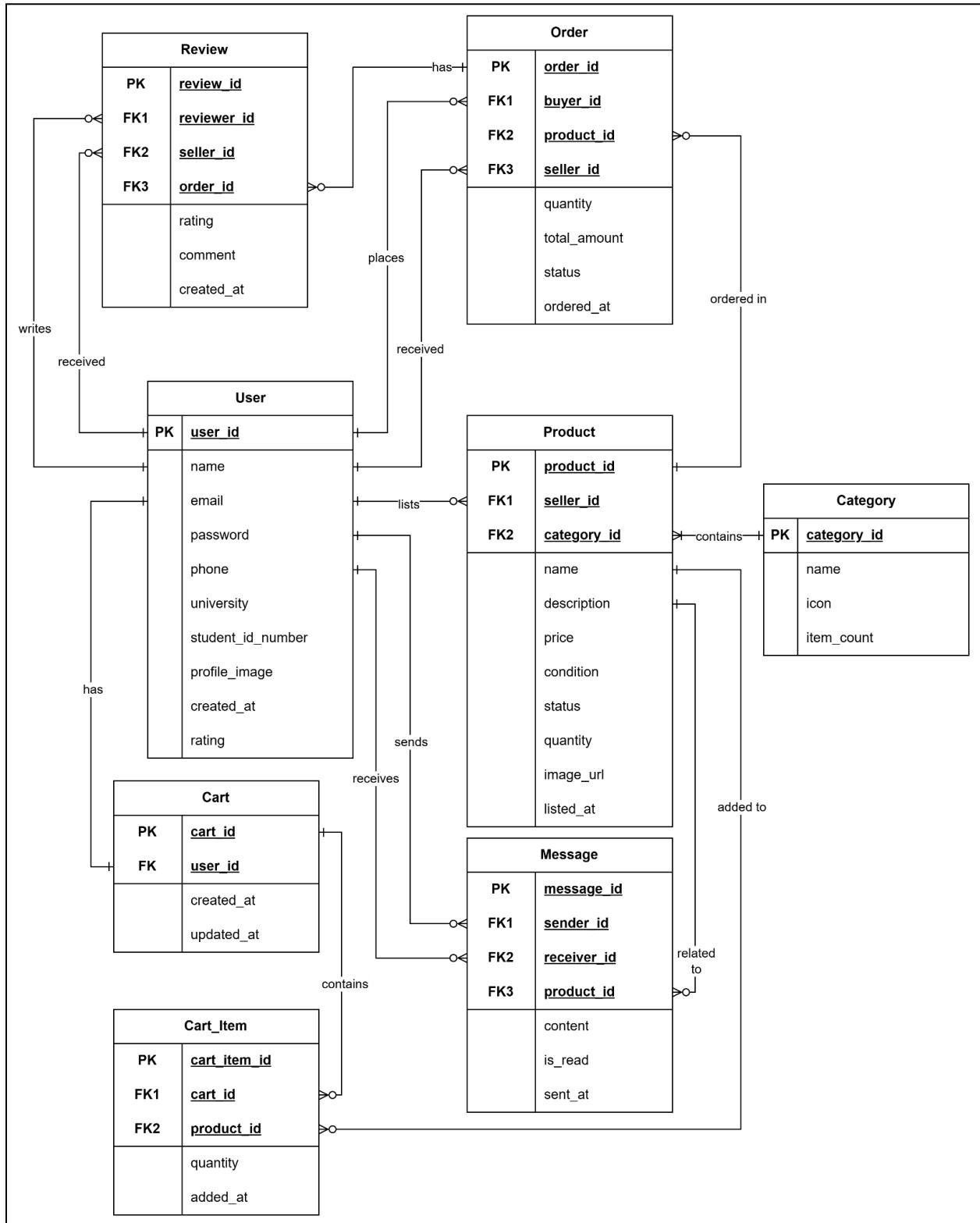


Figure 4: Entity Relational Diagram (ERD)

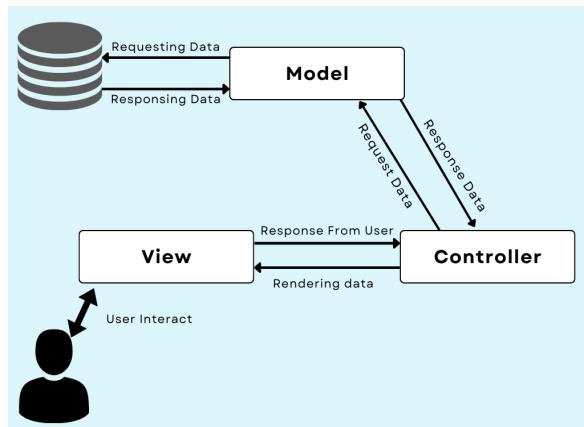
5. System Architecture

This system is developed using the Java Enterprise Edition (Java EE) platform and follows the Model–View–Controller (MVC) design pattern. CampusHub structures the application into Beans/DAOs (Models), JSP pages (Views), and Servlets (Controllers) to support organized development and efficient request handling.

The system is implemented using a monolithic architecture, where all application components including user interface handling, application logic, and data access are contained within a single WAR (Web Application Archive) file. The MVC pattern defines how these components are structured and how they interact within the GlassFish 5 application server environment.

5.1 Architectural Description

The system is developed using the Model–View–Controller (MVC) architectural pattern. MVC separates the application into three main components:

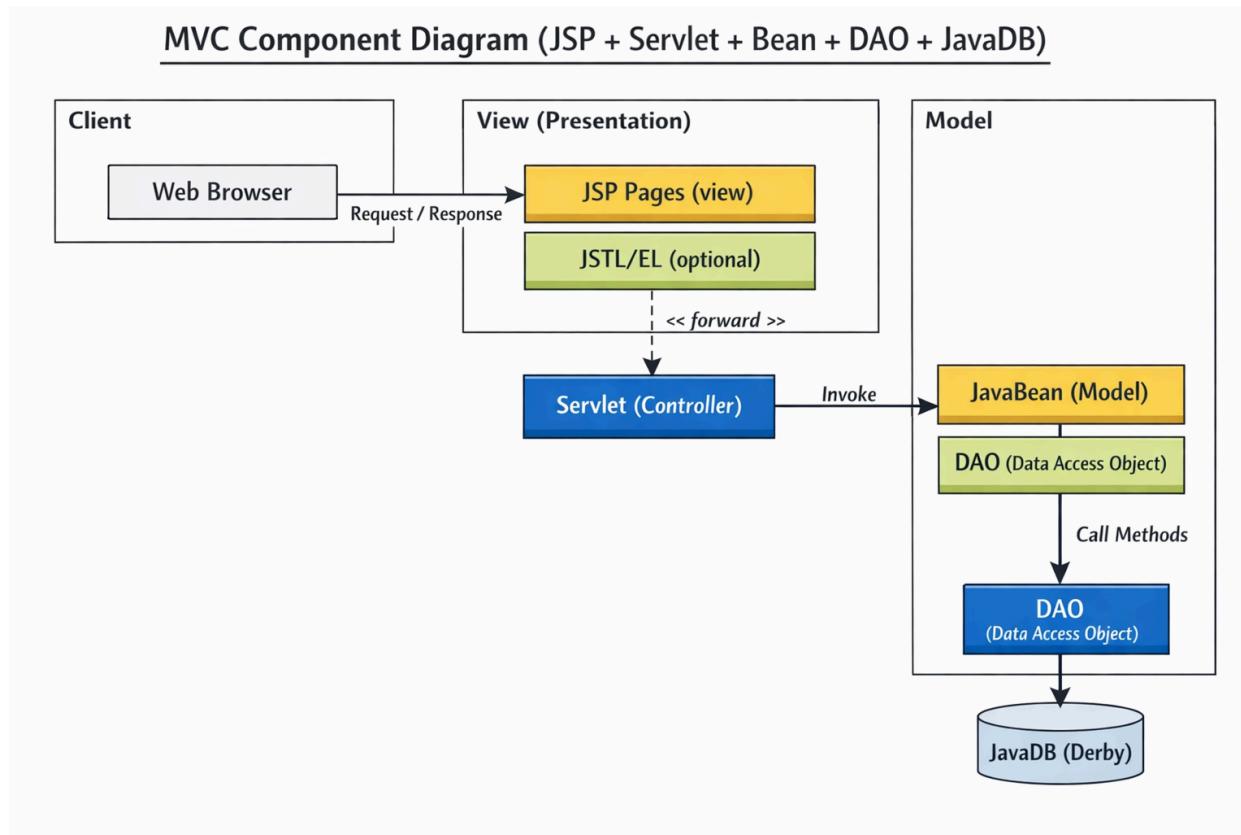


[Figure 5 MVC Diagram]

In this system, the MVC components interact as follows:

1. The user interacts with the system through the user interface (View).
2. The Controller (Servlet) receives the user's request via an HTTP request.
3. The Controller performs input validation and business logic, then coordinates operations using the Model.
4. The Model (DAO) accesses and updates the underlying data storage.

- The **Controller** then selects the appropriate **View** (JSP), passes the necessary data to it, and returns the response to the user.



[Figure 6 Detail MVC Component Diagram]

A. Model (Java Beans + DAO + Apache Derby)

The Model layer resides on the server side and interfaces directly with the Apache Derby database through the DAO (Data Access Object) pattern and JDBC. The Model represents the application's core domain data such as Users, Products, Categories, and Orders and acts as the primary mechanism for storing, retrieving, and managing that data.

From an implementation perspective, each domain entity is defined as a Java Bean class that encapsulates its attributes (e.g., userId, name, email, price) using private fields and public getters/setters. The DAO classes (e.g., ProductDao, UserDao) translates object-level operations into standard SQL queries, enabling the system to perform data access in a consistent and maintainable way without exposing database complexity to the controllers.

B. View (JSP + JSTL + Tailwind CSS)

The View layer is responsible for presenting the system's interface to end-users. In this implementation, the UI is built using **JSP (JavaServer Pages)**, **JSTL (JavaServer Pages Standard Tag Library)**, and **Tailwind CSS**.

The View layer renders interactive screens such as the product marketplace, seller listings, and order tracking timelines. While the backend handles the logic, the View uses **Tailwind CSS** to provide a modern, premium, and responsive user experience. JSTL tags are used within the JSP files to dynamically display data passed from the Servlets, such as listing all available products or showing user-specific notifications.

C. Controller (Java Servlets)

The Controller layer sits between the browser-based View and the Model/DAO layer. Within CampusHub, Java Servlets act as the request-handling and coordination component: they receive HTTP requests from the client, interpret user intent, invoke the appropriate business operations, and return a response to the View.

When a user performs an action—such as searching for a product, adding an item to the cart, or logging in—the browser sends a request to a specific Servlet mapping (e.g., /products, /login, /cart). The Servlet handles the following responsibilities:

1. **Request Routing:** Directing the user to the correct method or page.
2. **Input Validation:** Ensuring form data is correct and secure.
3. **Model Interaction:** Calling DAOs to query or update the database.
4. **Navigation Control:** Using RequestDispatcher to forward the user to the appropriate JSP page along with the required data.

Example Flow (High-Level)

1. The user submits a form or clicks a link in the **JSP** interface (View).
2. The browser sends the request to a **Servlet** (Controller).
3. The **Servlet** validates the session and request parameters.

4. The **Servlet** retrieves or updates data through **DAO** classes (Model) in the **Derby** database.
5. The **Servlet** attaches the results to the request object and forwards it to a **JSP**.

The **JSP** renders the data and displays the updated interface to the user.

6.0 USER MANUAL

CampusHub

1. Register Account

The screenshot shows the 'REGISTER' page for CampusHub. At the top, there's a navigation bar with 'CampusHub' (in red), 'Home', 'Categories', 'Login' (in blue), and a red 'Sign Up' button. The main area has a light gray hexagonal background pattern. On the left, there's a large white rounded rectangle containing the 'CH' logo in red, the word 'CAMPUSHUB' in bold black, and 'THE STUDENT ECONOMY' in smaller black text. Below this is a quote: "'Empowering student entrepreneurs and buyers with a secure, centralized campus marketplace.'" To the right, the word 'REGISTER' is in large bold black capital letters. Below it, the text 'CREATE YOUR STUDENT ACCOUNT' is in smaller black capital letters. There are four input fields: 'FULL NAME' (placeholder 'Full Name'), 'STUDENT EMAIL (@.EDU.MY)' (placeholder 'Student Email'), 'PASSWORD' (placeholder '*****'), and 'PHONE NUMBER' (placeholder 'Phone Number'). Below these is a dropdown menu labeled 'UNIVERSITY' with the placeholder 'Select Your University'. At the bottom is a large red 'REGISTER' button. At the very bottom right, there's a link 'ALREADY HAVE AN ACCOUNT? [LOGIN](#)'.

Figure 6.1 Register Page interface

Description: To open this page, click on the Sign Up button on the top right corner. Users are required to enter their full name, student email, password, phone number and university campus to register an account. Click on the Register button to submit the form which will redirect to the Log In page. If the user already has an account, click on the Login link located at the bottom right and top right of the page to redirect to the Login Page.

2. Login Page

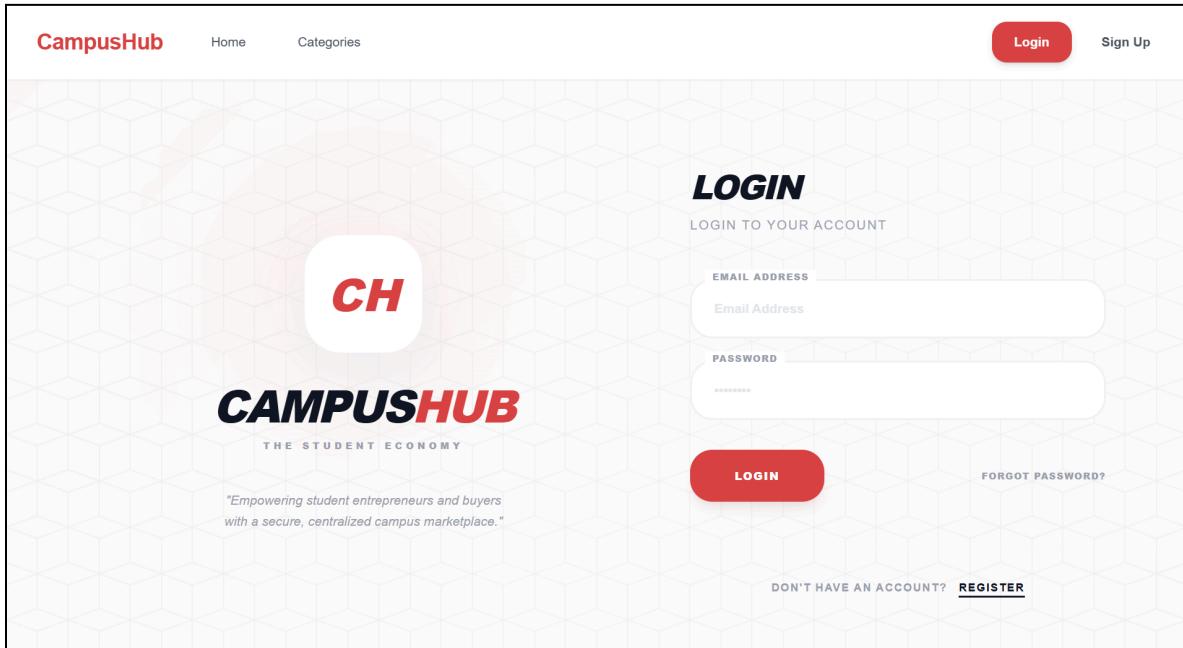


Figure 6.2 Login Page interface

Description: Users are required to enter their registered email address and password to login. After filling the form, click on the Login button under the password input box to redirect to submit. If the user forgot the password, the user can click on the Forgot password link located under the password text box. If a user does not have an account user can click on the Register link located at the bottom right of the page.

3. Forgot Password

The image displays two screenshots of a mobile application's forgot password interface. Both screenshots are set against a background of a hexagonal grid pattern.

Screenshot 1 (Top): This screenshot shows the initial state of the forgot password screen. It features a large red lock icon at the top center. Below it is the heading "FORGOT PASSWORD?" in bold black capital letters. A sub-instruction below the heading reads: "Enter your email address and we'll send you a temporary password." A text input field contains the email address "2025123456@student.uitm.edu.my". A red "RESET PASSWORD" button is positioned below the input field. At the bottom of the screen, there are links for "REMEMBER YOUR PASSWORD?" and "[BACK TO LOGIN](#)".

Screenshot 2 (Bottom): This screenshot shows the screen after a password reset has been initiated. It includes the same visual elements as the first screenshot. However, a green notification box at the top displays the message "Password reset successful! Temporary password: temp058f6". Below this message is a red "Go to Login" button. The rest of the interface remains consistent with the first screenshot, including the email input field and the bottom navigation links.

Figure 6.3 Forgot Password

Description : In case of forgetting password, users can reset their password by entering the student email. The system will update the password and display it for the user. Users can update the password in their Profile Page later.

4. Navigation Bar & Footer

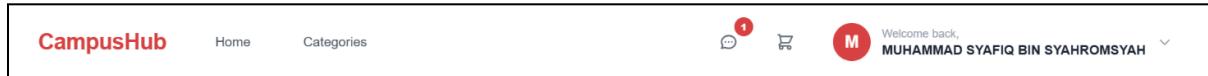


Figure 6.4.1 Navigation Bar

Description : The navigation bar is displayed at the top of every page after the user logs in. It includes the system name (CampusHub), a Home link (redirects to the Home page), a Categories link (redirects to the Categories page), a Messages icon (redirects the Messages page), a Cart icon (opens the user's cart), and the user's full name.

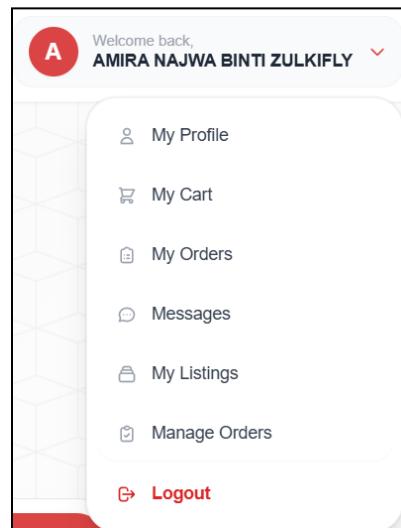


Figure 6.4.2 : shortcut navigation

Description : Hovering on the user's name opens a dropdown menu with the following options: My Profile , My Cart, My Orders, Messages, My Listings, Manage Orders, and Logout. Each option redirects to their respective pages, except Logout which ends the session and redirects to Login Page.

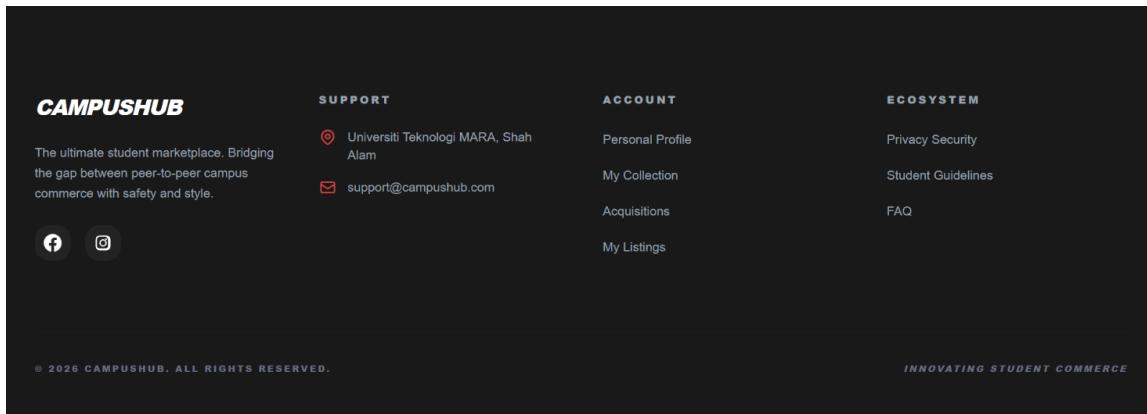


Figure 6.4.3: Footer

Description : The footer is displayed at the bottom of the page and provides quick access to important information and links. On the left, it shows the CampusHub brand description and social media icons (Facebook and Instagram). The Support section lists the support location and email address for user assistance

5. Home Page

The screenshot shows the homepage of the CampusHub Marketplace. At the top, there is a navigation bar with 'CampusHub' (in red), 'Home', 'Categories', a message icon, a shopping cart icon, and a user profile for 'MUHAMMAD SYAFIQ BIN SYAHROMSYAH'. Below the header, the word 'MARKETPLACE' is prominently displayed in large, bold, black letters. Underneath it, the text 'PREMIUM STUDENT VERIFIED EXCHANGE' is visible. A search bar with the placeholder 'Search textbooks, electronics, or style...' and a red 'EXPLORE' button are located below the main title. On the left side, there is a section titled 'VERIFIED LISTINGS' under 'FEATURED COLLECTIONS'. This section contains five items: 1) 'HOW TO WIN AT CHESS' (RM 42.0) by Levy Rof, a book about chess strategy. 2) 'DESSINI POT BOWL' (RM 30.0) made of granite die cast aluminum. 3) 'WOMEN'S BLAZER' (RM 80.0) in size M. 4) 'MOONDROP SPACE TRAVE...' (RM 75.0) which is a heavy bass, beautiful Bluetooth speaker. 5) 'INTRODUCTION TO JAVA PROGRAMMING' (RM 50.0) by Katsushi, a book for Java programming. On the right side, there is a 'GLOBAL MARKETPLACE FEED' section which is currently empty. At the bottom, there are two 'YOUR LISTING' buttons.

Figure 6.5.1 Home Page

Descriptions : Home page provides an entry point to the marketplace, which shows available products listed by users. The product displayed in this page can be filtered using the search function or filtered by a category.

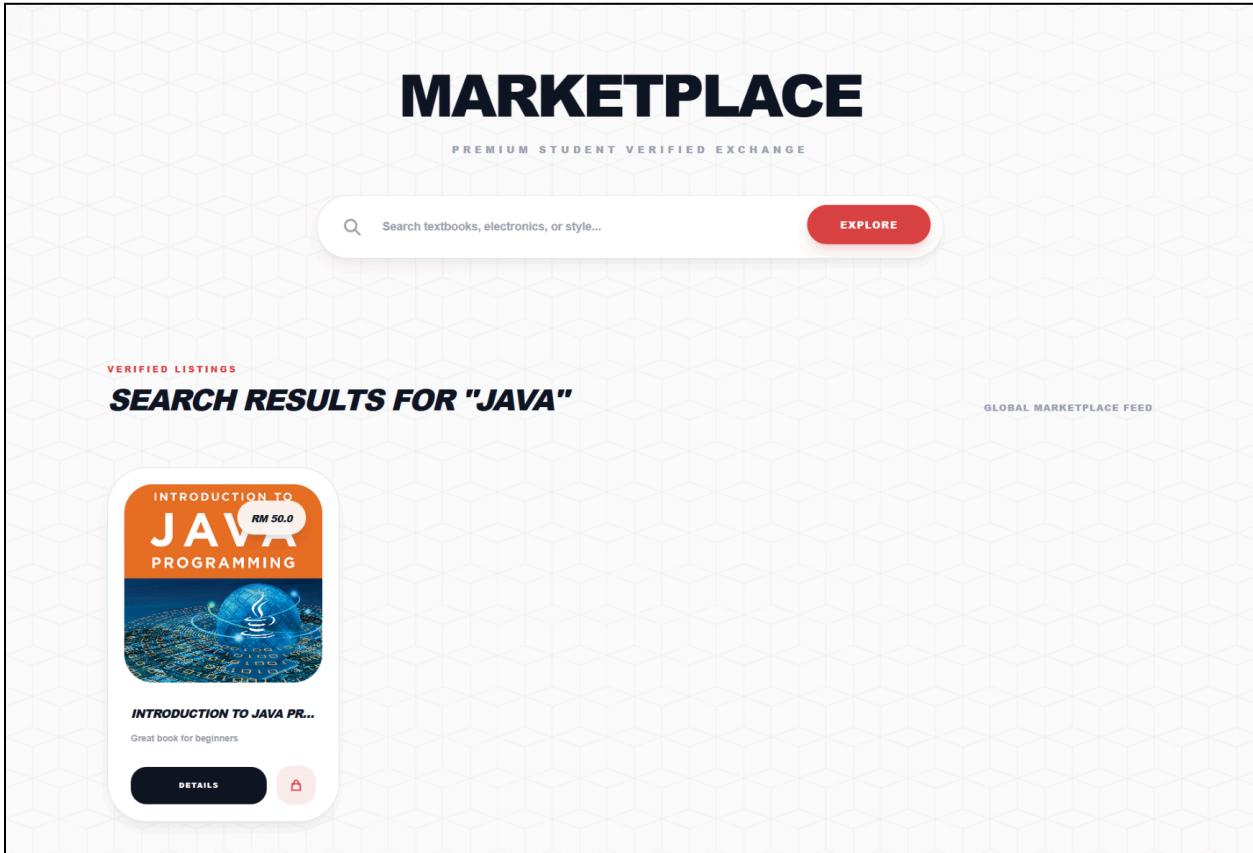


Figure 6.5.2 Home Page search bar results interface

Description : Users can search products by entering keywords in the search bar. The system will match the keyword with product name and description, do the filter and only display products with name and description that matches the keyword.

6. Products

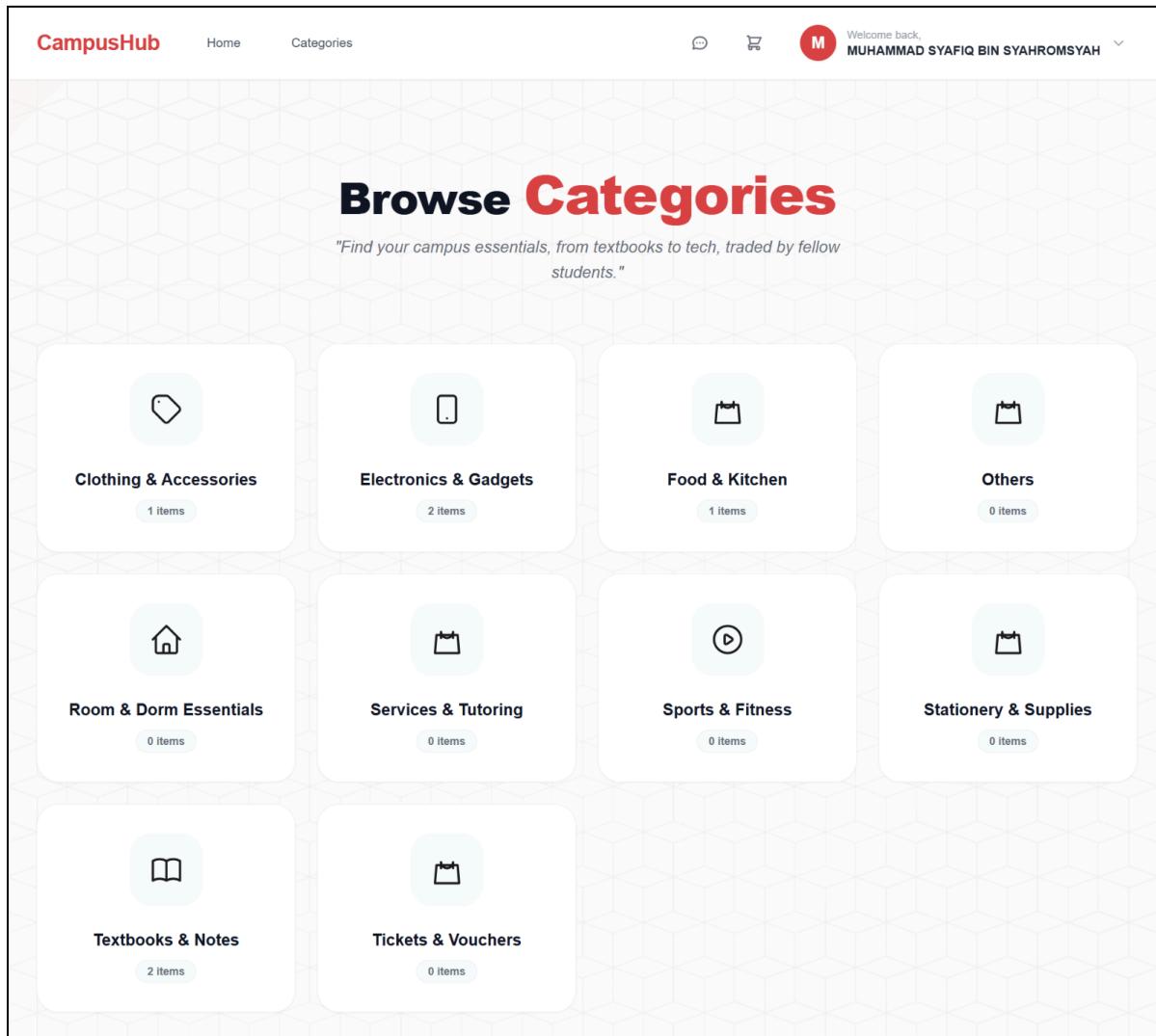


Figure 6.6.1 : Categories Browse interface

Descriptions : Lists down the categories of the product with the number of available products in each category. Clicking on a category card will redirect to the product list page of the selected category.

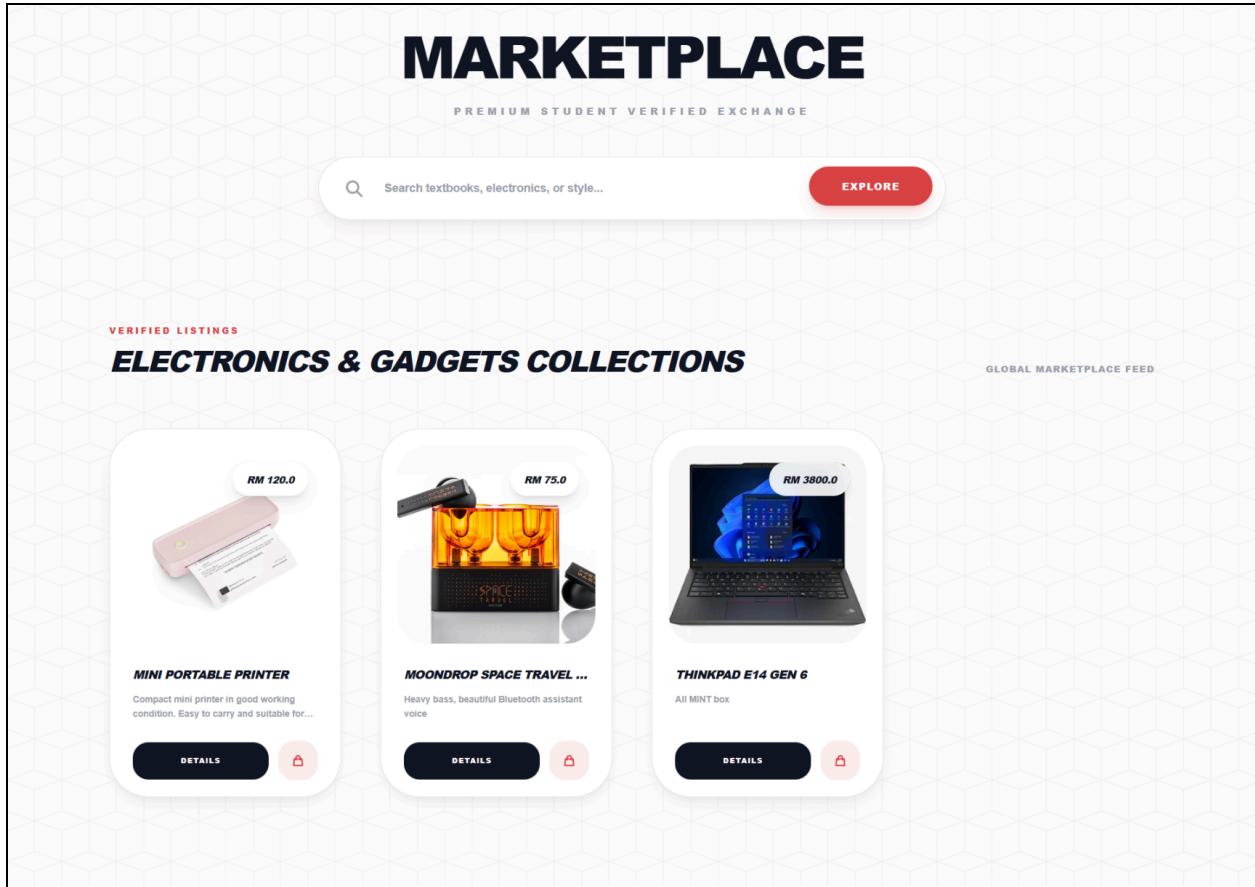


Figure 6.6.2 : Product Listing by Categories

Descriptions : Lists down the categories of the product with the number of available products in each category. Clicking on a category card will redirect to the product list page of the selected category.

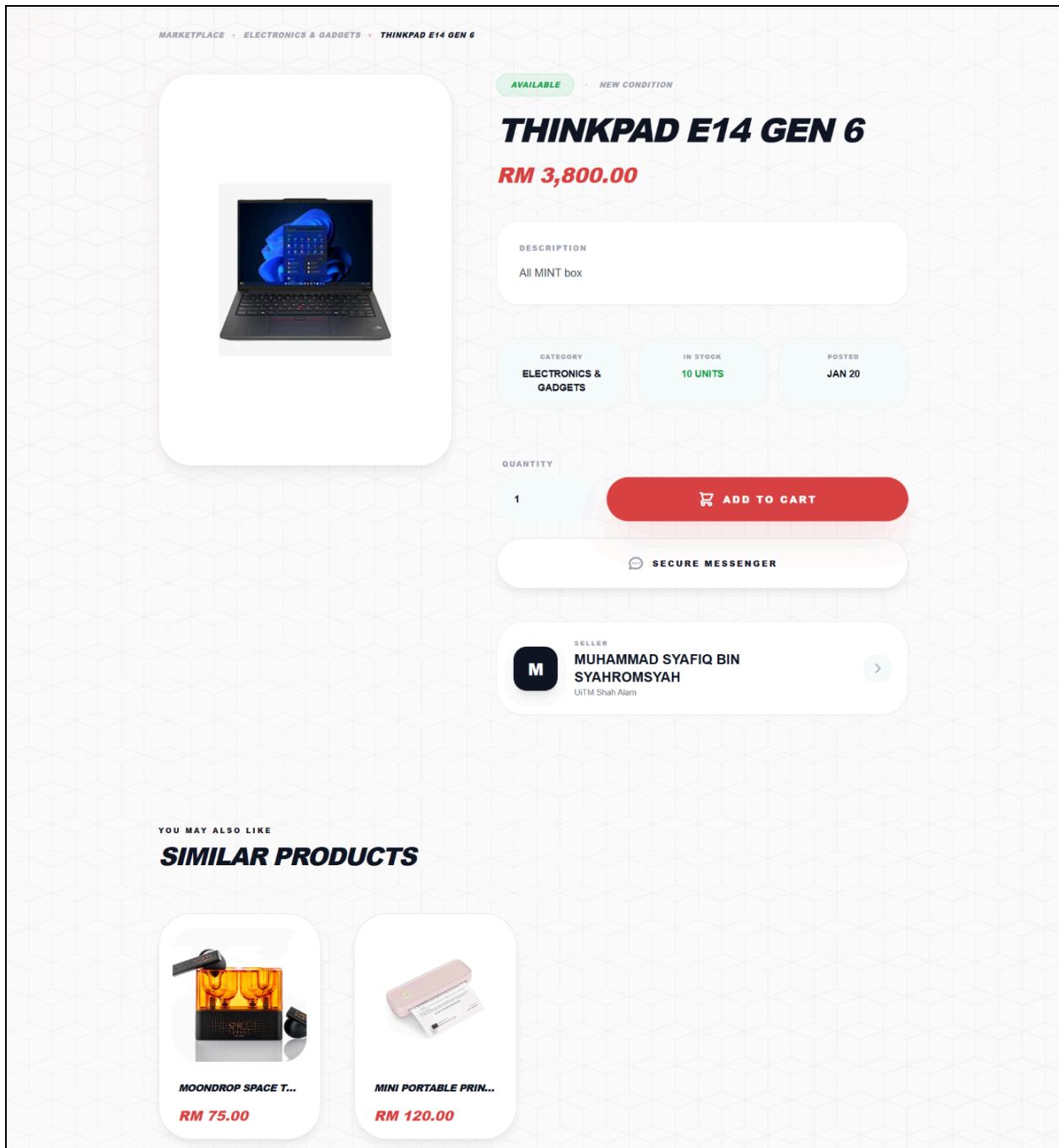


Figure 6.6.3 : Product Details interface

Description : This page shows detailed information about a specific product. Users can add the product to their shopping cart directly from this page, allowing them to continue shopping or proceed to checkout. Users also can send a message or inquire further about the product via the messaging system. Clicking on the Secure Messenger button will redirect to the Message Page.

7. Message

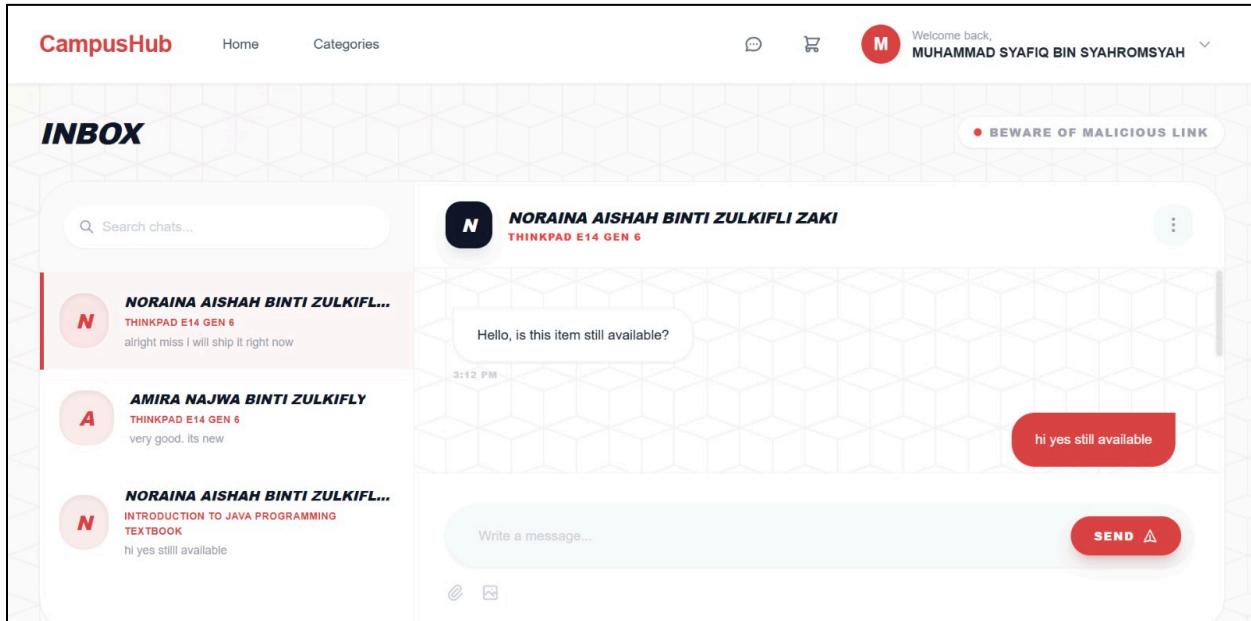


Figure 6.7.1 : Message Page

Descriptions : In this page, each conversation is listed at the left side. A conversation is differentiated by the unique combination of the buyer, seller and product. This means that if a buyer sends a message to the same seller for a different product, two conversations are listed at the left side. The name and product is displayed at the top middle as a quick identifier. Clicking on the product name will redirect to the Product Detail Page.

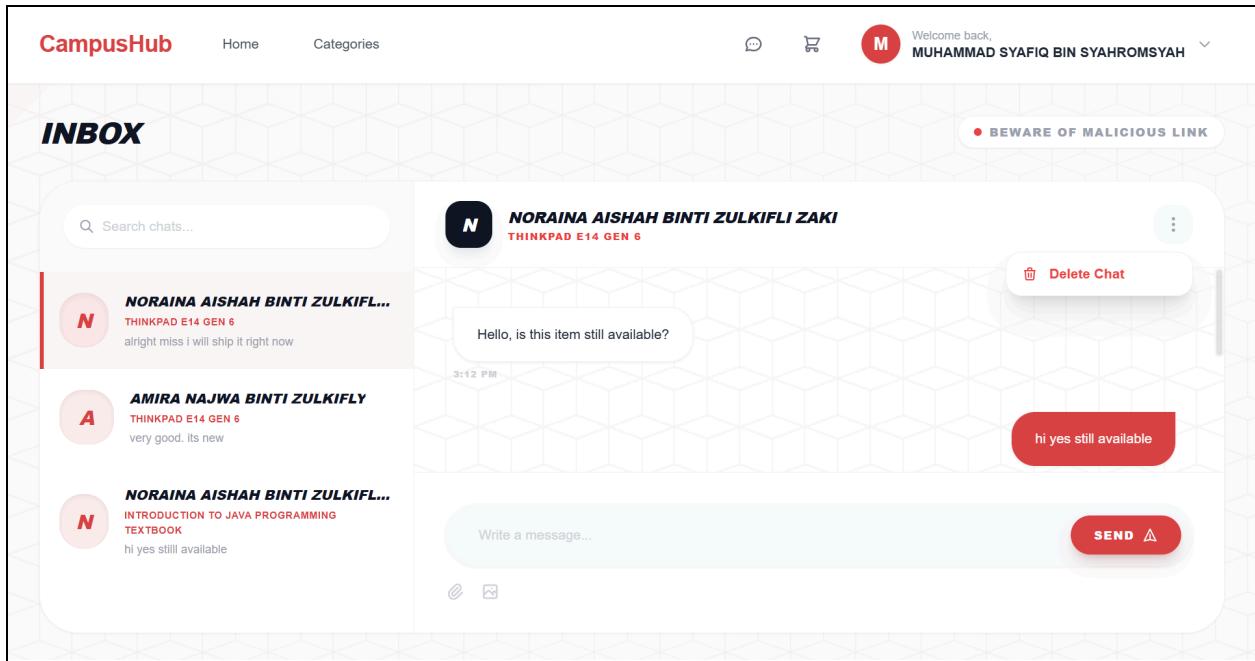


Figure 6.7.3 : Delete chat

Descriptions : Users can delete chat of a conversation which will be reflected for both user.

8. Shopping cart

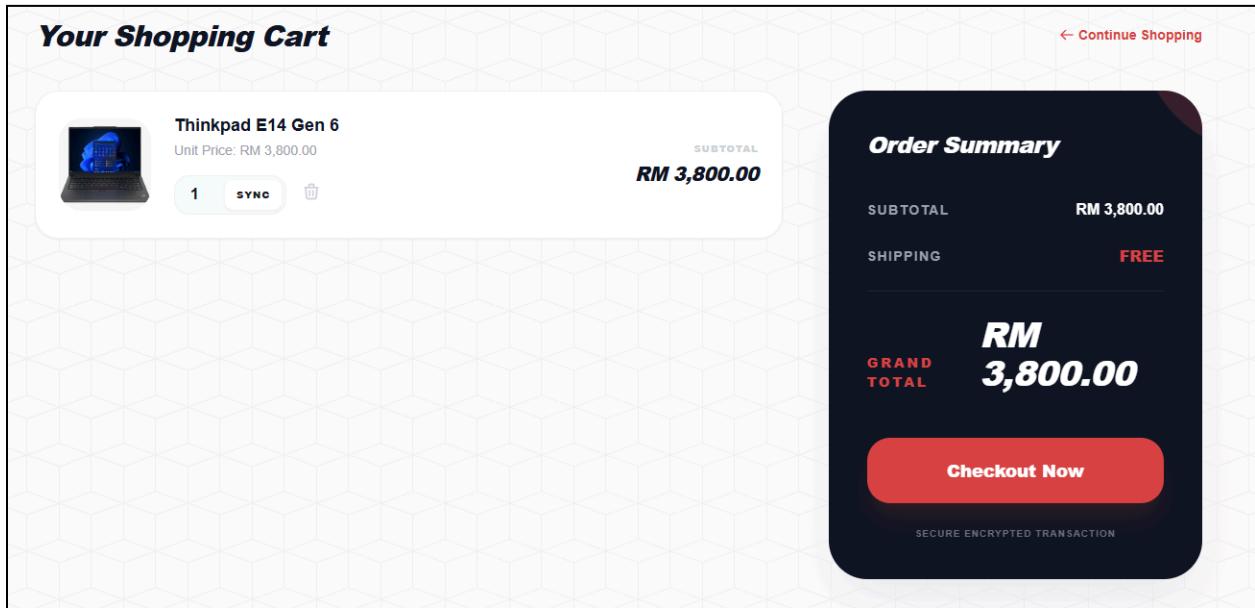


Figure 6.8.1 : Students shopping cart interface

Products that have been added to the user's cart will be listed in this page. Users can change the quantity of each product or remove the product from the cart.

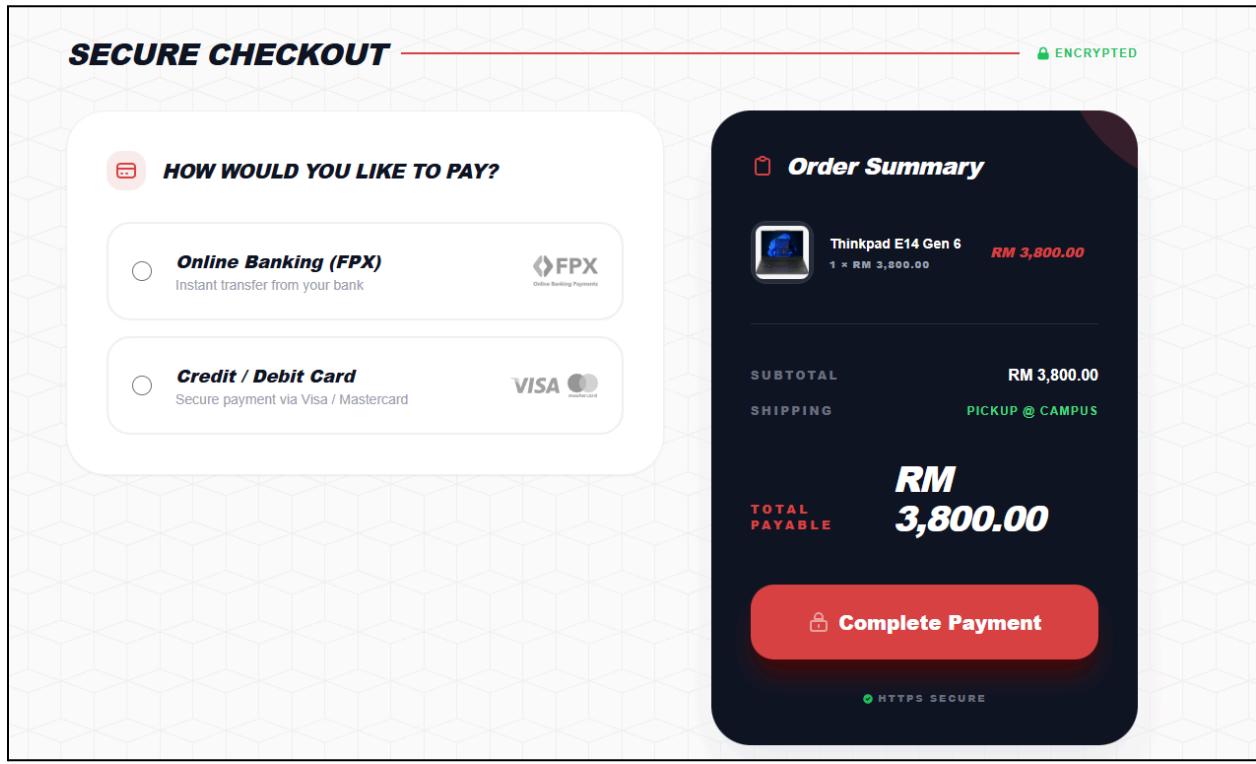


Figure 6.8.2 : Checking out Process interface

Description : The Checkout page allows users to choose their preferred payment method, such as Online Banking or Card, and provides a clear summary of their order before final purchase.

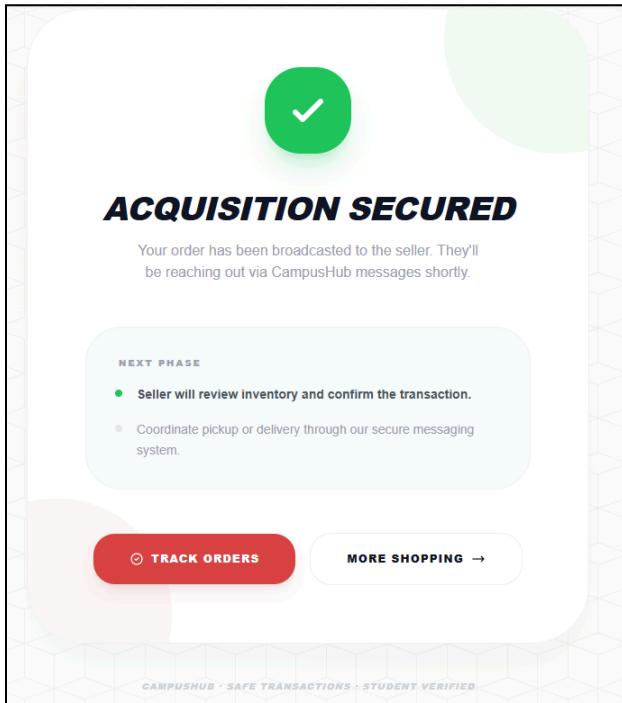


Figure 6.8.3 Payment successfully pop out

Description : This page confirms your transaction and outlines the next steps for order fulfillment, providing a seamless transition to tracking your purchases or continuing your shopping experience.

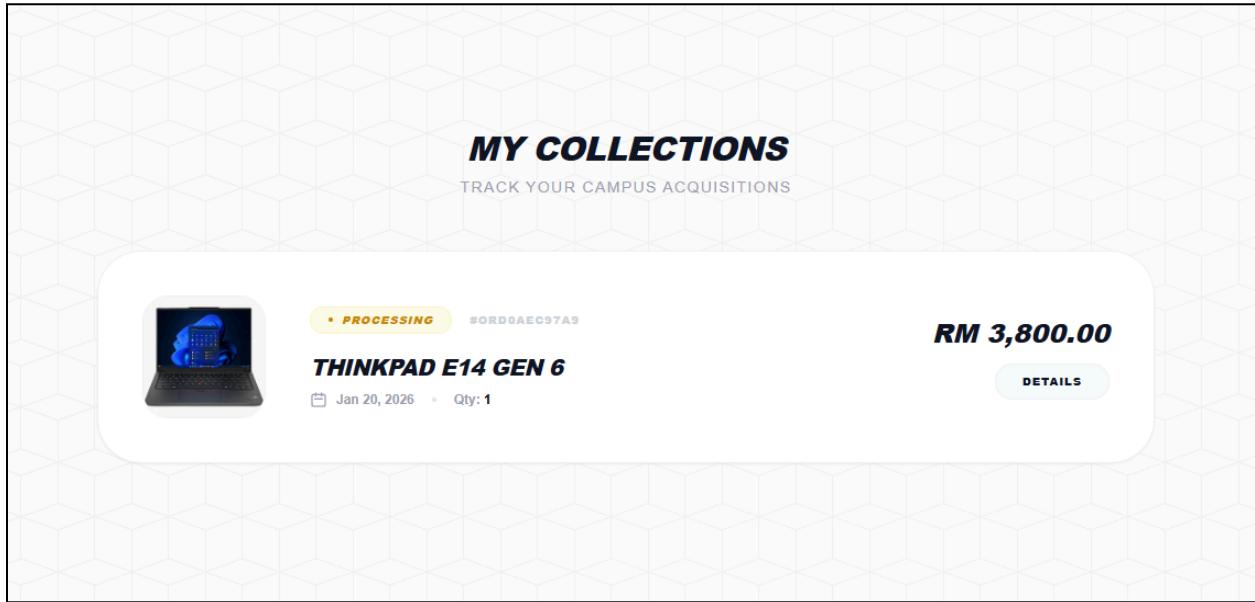


Figure 6.8.4 Order Listing interface

Description : The Order Listing page, titled 'My Collections', provides a comprehensive overview of your campus purchases, allowing you to monitor real-time order statuses and quickly access detailed tracking information for every acquisition

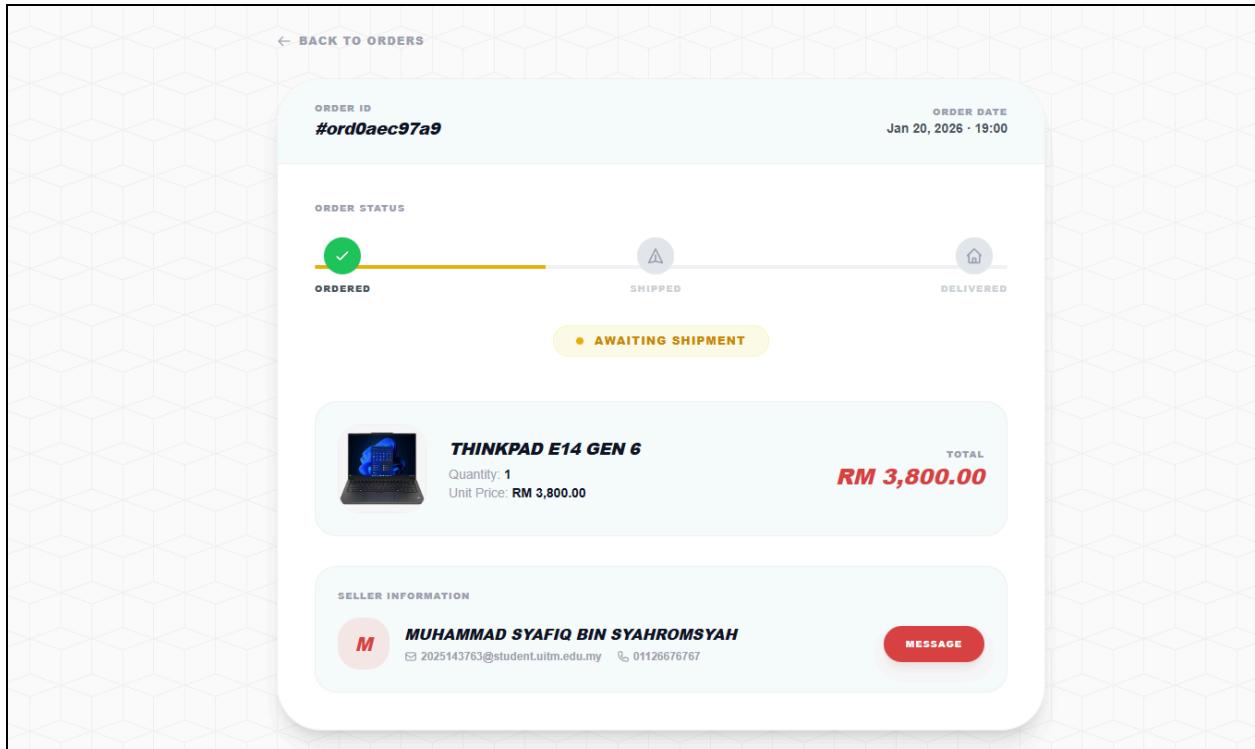


Figure 6.8.5 Order tracking interface

Description : This is the Order Tracking page, designed to provide complete transparency and peace of mind. It features a visual timeline of your item's journey from purchase to delivery, along with a direct link to message the seller for instant updates.

CampusHub Home Categories

Welcome back,
MUHAMMAD SYAFIQ BIN SYAHROMSYAH

MUHAMMAD SYAFIQ BIN SYAHROMSYAH

UITM SHAH ALAM ACTIVE SINCE JAN 2026

5.0 / 5.0 MESSAGE HUB

1 ITEMS SOLD 2 ITEMS AVAILABLE 2 REVIEWS 5.0 AVG RATING

ABOUT THE SELLER

CURRENT ACTIVE LISTINGS

 **INTRODUCTION TO JAVA PROGRAMMING**

LIKE NEW Moondrop space travel e... RM 75.00 →

LIKE NEW introduction to java progr... RM 50.00 →

VERIFIED FEEDBACK

BUYER TESTIMONIALS

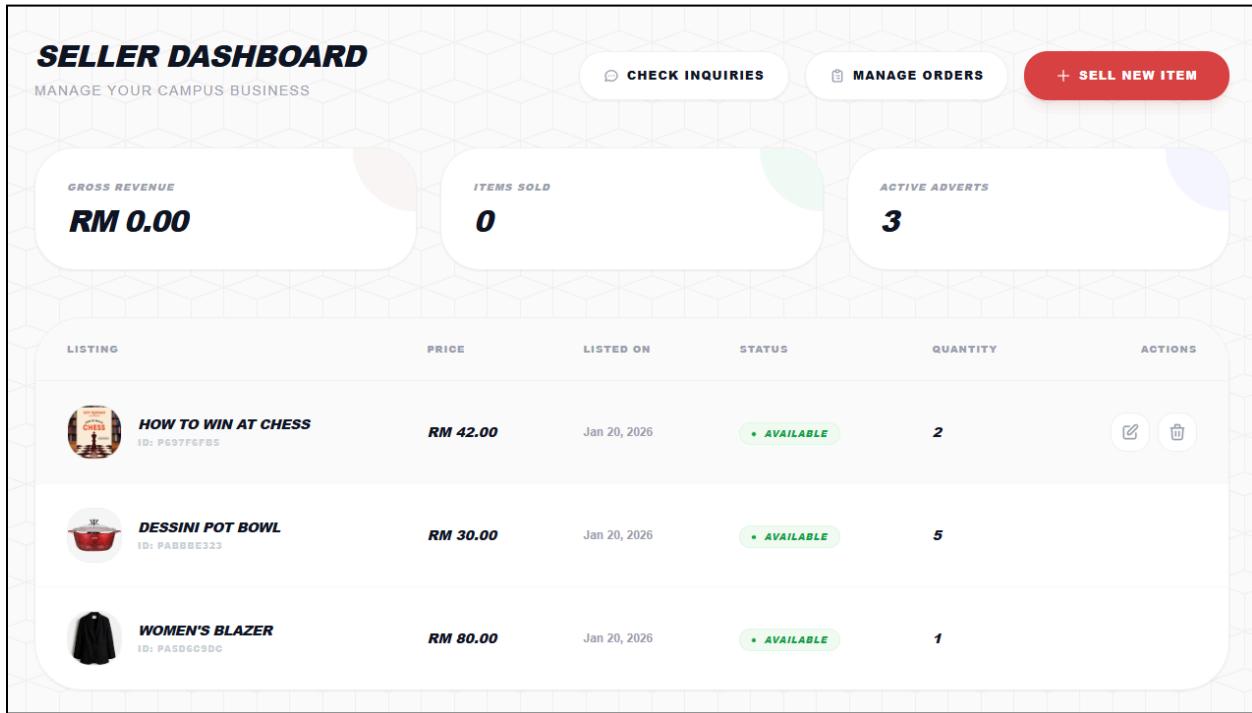
NORAINA AISHAH BINTI ZULKIFLI ZAKI ★★★★★ JAN 21, 2026
"Textbook delivered successfully"

NORAINA AISHAH BINTI ZULKIFLI ZAKI ★★★★★ JAN 20, 2026
"The seller is fast reply and kind. Overall, the item delivered in a good condition."

Figure 6.8.6 : Seller Profile interface

Description : The **Seller Profile** page acts as a personalized storefront that builds community trust by displaying verified seller details, key performance statistics (including average ratings and items sold), diverse active listings, and authentic buyer testimonials.

9. Seller Add, Edit, Delete



The image shows a digital interface for a 'SELLER DASHBOARD'. At the top, there's a header with the title 'SELLER DASHBOARD' and a sub-header 'MANAGE YOUR CAMPUS BUSINESS'. Below the header are three main performance metrics: 'GROSS REVENUE' (RM 0.00), 'ITEMS SOLD' (0), and 'ACTIVE ADVERTS' (3). There are also three buttons: 'CHECK INQUIRIES', 'MANAGE ORDERS', and a red button labeled '+ SELL NEW ITEM'. The main area is a table titled 'LISTING' with columns for LISTING, PRICE, LISTED ON, STATUS, QUANTITY, and ACTIONS. It displays three items:

LISTING	PRICE	LISTED ON	STATUS	QUANTITY	ACTIONS
HOW TO WIN AT CHESS ID: P697F6FB5	RM 42.00	Jan 20, 2026	• AVAILABLE	2	
DESSINI POT BOWL ID: PABBEE323	RM 30.00	Jan 20, 2026	• AVAILABLE	5	
WOMEN'S BLAZER ID: PASD6C9DC	RM 80.00	Jan 20, 2026	• AVAILABLE	1	

Figure 6.9.1 Students own seller dashboard interface

Description: user will manage listings and track performance. The Figure displays the total earnings from all sales made through the platform,Shows the number of items the seller has successfully sold and tracks how many items are currently available for sale.

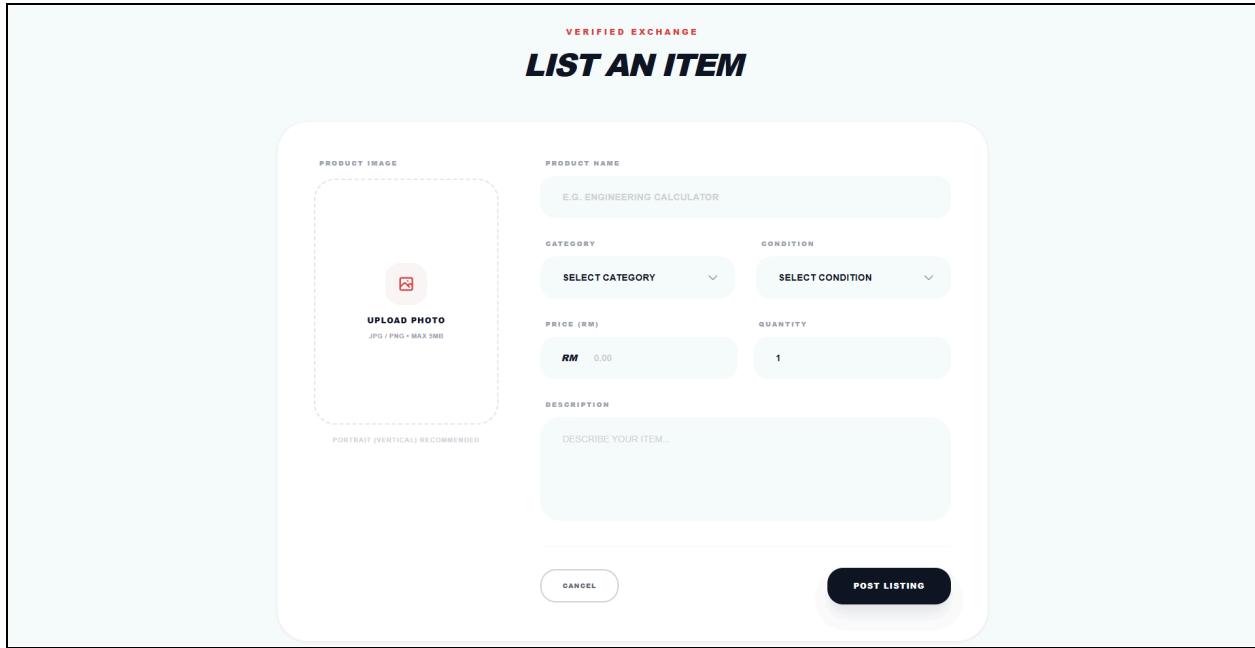


Figure 6.9.2 Add new product interface

Description: This interface is where student sellers can add new products to their listings on the marketplace by entering the product details, select categories, and upload product images to post the listing.

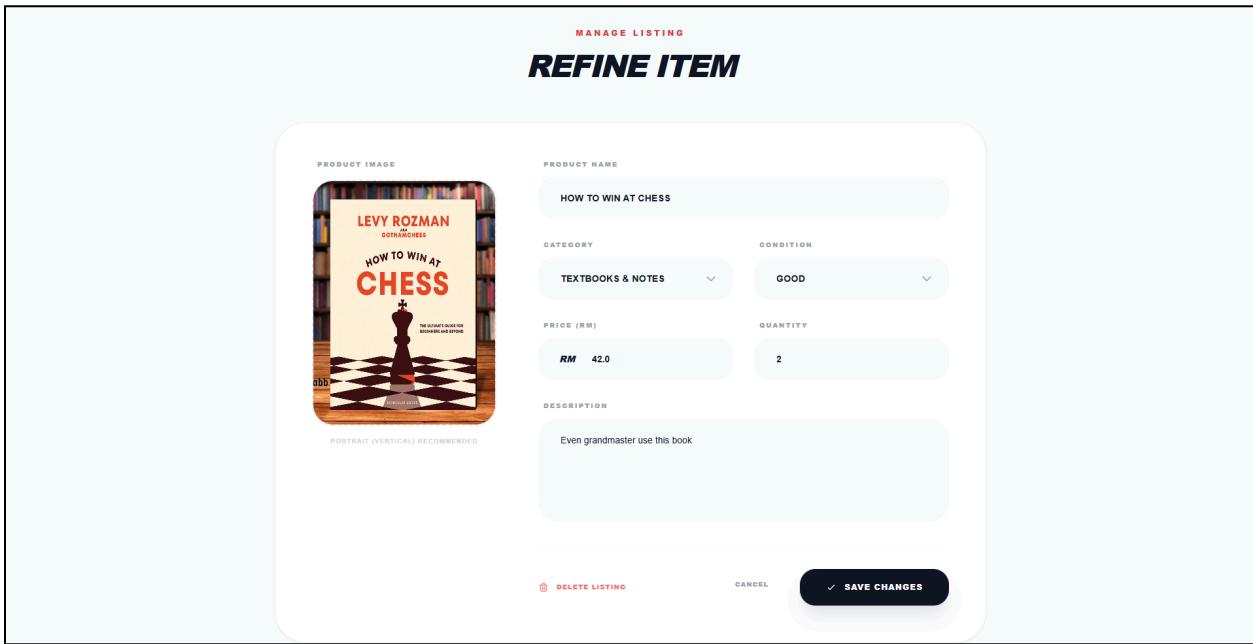


Figure 6.9.3 Edit product interfaces

Description : Users can modify the details of a previously listed product and save the changes

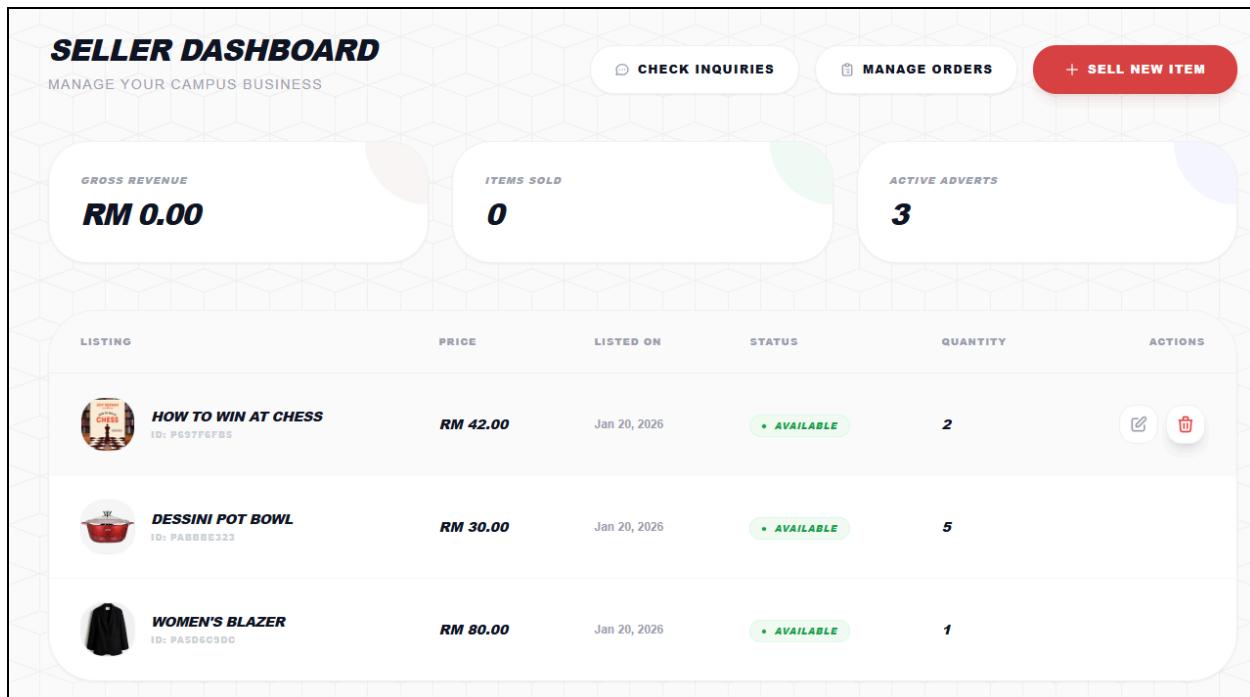


Figure 6.9.4 Delete product button

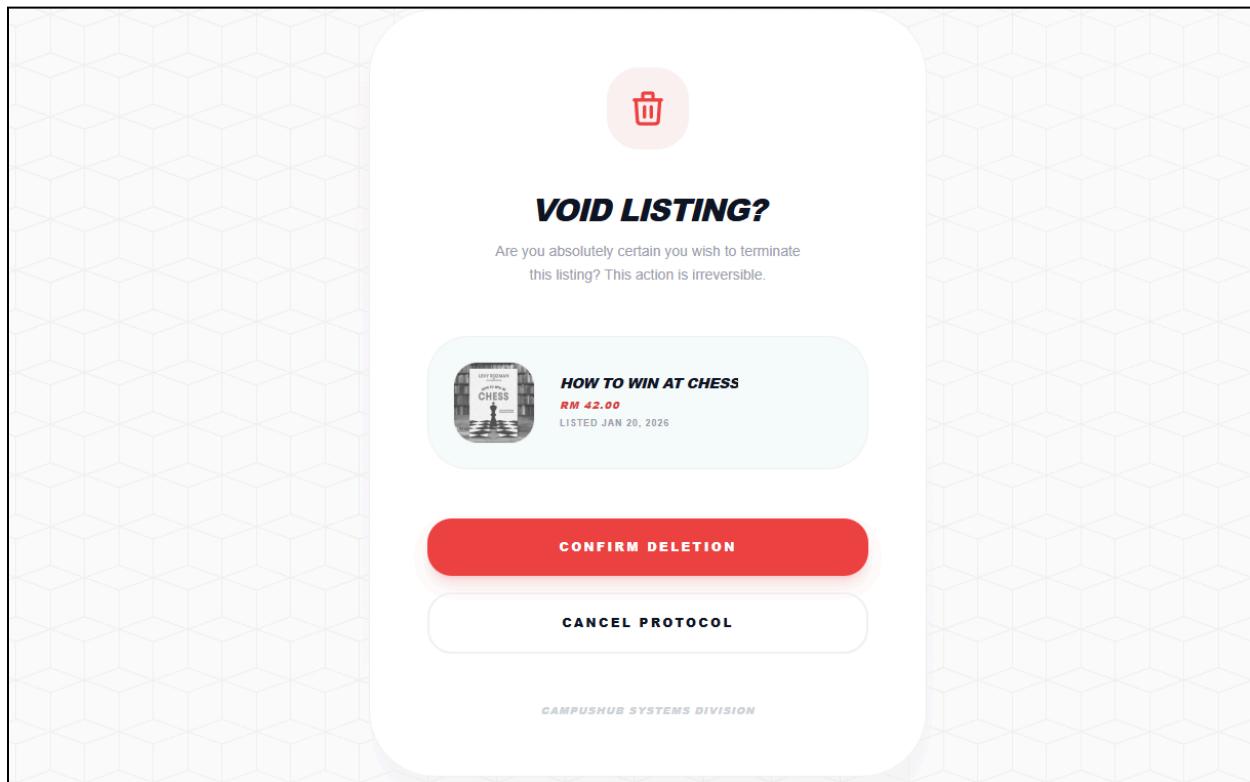


Figure 6.9.5 Delete confirmation pop out

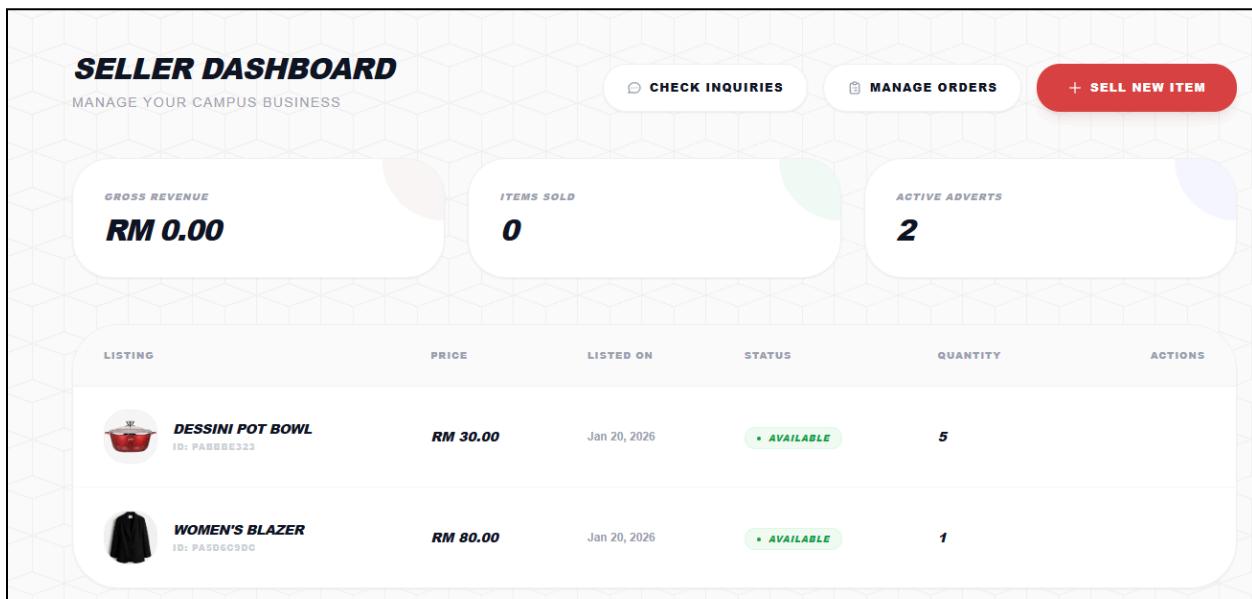


Figure 6.9.6 Seller Dashboard After Deletion

Description : Users can delete the product from the listing by clicking the trash button, and pop out will come out to ask for confirmation deletion and finally the product will remove a product listing from the system.

10. Manage order

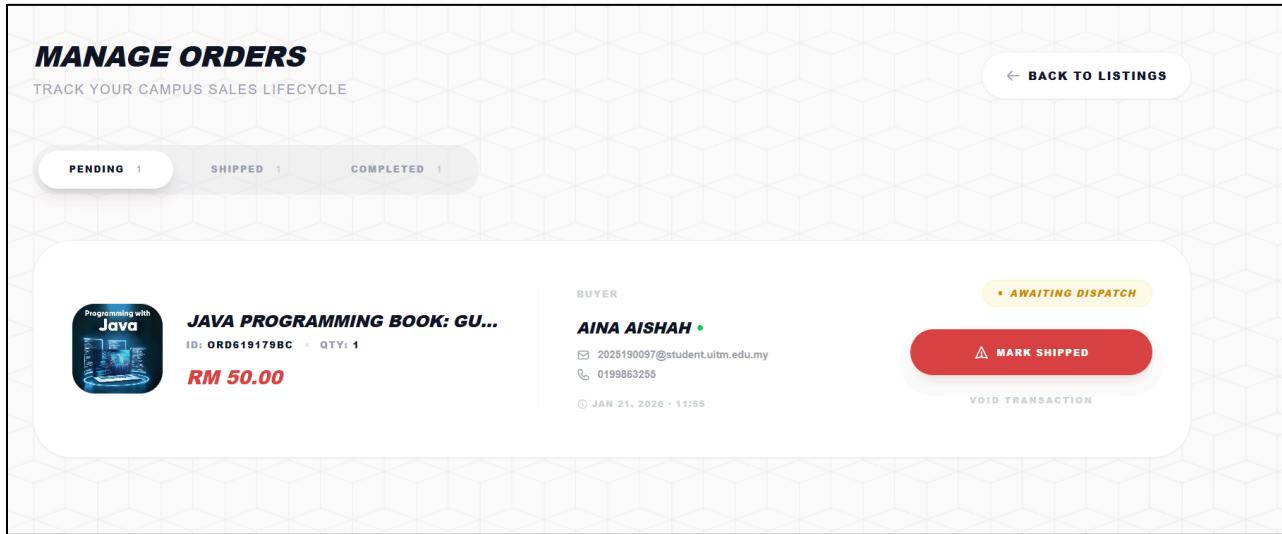


Figure 6.10.1 Manage Order for Pending Section

Description: The Pending Section displays all newly received orders that have not yet been processed by the seller. This interface allows sellers to review order details and take appropriate actions, such as confirming the order or cancelling the transaction if necessary. The Pending section helps sellers manage incoming orders efficiently and ensures timely order processing before shipment.

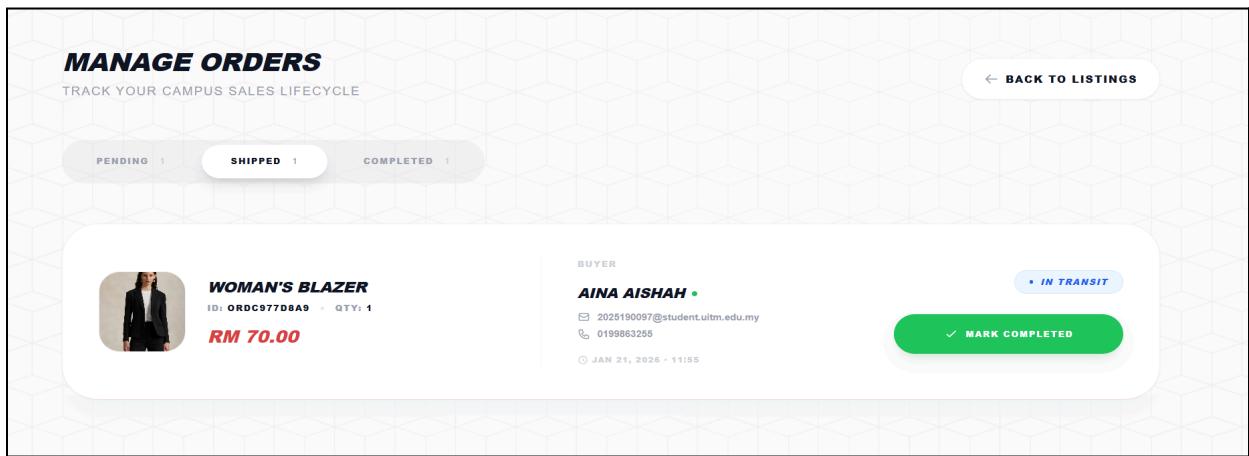


Figure 6.10.2 Manage Order for Shipped Section

Description: The Shipped Section displays orders that have been processed and dispatched by the seller. This interface allows sellers to track items that are currently in transit and update

the order status once delivery is confirmed. The Shipped section helps ensure proper monitoring of shipped orders and keeps buyers informed of the delivery progress.

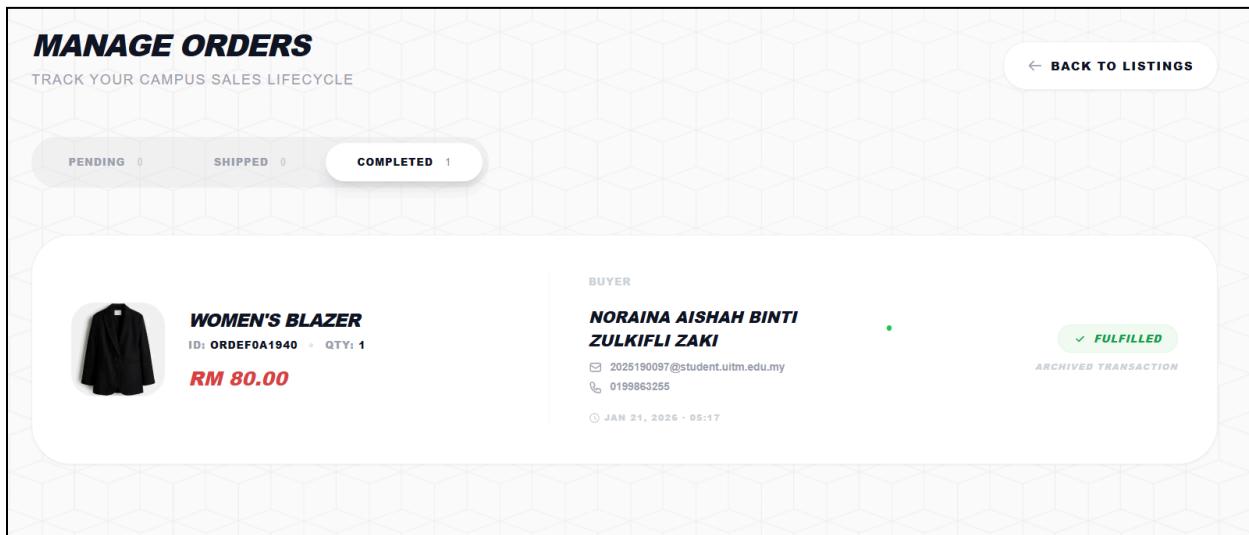


Figure 6.10.3 Manage Order for Completed Section

Description: The completed Section displays all orders that have been successfully delivered and finalized. This interface allows sellers to review completed transactions and confirms that the items have been received by the buyers. The Completed section provides a clear record of fulfilled orders, supporting transaction tracking and overall order management efficiency.

11. Product review

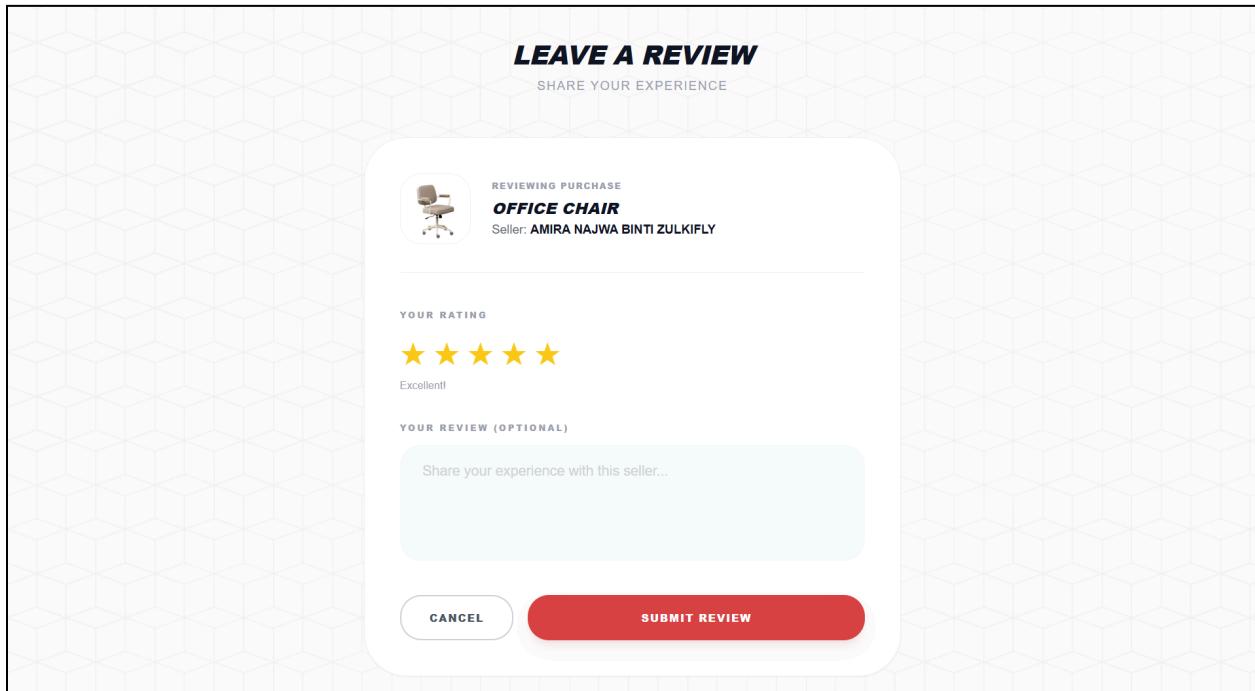


Figure 6.11.1: Review Form for buyer to rate and leave review

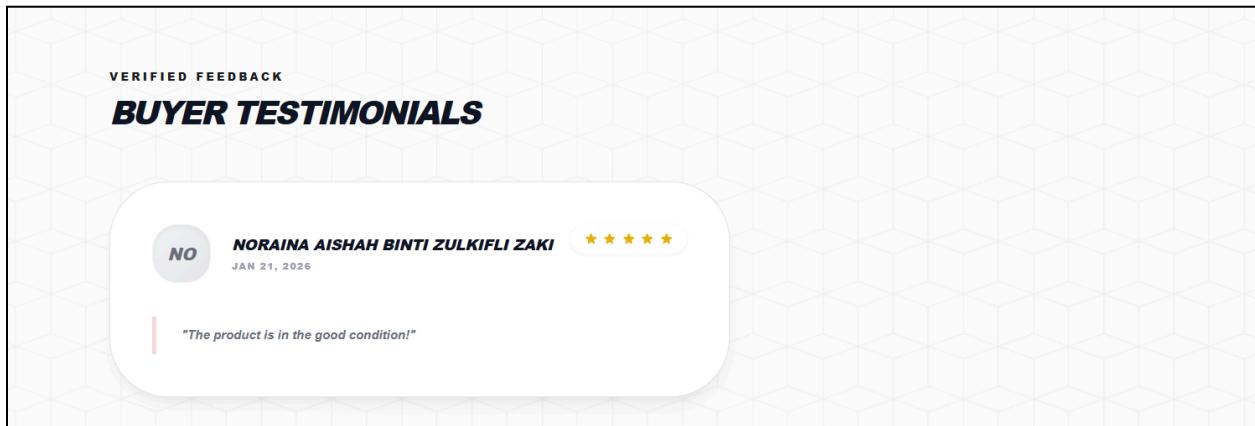


Figure 6.11.2: Buyer Testimonials

Description: The Product Review feature allows buyers in the CampusHub system to provide feedback after successfully receiving a purchased item. Once an order is completed, buyers can rate the product using a star rating system and submit written comments through the review form. The submitted reviews are then displayed as buyer testimonials, providing transparent and trustworthy feedback for other users. This feature helps improve seller accountability, supports informed purchasing decisions, and enhances overall trust within the CampusHub platform.

12. Student profile

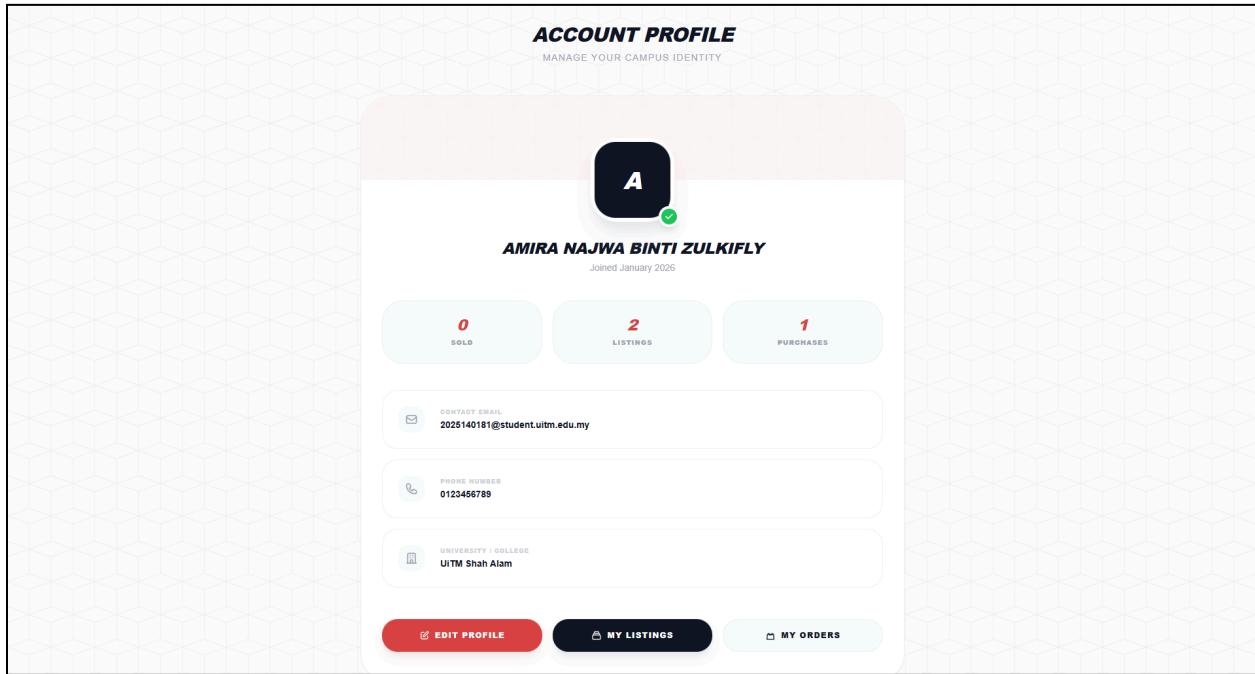


Figure 6.12.1 Students profile interfaces

Description: The Student Profile interface provides a summary of the student's account, showing their name, key activity stats, and account details. Action buttons allow easy access to edit the profile, view listings, and track orders, supporting quick navigation and efficient management of campus transactions.

The screenshot shows the 'UPDATE PROFILE' section of a mobile application. At the top, it says 'REFINE YOUR CAMPUS IDENTITY'. There are four input fields: 'FULL NAME *' (AMIRA NAJWA BINTI ZULKIFLY), 'EMAIL ADDRESS' (2025140181@student.uitm.edu.my), 'PHONE NUMBER' (0123456789), and 'YOUR UNIVERSITY' (UITM Shah Alam). At the bottom are two buttons: 'CANCEL' (gray) and '✓ SAVE CHANGES' (red).

Figure 6.12.2 Edit profile

Description: The Student Profile feature in the CampusHub system also gives the option to update their personal details through the edit profile function, ensuring that their information remains accurate and up to date. The Student Profile feature enhances usability by allowing easy profile management and supports smooth interaction between users within the CampusHub platform.

6.0 CONCLUSION

In conclusion, the CampusHub system has been developed to effectively address the difficulties faced by students in obtaining affordable academic and personal items within a campus environment. By offering a centralized and campus-oriented digital marketplace, the system streamlines buying and selling activities in a secure, organized, and user-friendly manner. The inclusion of structured product listings with essential details allows users to make informed decisions, while the integrated messaging feature enhances communication and coordination between buyers and sellers, contributing to smoother and more efficient transactions.

In addition to improving convenience, CampusHub plays a significant role in promoting sustainable consumption practices among students. By encouraging the reuse of items that are still in good condition, the system helps reduce unnecessary expenditure and minimizes waste, supporting environmental responsibility within the campus community. Furthermore, limiting participation to student users enhances trust and ensures that all transactions remain relevant to campus needs.

Overall, CampusHub demonstrates strong potential as a practical and educationally valuable system that supports student collaboration, responsible consumption, and digital engagement. The system not only improves the overall efficiency of campus-based transactions but also contributes positively to the development of a more connected, sustainable, and supportive campus culture.