
REQUIREMENT & DESIGN SPECIFICATION for hoalacaptops.com

Version 0.1. Work in progress.

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1. Introduction

hoalacaptops.com is a new website that aims to bring Hoalac Laptops into the e-commerce space. Customers around the globe will be able to browse the shop's various offerings, place orders and pay on the spot, and have them delivered right to their doorstep.

1.1. Purpose

The objective of this requirement and design specification is to provide an overview of the project which include its vision, scope, users, use cases; from which functional and non-functional requirements, business rules and environment specifications will be extracted. From there, the system's design will be presented in detail.

This document is intended for current developers of the project to ensure correct realization of the system, future developers for maintenance and iteration, and managers and stakeholders for review and approval.

1.2. Project Vision and Product Scope

1.2.1. Vision Statement

hoalacaptops.com will act as an online storefront for Hoalac Laptops. An easy-to-use interface will greet customers as they traverse through our catalog of laptops and accessories using a suite of search and filter options. Upon landing on a product, they will be able to see detailed product descriptions, specifications, photos, and thoughts about the hardware by previous buyers. From there they will only be a screen or two away from having that product delivered right to their doorstep.

Regular visitors can glean the latest shop updates from the news tab, onto which new vouchers may be posted. Once they have tried out their purchases, customers can leave reviews on products for future buyers.

Staff members will rejoice at the ease and thoroughness of the management end of the system, wherein products can be added and restocked quickly, and sales numbers will be presented with clarity and conciseness, with various reporting modes and options.

1.2.2. Product Scope

The scope of the computer selling website includes basic features aimed at creating a convenient and reliable online platform for customers to search, view, and purchase computer products. The website will provide a user-friendly, modern, and intuitive interface, allowing customers to easily browse through product listings, view detailed information, check availability, and pricing. Customers can create accounts, log in, and manage their personal information and order history. The website will also support secure online payment options, enabling customers to complete transactions with confidence.

2. Overview

2.1. User Requirements

hoalacaptops.com must provide customers with a seamless and intuitive browsing and purchasing experience. This includes the organization of detailed and accurate information about each laptop model available for sale, including specifications, features, pricing, and availability, in a clear and easy-to-navigate manner to allow customers to make purchasing decisions. The website must also provide a secure and reliable payment processing system to ensure the safety of customer financial information and transactions, including the use of industry-standard encryption protocols, secure payment gateways, and to protect against unauthorized access and financial losses. Moreover, user experience can be enhanced by sending emails to confirm delivery and announce various shop updates such as vouchers or new products.

2.1.1. User Classes and Characteristics

- **Guests** can view general parts of the site, such as products and news posts, and be able to search through and filter them.
- **Customers** will look through products and place an order on products they like. They will filter through products according to various criteria, or use a search term to find a specific make or model. When ordering, they will provide delivery information such as the address and phone number, and may pay immediately through online means or pay when the order arrives. When placing an order, they can use a voucher code that they've gleaned from shop recommendations, or from the news posts. Customers can leave reviews on products they've purchased in the past.
- **Sales Staff** will manage the shop's offerings. They can manage the shop's offerings, updating it to fit the shop's inventory. They have the ability to look up all the users in the system and see their activities, and have the responsibility of updating certain details of orders when necessary.
- **Marketing Staff** will need to quickly pull up sales figures for the whole site and for specific product segments or manufacturers, making reports on monthly and quarterly sales to develop strategies. They will also issue vouchers with different range conditions, discounts, and expiration dates to motivate purchases. They also post news articles to announce the latest news of the shop, announce voucher codes, and to enlighten customers on laptop tech.
- **Managers** will overlook and sometimes perform the responsibilities of staff members. They will have administrative control over the site.

2.1.2. Actors

- **Web Users** are users of the website. Unregistered users can log in or register with the site, while registered users can manage their accounts and log out.

- **Guests** are visitors of the site. They have the ability to list, search, and filter through products; and view the details of and reviews for each product. They can also view news posts.
- **Customers** are basic users who have registered. Apart from what guests can do, they can also manage their account, place an order on any product and pay for those orders. They can also leave reviews on products they've previously purchased.
- **Sales Staff** are sales employees of the business. They can manage the shop's offerings and view the details of all the customers in the system. They can also view all the orders of the shop and make edits to them.
- **Marketing Staff** are in charge of marketing, which necessitates the collation of sales figures, customer reviews, and the management of vouchers. They can also post news articles.
- **Managers** are members who have the highest authority in the system. They have all the abilities of Staff members, as well as managing all user accounts.

2.1.3. Features

2.1.3.1. Web Features

These features apply to all users of the website. They do not reflect operations or responsibilities of the shop, but rather of the website on its own.

- **FE-W01: Manage access**
Users who haven't logged in can login and register, while other users can log out of the system.
- **FE-W02: Manage account**
All logged-in users can manage their accounts including viewing and updating of login credentials and personal details.

2.1.3.1. Public Features

These features are public facing, meaning they are intended to serve the public including guests and customers.

- **FE-P01: View products**
All users can view the products of the page directly through the home page, or a dedicated products page where they can hone down results through filters and search terms. Users can view each product in detail including images, name, price, description, its manufacturer, user reviews, and related products.
- **FE-P02: Purchase products**
Customers can purchase products by managing their shopping cart, then proceeding to checkout where they can provide shipping details and pay on the shop through online

banking. Customers can also provide a voucher code to get a discount. Customers can view orders that they've just created or past ones they've had with the shop.

- **FE-P03: Manage product reviews**

Past buyers can leave reviews on products they've bought by providing a star rating and written thoughts on them. Customers can also view all of their reviews, make edits to them, and delete them.

- **FE-P04: View news**

All users can view the shop's news posts, and search through them using filters and search terms.

2.1.3.2. Administrative Features

These features are administrative, meaning they are intended to provide staff members of the shop with full control of the website and insight into the shop's performance.

- **FE-A01: Manage products**

Marketing Staff can view products and their reviews, while Sales staff can also view, add, edit, and delete products. Sales Staff can also manage the products' component series, such as CPU and GPU series.

- **FE-A02: Manage brands**

Sales Staff can view, add, edit, and delete brands.

- **FE-A03: Manage orders**

Sales Staff can view all the orders of the shop and make limited edits to them on demand by customers through support channels. Sales Staff can also view the orders of individual products and customers.

- **FE-A04: View shop statistics**

Marketing Staff can view the shop's statistics including sales figures and top sellers for the whole shop and for each item (products, brands, individual components, etc..).

- **FE-A05: Manage vouchers**

Marketing Staff can view, add, edit, and delete vouchers. They can also view the usages of individual vouchers.

- **FE-A06: Manage news**

Marketing Staff can add, edit, and remove news posts.

- **FE-A07: Manage accounts**

Sales Staff can view accounts. Managers can manage view, add, edit, and delete accounts without verification.

- **FE-A08: Manage product reviews**

Marketing Staff can view the latest product reviews of the shop, those of individual products, and ones by customers. They can also delete inappropriate reviews.

2.1.4. Use Cases

2.1.4.1. Overview

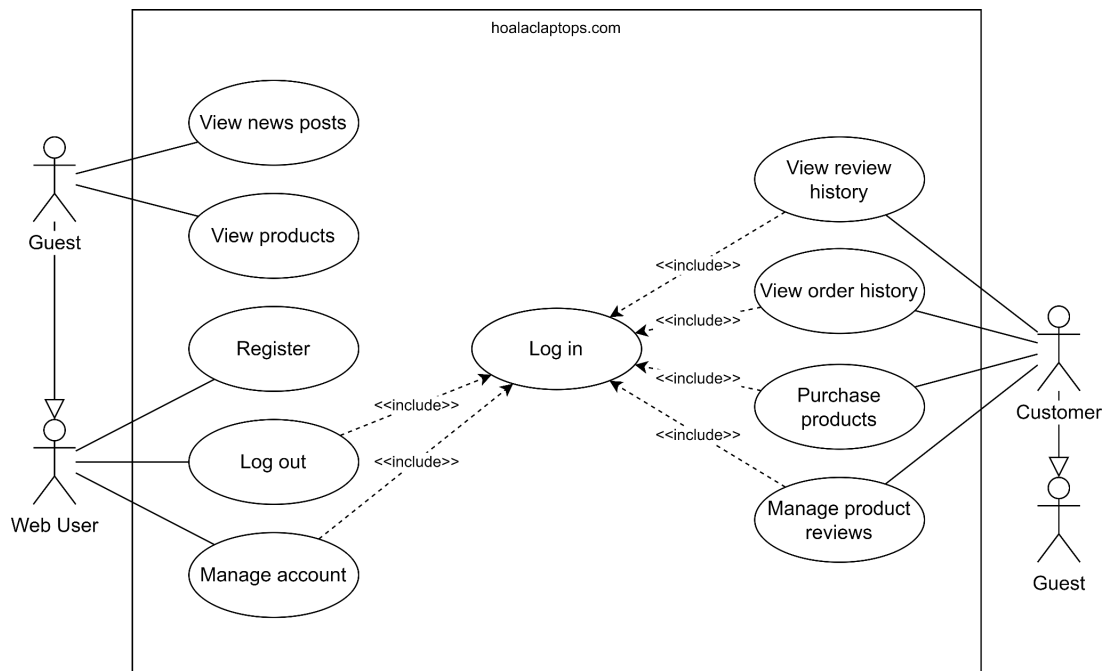


Figure 2.1.4.1/1. Overall public use cases of the system

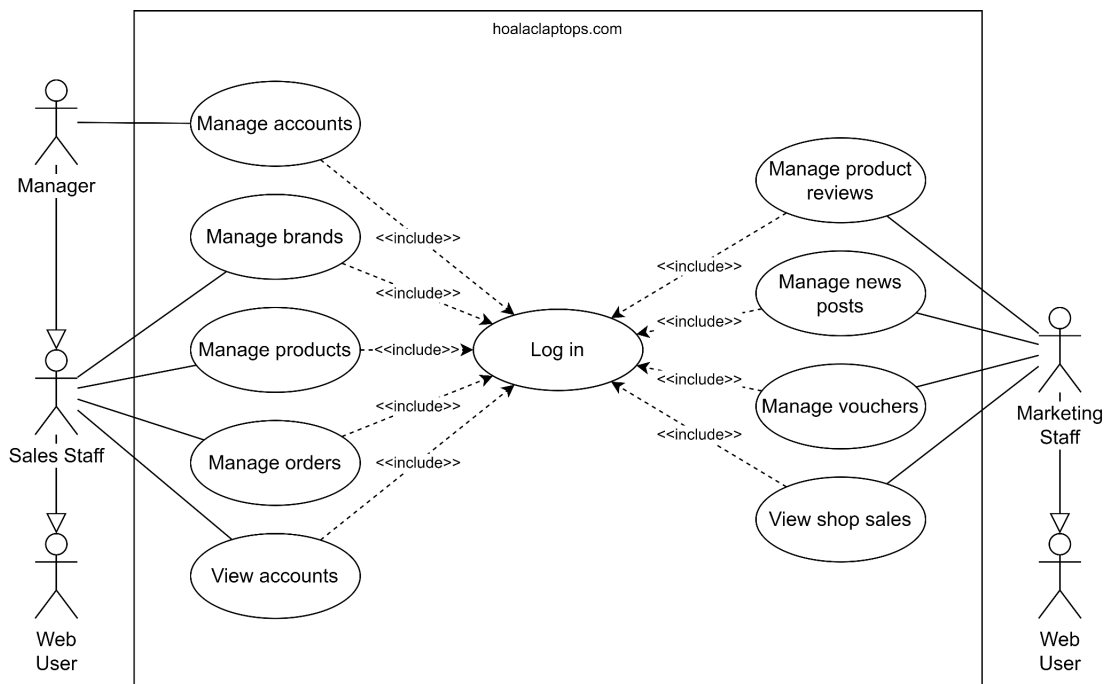


Figure 2.1.4.1/1. Overall administrative use cases of the system

2.1.4.2. Web User

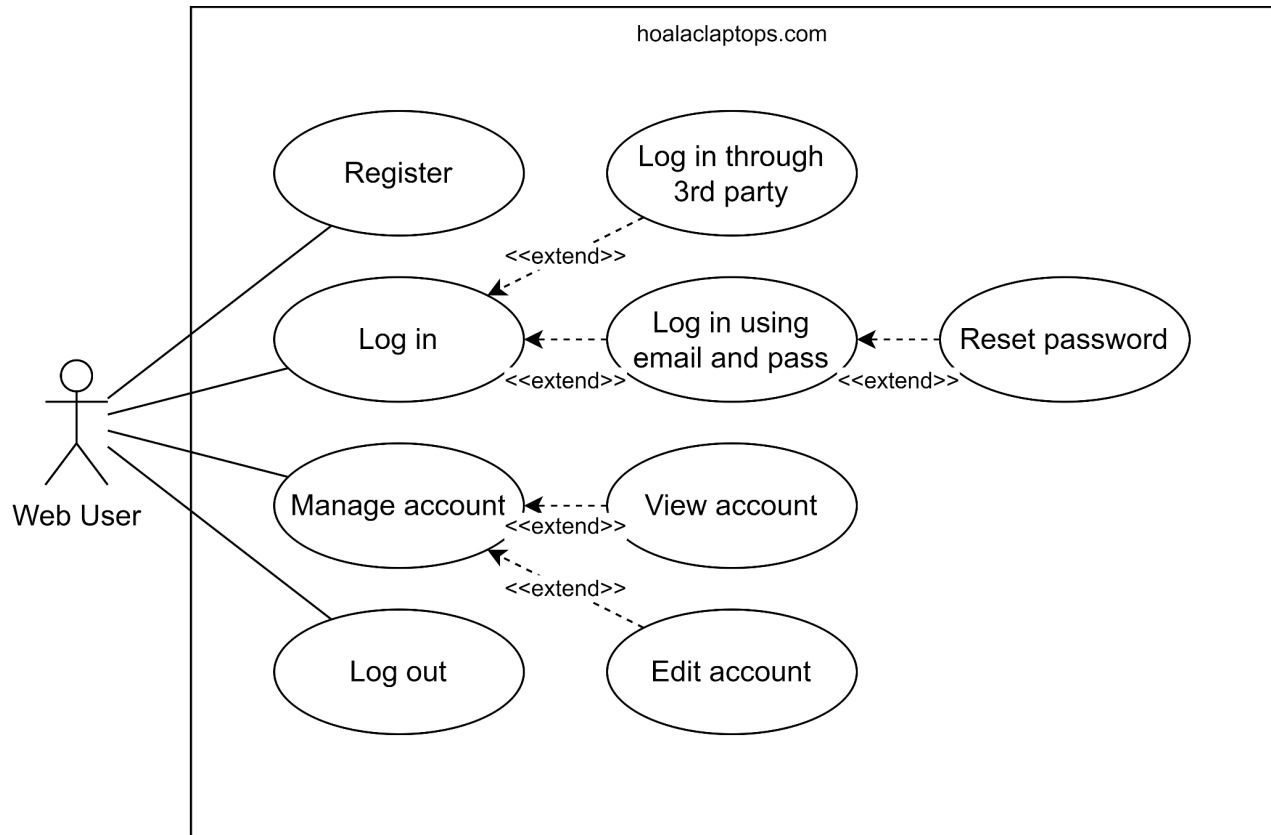


Figure 2.1.4.2/1. Guest use cases

ID	Feature	Use case	Description
UC-01	FE-W01	Log in	Web users can log into the system to gain access to more parts of the website such as purchasing items.
UC-02	FE-W01	Register	Web users can register to become a user of a system and gain access to aforementioned functions.
UC-03	FE-W01	Log in through 3rd party	Web users can log in through a 3rd party service such as Google.
UC-04	FE-W01	Log in using email and pass	Web users can log in using their email and password.
UC-05	FE-W01	Reset password	Web users can request to reset their password if they've forgotten it.
UC-06	FE-W02	Manage account	Web users can manage their accounts with the website.
UC-07	FE-W02	View account	Web users can view their account in full detail.
UC-08	FE-W02	Edit account	Web users can edit their account including editing login credentials and personal information.
UC-09	FE-W01	Log out	Web users can log out of the website to end their use session and to prevent unauthorized access from other people.

2.1.4.3. Guest

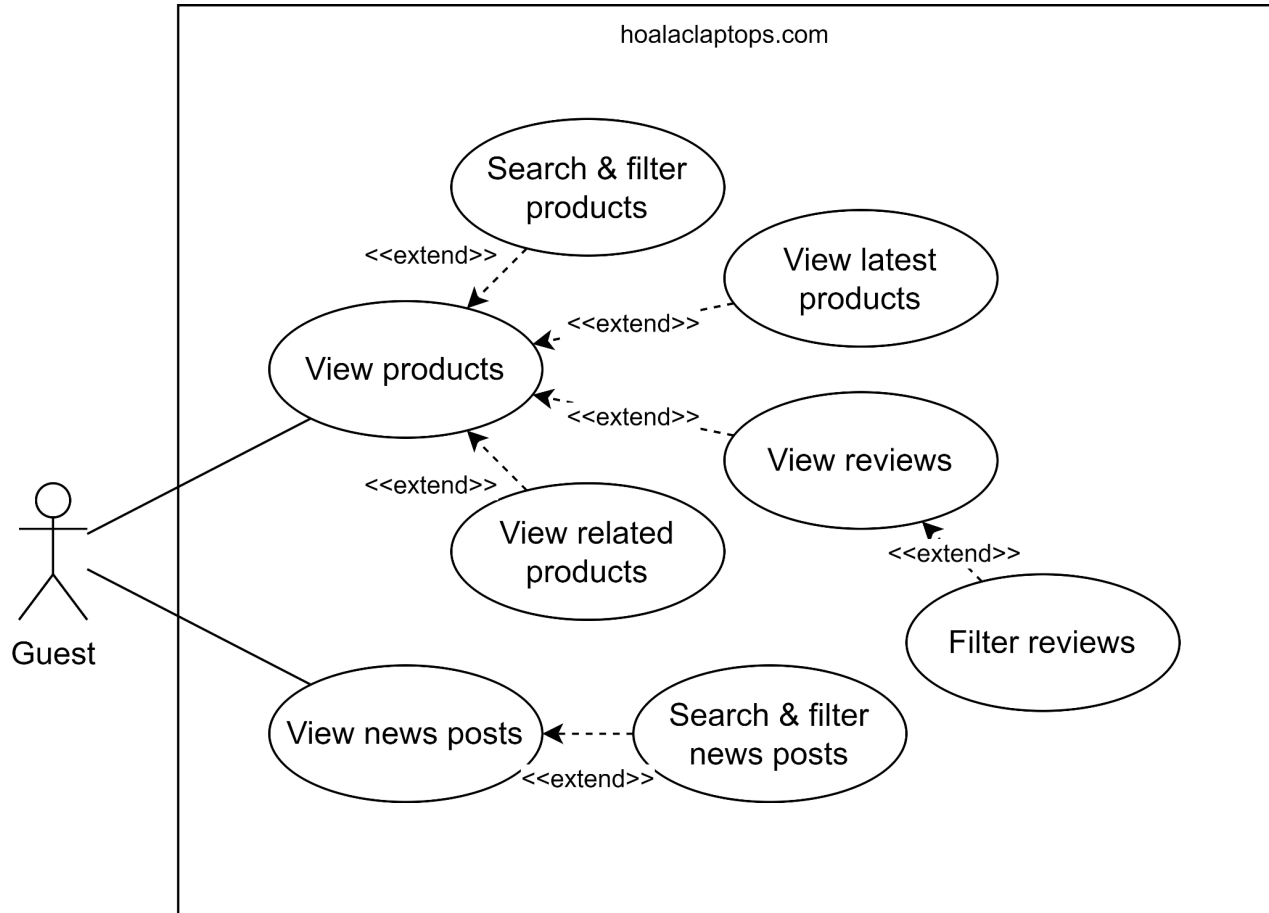


Figure 2.1.4.3/1. Guest use cases

ID	Feature	Use case	Description
UC-10	FE-P01	View products	Guests can view the shop's offerings.
UC-11	FE-P01	Search & filter products	Guests can search and filter for products to narrow down results.
UC-12	FE-P01	View latest products	Guests can view the latest offerings from the shop.
UC-73	FE-P01	View related products	Guests can view related products to the one they are currently viewing
UC-13	FE-P01	View reviews	Guests can view reviews left by buyers of a product.
UC-80	FE-P01	Filter reviews	Guests can filter through the reviews of a product
UC-14	FE-P04	View news posts	Guests can view the shop's news posts.
UC-15	FE-P04	Search & filter news posts	Guests can search and filter through the shop's news posts to find specific content.

2.1.4.4. Customer



Figure 2.1.4.4/1. Customer use cases

ID	Feature	Use case	Description
UC-16	FE-P02	Purchase products	Customers can purchase the shop's offerings.
UC-17	FE-P02	Checkout	Customers can perform a checkout to finalize and confirm their order with the shop.
UC-18	FE-P02	Apply voucher	Customers can use a voucher while checking out to receive a discount.
UC-19	FE-P02	Manage cart	Customers can manage their shopping cart.
UC-20	FE-P02	Edit quantities	Customers can edit the quantities of the products they're currently purchasing.
UC-21	FE-P02	Remove from cart	Customers can remove items from their cart.
UC-22	FE-P02	Add to cart	Customers can add products to their cart for easier bulk purchases.
UC-28	FE-P02	View orders	Customers can view their purchases and orders.
UC-81	FE-P02	Search & filter orders	Customers can search and filter through the past orders.
UC-23	FE-P03	Manage product reviews	Customers can manage their product reviews.
UC-27	FE-P03	View past reviews	Customers can view their previously made reviews.
UC-82	FE-P03	Search & filter past reviews	Customers can search and filter through past reviews
UC-24	FE-P03	Leave product reviews	Customers can leave product reviews on products that they've previously bought.
UC-25	FE-P03	Edit product reviews	Customers can edit reviews that they've put down.
UC-26	FE-P03	Delete product reviews	Customers can delete reviews that they've put down.

2.1.4.5. Sales Staff



Figure 2.1.4.5/1. Sales Staff use cases

ID	Feature	Use case	Description
UC-29	FE-A03	Manage orders	Sales Staff can manage the shop's orders.
UC-30	FE-A03	Edit orders	Sales Staff can edit certain details of orders.
UC-31	FE-A03	View orders	Sales Staff can view all of the orders placed by customers.
UC-45	FE-A03	Search & filter orders	Sales Staff can search and filter through order listings
UC-32	FE-A02	Manage brands	Sales Staff can manage brands' information.
UC-33	FE-A02	View brands	Sales Staff can view all the brands in the shop.
UC-76	FE-A02	Search brands	Sales Staff can search through brands
UC-34	FE-A02	Add brands	Sales Staff can add a new brand to the shop.
UC-35	FE-A02	Edit brands	Sales Staff can edit the information of a brand.
UC-36	FE-A02	Delete brands	Sales Staff can delete a brand from the shop.
UC-37	FE-A01	Manage products	Sales Staff can manage the shop's offerings.
UC-38	FE-A01	View products	Sales Staff can quickly view all of the shop's products and execute actions.
UC-83	FE-A01	Search products	Sales Staff can search through the shop's products.
UC-39	FE-A01	Add products	Sales Staff can add a new product into the shop's offerings.
UC-40	FE-A01	Edit products	Sales Staff can edit the information of an existing product.
UC-41	FE-A01	Delete products	Sales Staff can delete an existing product.
UC-68	FE-A01	Manage component series	Sales Staff can manage the products' component series.
UC-69	FE-A01	View component series	Sales Staff can view all component series.
UC-84	FE-A01	Search component series	Sales Staff can search through component series.

UC-70	FE-A01	Add component series	Sales Staff can add new component series.
UC-71	FE-A01	Edit component series	Sales Staff can edit component series.
UC-72	FE-A01	Delete component series	Sales Staff can delete component series, if they haven't been assigned to a product yet.
UC-42	FE-A07	View accounts	Sales Staff can view all accounts in the system.
UC-85	FE-A07	Search accounts	Sales Staff can search through accounts in the system
UC-44	FE-A07	View review history	Sales Staff can view customers' previously made reviews.

2.1.4.6. Marketing Staff

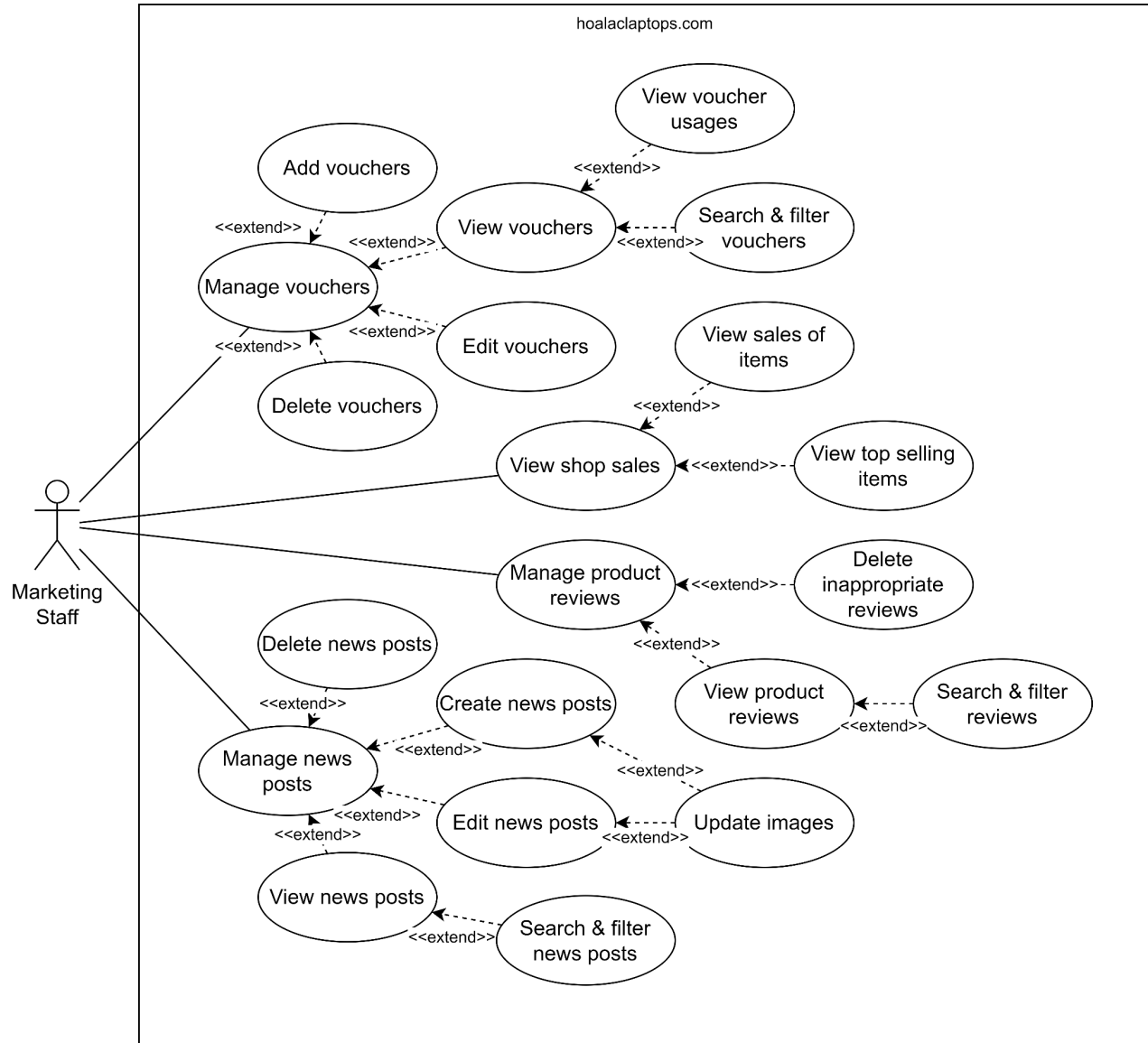


Figure 2.1.4.6/1. Marketing Staff use cases

ID	Feature	Use case	Description
UC-46	FE-A05	Manage vouchers	Marketing Staff can manage the shop's vouchers.
UC-47	FE-A05	Add vouchers	Marketing Staff can add a new voucher.
UC-48	FE-A05	View vouchers	Marketing Staff can view all the vouchers of the shop, including code, discount, etc..
UC-49	FE-A05	View voucher usages	Marketing Staff can view all orders which utilize a specific voucher.
UC-50	FE-A05	Search & filter vouchers	Marketing Staff can search and filter through vouchers based on various criteria.
UC-51	FE-A05	Edit vouchers	Marketing Staff can edit an existing voucher.
UC-52	FE-A05	Delete vouchers	Marketing Staff can delete vouchers from the shop, marking it as unusable even if it hasn't expired.
UC-54	FE-A04	View shop sales	Marketing Staff can view the shop's product sales in many forms.
UC-55	FE-A04	View sales of items	Marketing Staff can view the sales numbers for a specific item.
UC-56	FE-A04	View top selling items	Marketing Staff can view the best selling items in the shop, and for each category of items.
UC-57	FE-A08	Manage product reviews	Marketing Staff can manage the reviews of the shop's products.
UC-74	FE-A08	View product reviews	Marketing Staff can view reviews for the shop's products
UC-89	FE-A08	Search & filter reviews	Marketing Staff can search and filter through product review listings
UC-75	FE-A08	Delete inappropriate reviews	Marketing Staff can delete inappropriate reviews.
UC-59	FE-A06	Manage news posts	Marketing Staff can manage news posts.

UC-60	FE-A06	View news posts	Marketing Staff can view previously posted news pieces.
UC-90	FE-A06	Search & filter news posts	Marketing Staff can search and filter through news posts.
UC-61	FE-A06	Create news posts	Marketing Staff can compose a new news post.
UC-62	FE-A06	Edit news posts	Marketing Staff can edit an existing news post that they've created.
UC-78	FE-A06	Update images	Marketing Staff can insert images while authoring a news post.
UC-63	FE-A06	Delete news posts	Marketing Staff can delete an existing news post that they've created.

2.1.4.7. Manager

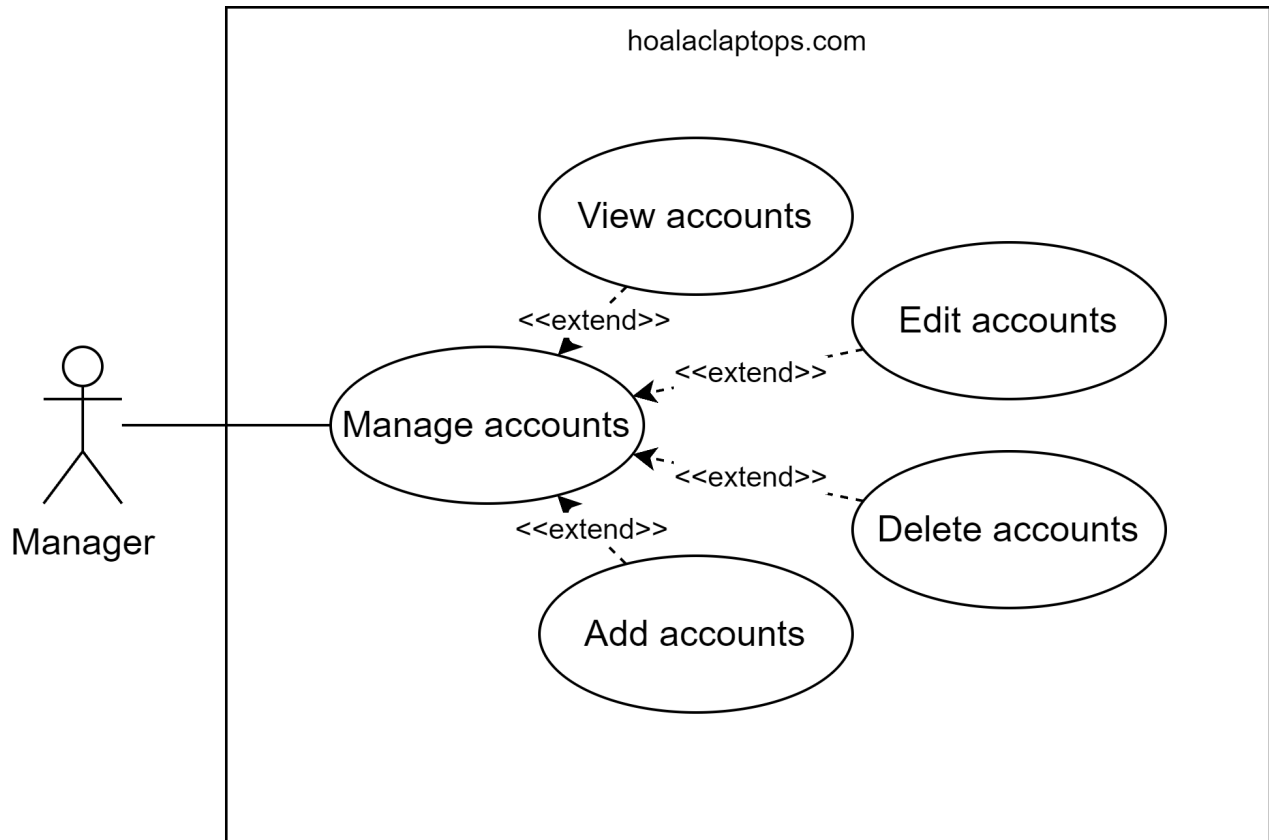


Figure 2.1.4.7/1. Manager use cases

ID	Feature	Use case	Description
UC-64	FE-A07	Manage accounts	Managers can manage all accounts of the shop.
UC-65	FE-A07	Add accounts	Managers can add new accounts to the shop without verification challenge steps.
UC-66	FE-A07	Edit accounts	Managers can edit existing accounts.
UC-67	FE-A07	Delete accounts	Managers can delete existing accounts.

2.2. Overall Functionalities

2.2.1. Screenflow

2.2.1.1. Public Screenflow

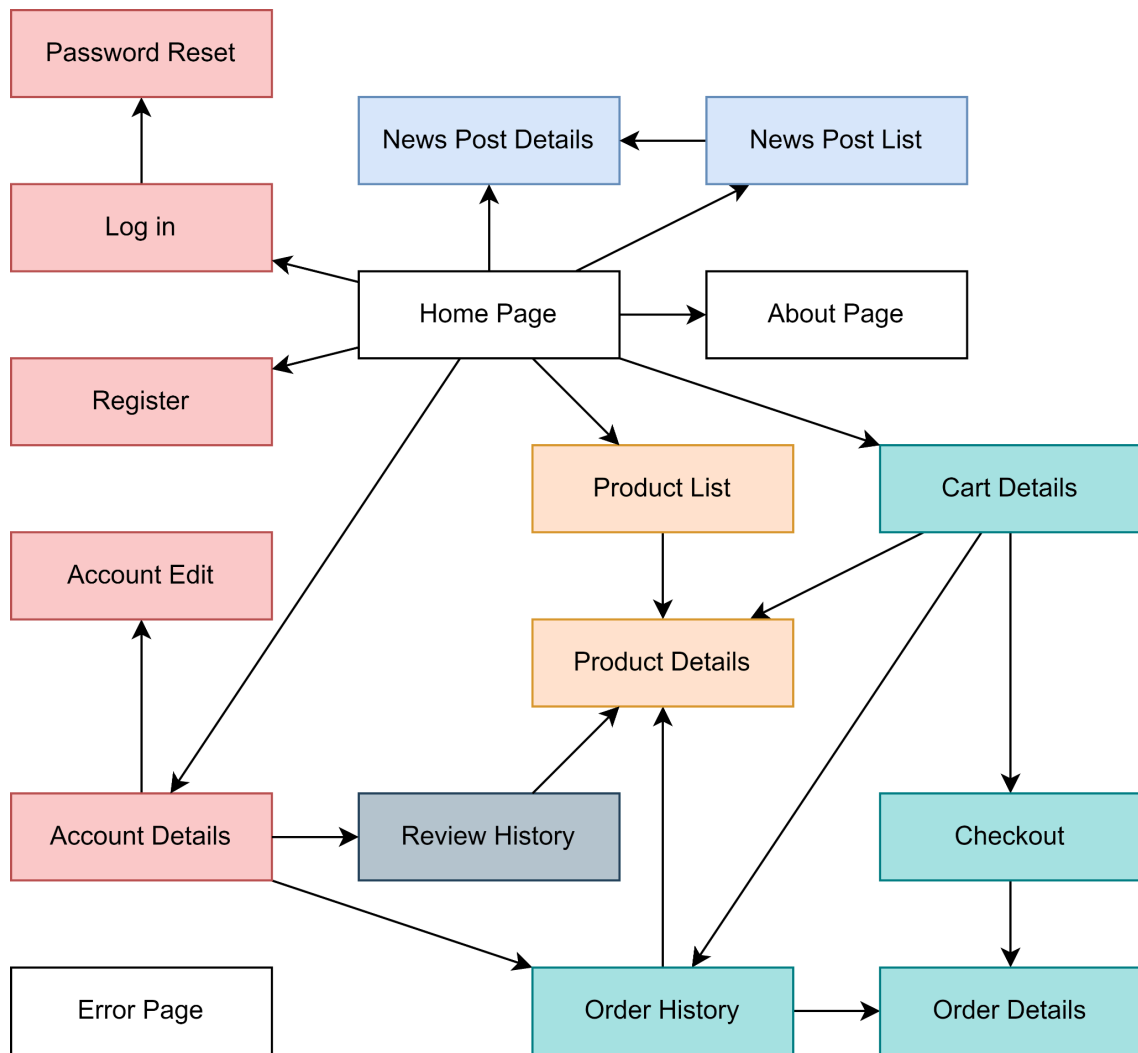


Figure 2.2.1.1/1. Public screenflow

ID	Feature	Screen	Description
SCR/ P.01		Home Page	The central hub of the website. From here, users can navigate to various sections including the product list, news posts, about page, and more.

SCR/ P.02		About Page	Contains information about the website, company, mission, and other relevant details.
SCR/ P.03	FE-W01	Log in	A screen where existing users can enter their credentials to access their accounts. It includes fields for username/email and password, with an option to reset the password.
SCR/ P.04	FE-W01	Register	This screen allows new users to create an account by providing necessary details such as name, email, and password.
SCR/ P.05	FE-W01	Password Reset	A screen where users can request a password reset link by entering their registered email address.
SCR/ P.06	FE-W02	Account Details	Displays the user's account information including personal details and order history. Users can navigate to this screen after logging in.
SCR/ P.07	FE-W02	Account Edit	Allows users to edit their account information such as name, email, password, and other personal details.
SCR/ P.08	FE-P04	News Post List	Shows a list of news posts or updates related to the website or products. Users can click on a post to view its details.
SCR/ P.09	FE-P04	News Post Details	Provides detailed information about a specific news post selected from the News Post List.
SCR/ P.10	FE-P01	Product List	Displays a list of all available products. Users can browse through the products and select one to view more details.
SCR/ P.11	FE-P01	Product Details	Shows detailed information about a selected product, including specifications, pricing, and reviews.
SCR/ P.12	FE-P02	Cart Details	Displays the items that the user has added to their shopping cart. Users can review their selections, adjust quantities, and proceed to checkout.
SCR/ P.13	FE-P02	Checkout	A multi-step process where users provide shipping information, select payment methods, and confirm their order.

SCR/ P.14	FE-P02	Order Details	Provides a summary of a completed order, including product details, shipping information, and payment confirmation.
SCR/ P.15	FE-P02	Order History	Shows a list of past orders made by the user. Each order can be clicked to view its detailed information.
SCR/ P.16	FE-P03	Review History	Shows a list of past reviews made by the user. From here the user can go to the details of the products being reviewed.
SCR/ P.17		Error Page	A page to fall back upon when an interaction with the system produces an error.

2.2.1.2. Administrative Screenflow

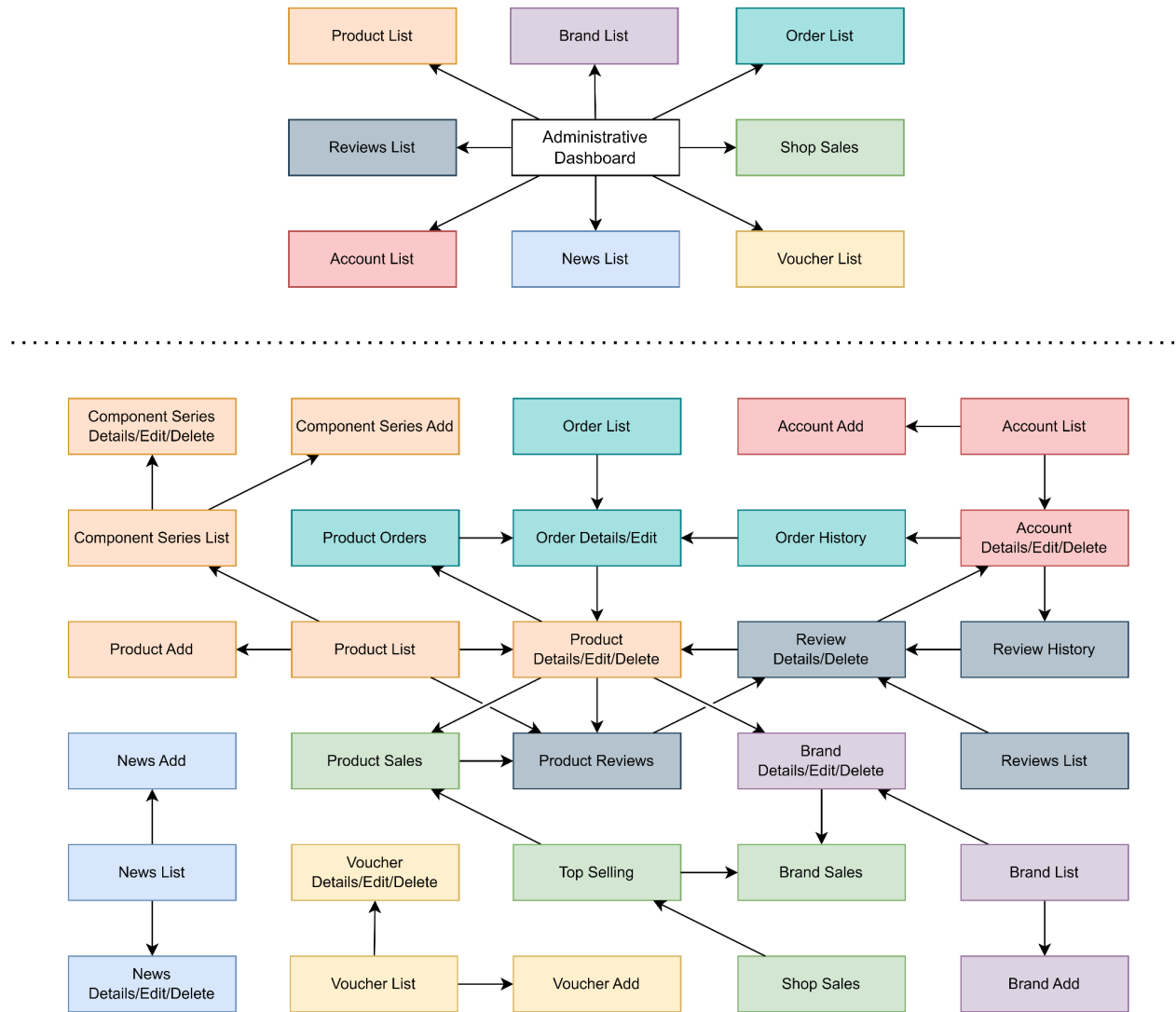


Figure 2.2.1.2/1. Administrative screenflow

ID	Feature	Screen	Description
SCR/A.01		Administrative Dashboard	Provides links to administrative features for all users with authority.
SCR/A.02	FE-A07	Account List	Displays a list of user accounts. Admins can browse and select accounts for more details or actions.

SCR/ A.03	FE-A07	Account Add	Allows admins to create new user accounts by entering the necessary details and saving them to the system.
SCR/ A.04	FE-A07	Account Details/Edit/Delete	Shows detailed information about a user account with options to edit or delete it.
SCR/ A.05	FE-A03	Order History	Displays a history of orders placed by the user, including details and statuses of each order.
SCR/ A.06	FE-A03	Order List	Lists all the orders that have been made with the shop.
SCR/ A.07	FE-A03	Order Details/Edit	Provides detailed information about a specific order, including product details, shipping information, and payment confirmation.
SCR/ A.08	FE-A03	Product Orders	Shows the orders of a particular product
SCR/ A.09	FE-A08	Review History	Displays a history of reviews submitted by the user for various products.
SCR/ A.10	FE-A08	Product Reviews	Displays reviews submitted by customers for a specific product.
SCR/ A.11	FE-A08	Reviews List	Shows the most recent reviews submitted by customers for various products.
SCR/ A.12	FE-A08	Review Details/Delete	Shows the details of a review, including the contents of the review, the product being review, and the reviewer
SCR/ A.13	FE-A02	Brand List	Displays a list of available brands. Users can browse and select brands for more details or actions.
SCR/ A.14	FE-A02	Brand Add	Allows users to add new brands by entering the necessary details and saving them to the system.
SCR/ A.15	FE-A02	Brand Details/Edit/Delete	Shows detailed information about a selected brand with options to edit or delete it.
SCR/ A.16	FE-A04	Product Sales	Displays sales data related to products, including revenue and transaction details for each product.

SCR/ A.17	FE-A04	Brand Sales	Displays sales data related to a specific brand, including revenue and transaction details.
SCR/ A.18	FE-A04	Shop Sales	Displays sales statistics of the shop, calculated based on many metrics and presented in chronological form.
SCR/ A.19	FE-A04	Top Selling	Displays the top selling products of the shop, both in general and by categories
SCR/ A.20	FE-A06	News List	Shows a list of news posts or updates related to the website or products. Users can click on a post to view its details.
SCR/ A.21	FE-A06	News Add	Allows users to create new news posts by entering the necessary details and publishing them.
SCR/ A.22	FE-A06	News Details/Edit/ Delete	Provides detailed information about a specific news post with options to edit or delete it.
SCR/ A.23	FE-A05	Voucher List	Displays a list of available vouchers. Users can browse and select vouchers for more details or actions.
SCR/ A.24	FE-A05	Voucher Add	Allows users to add new vouchers, specifying its conditions and expiry, and saving them to the system.
SCR/ A.25	FE-A05	Voucher Details/Edit/ Delete	Shows detailed information about a selected voucher with options to edit or delete it.
SCR/ A.26	FE-A01	Product List	Displays a list of all available products. Users can browse through the products and select one to view more details.
SCR/ A.27	FE-A01	Product Add	Allows users to add new products by entering the necessary details and saving them to the system.
SCR/ A.28	FE-A01	Product Details/Edit/ Delete	Shows detailed information about a selected product with options to edit or delete it.
SCR/ A.29	FE-A01	Component Series List	Shows a list of component series

SCR/ A.30	FE-A01	Component Series Details/Edit/ Delete	Shows the details of a component series
SCR/ A.31	FE-A01	Component Series Add	Allows users to add new component series.

2.2.1.3. Screen Authorization

Screen		Access					
ID	Name	Web user	Guest	Cust.	MKT.	Sales	Manager
SCR/P.01	Home Page	x	x	x			
SCR/P.02	About Page	x	x	x			
SCR/P.03	Log in	x	x				
SCR/P.04	Register	x	x				
SCR/P.05	Password Reset	x	x				
SCR/P.06	Account Details	x	x	x			
SCR/P.07	Account Edit	x	x	x			
SCR/P.08	News Post List	x	x	x			
SCR/P.09	News Post Details	x	x	x			
SCR/P.10	Product List	x	x	x			
SCR/P.11	Product Details	x	x	x			
SCR/P.12	Cart Details			x			
SCR/P.13	Checkout			x			
SCR/P.14	Order Details			x			
SCR/P.15	Order History			x			
SCR/P.16	Review History			x			
SCR/P.17	Error Page	x	x	x			
SCR/A.01	Administrative Dashboard				x	x	x
SCR/A.02	Account List				x	x	x
SCR/A.03	Account Add						x
SCR/A.04	Account Details/Edit/Delete					x	x

SCR/A.05	Order History					X	X
SCR/A.06	Order List					X	X
SCR/A.07	Order Details/Edit					X	X
SCR/A.08	Product Orders					X	X
SCR/A.09	Review History				X		X
SCR/A.10	Product Reviews				X		X
SCR/A.11	Reviews List				X		X
SCR/A.12	Review Details/Delete				X		X
SCR/A.13	Brand List				X	X	X
SCR/A.14	Brand Add					X	X
SCR/A.15	Brand Details/Edit/Delete					X	X
SCR/A.16	Product Sales				X		X
SCR/A.17	Brand Sales				X		X
SCR/A.18	Shop Sales				X		X
SCR/A.19	Top Selling				X		X
SCR/A.20	News List				X		X
SCR/A.21	News Add				X		X
SCR/A.22	News Details/Edit/Delete				X		X
SCR/A.23	Voucher List				X		X
SCR/A.24	Voucher Add				X		X
SCR/A.25	Voucher Details/Edit/Delete				X		X
SCR/A.26	Product List				X	X	X

SCR/A.27	Product Add					x	x
SCR/A.28	Product Details/Edit/ Delete					x	x
SCR/A.29	Component Series List					x	x
SCR/A.30	Component Series Details/Edit/Delete					x	x
SCR/A.31	Component Series Add					x	x

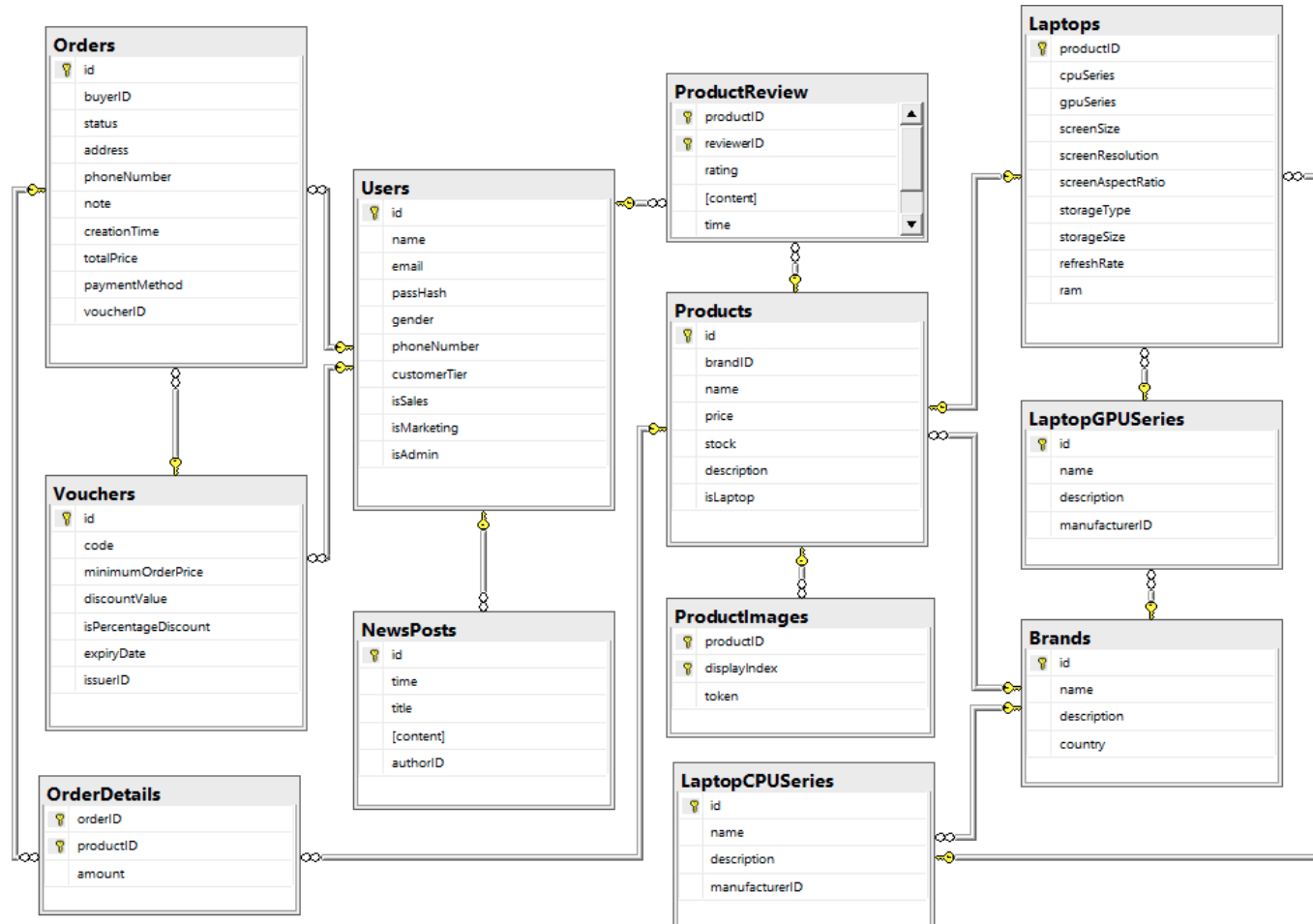
2.2.2. Non-UI Functions

ID	Feature	Function	Description
FN-01	Access Management	User Authorization	Manage user sessions and permissions to control access to different parts of the website based on user roles and privileges.
FN-02	Access Management	Password Hashing	Utilize hashing in every facet of password management and verification.

3. System High Level Design

3.1. Database Design

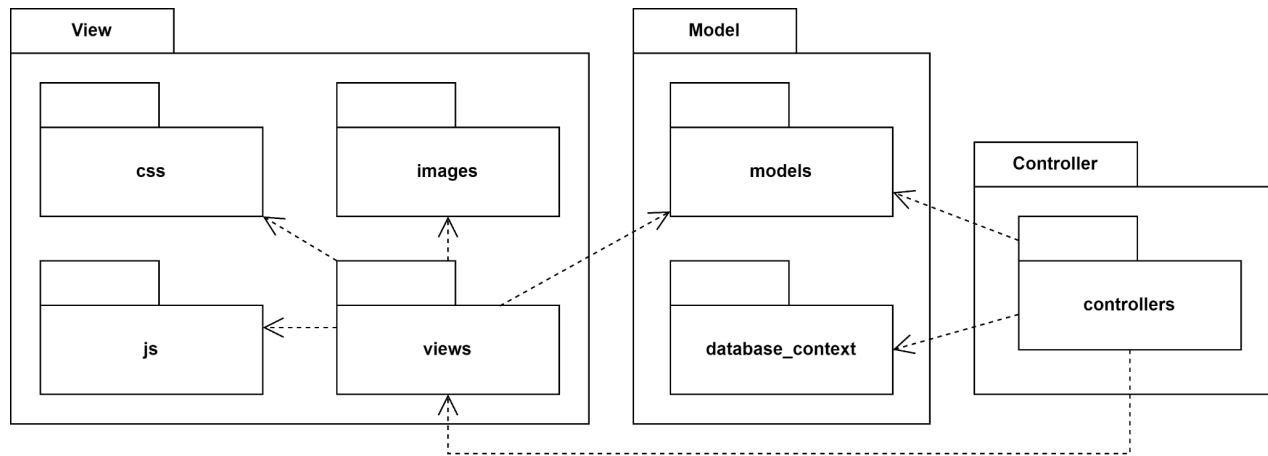
3.1.1. Schema



3.1.2. Table Descriptions

#	Table	Primary Key	Foreign Key	Description
1	Users	id		Stores user account information
2	Brands	id		Stores brand information
3	id		brandID	Stores product information
4	ProductImages	id	productID displayIndex	Stores product images.
5	LaptopCPUSeries	id	manufacturerID	Stores CPU series information
6	LaptopGPUSeries	id	manufacturerID	Stores GPU series information
7	Laptops	productID	productID cpuSeries gpuSeries	Stores laptop information.
8	Vouchers	id	issuerID	Stores voucher information.
9	Orders	id	buyerID voucherID	Stores order information
10	OrderDetails	orderID productID	orderID productID	Stores order to product mapping information
11	ProductReview	productID reviewerID	productID reviewerID	Stores product review information
12	NewsPosts	id	authorID	Stores news post information

3.2. Code Packages



#	Package	Description
1	View	Contains infrastructure for the presentation of the web page.
2	Controller	Contains infrastructure for handling requests from users and generating views.
3	Model	Contains representations of underlying business objects and infrastructure for modifying the database.
4	css	Contains .css files used for styling web pages.
5	js	Contains .js files used for adding reactivity to web pages.
6	images	Contains images used by the site.
7	views	Contains Razor templates for generating pages.
8	controllers	Contains controllers that process user input and pass data onto the views.
9	models	Contains models which map business objects for use by the view and controller.
10	database_context	Contains infrastructure for the controller to access and modify the underlying database.

4. Requirement Specifications

4.1. FE-W01: Manage access

4.1.1. UC-01 - Log in

UC ID and Name	UC-01 - Log in		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	None
Trigger	When a web user wants to log into the website.		
Description	Web users can log into the system to gain access to more parts of the website such as purchasing items.		
Preconditions	- The web user has an account with the system.		
Postconditions	- The web user is logged in and granted permissions pertaining to their account. - The system sets up appropriate cookies to store on the client side. - The web user is redirected to the home page with a notification confirming the successful log in.		
Normal Flow	01: Logging in using email and password 1. The web user chooses to log into the website. 2. The system redirects the user to the initial login page. 3. [UC-04] The web user enters their email and password and triggers the log in. 4. The user is redirected to the home page with a notification confirming the log in		
Alternative Flows	02: Logging in using 3rd party service. 1. (from 01.2) The web user chooses to log in using 3rd party service 2. The system redirects the user to the 3rd party login page. 3. [UC-03] The web user logs in via 3rd party. 4. (return to 01.4)		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Assumptions	TODO		

4.1.2. UC-02 - Register

UC ID and Name	UC-02 - Register		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	None
Trigger	When a web user wants to register with the website.		
Description	Web users can register to become a user of a system and gain access to more parts of the website.		
Preconditions	<ul style="list-style-type: none"> - The web user does not have an account with the website. 		
Postconditions	<ul style="list-style-type: none"> - A new account is made according to the information provided by the web user. - The web user is redirected to the log in page and prompted to log in using their new credentials. 		
Normal Flow	<p>01: Normal flow</p> <ol style="list-style-type: none"> 1. The web user chooses to register with the website. 2. The system redirects the user to the registering page. 3. The web user enters their email, password, and personal information. 4. The system checks the validity of the email and password. 5. The system generates a verification code and sends it to the provided email address. 6. The system redirects the user to the verification challenge page and prompts them to enter in the code sent to their email. 7. The web user enters the code and chooses to continue. 8. The system checks the validity of the code. 9. The system completes the registration and saves relevant data to the database. 10. The web user is redirected to the login page and is prompted to log in. 		
Alternative Flows	None		
Recovery Flows	<p>01.R1: Bad information</p> <ol style="list-style-type: none"> 1. (from 01.4) The system detects one of the following <ol style="list-style-type: none"> a. The information provided are not in the right format or were not supplied (if required) b. The email address pointed to an unreachable host. c. The password was inadequate. 2. The system informs the users of the errors and prompts them to retry. 3. (return to 01.3) <p>01.R2: Incorrect code (with tries left)</p>		

	<ol style="list-style-type: none"> 1. (from 01.8) The system detects that the inputted code is incorrect and the web user is out of attempts to enter it. 2. The system informs that the entered code did not match the true code and the number of tries they have left to enter it in. 3. (return to 01.7)
Exceptions	<p>01.E1: Bad verification code (out of tries)</p> <ol style="list-style-type: none"> 1. (from 01.7) The system detects that the inputted code is incorrect and the web user is out of attempts to enter it. 2. The system stops the registration process and informs that they have entered the code incorrectly too many times. 3. The system redirects the user to the register page. 4. (case end) <p>01.E2: Code has expired</p> <ol style="list-style-type: none"> 1. (from 01.7) The system detects that the web user has run out of time to enter in the code. 2. The system stops the registration process and informs that they have run out of time to enter in the code. 3. The system redirects the user to the register page. 4. (case end)
Priority	Must have
Frequency of Use	High
Business Rules	TODO
Other Information	TODO
Assumptions	TODO

4.1.3. UC-03 - Log in through 3rd party

UC ID and Name	UC-03 - Log in through 3rd party		
Extending	UC-01 - Log in		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	None
Trigger	When a web user wants to log in via a 3rd party service.		
Description	Web users can log in through a 3rd party service such as Google.		
Preconditions	<ul style="list-style-type: none"> - (refer to extended use case) - The web user has been redirected to the log in page of the 3rd party service by the website. 		
Postconditions	<ul style="list-style-type: none"> - (refer to extended use case) 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The proceeds with login through the 3rd party service. 2. The 3rd party service sends a confirmation signal back to the website. 3. The website retrieves the corresponding account. 4. (continue to UC-01/01.4) 		
Alternative Flows	None		
Exceptions	01.1: Login canceled/failed <ol style="list-style-type: none"> 1. (from 01.1) The 3rd party service sends a cancellation or failed signal back to the website. 2. The system informs the web user that the login has failed. 3. The system redirects the web user to the login page. 4. (case end) 01.2: An account was not found <ol style="list-style-type: none"> 1. (from 01.3). The system informs that no account could be matched with the credentials provided by the 3rd party. 2. The system redirects the web user to the login page. 3. (case end) 		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.1.4. UC-04 - Log in using email and pass

UC ID and Name	UC-04 - Log in using email and pass		
Extending	UC-01 - Log in		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	None
Trigger	When the user wants to log in using their email and password.		
Description	Web users can log in using their email and password.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The web user is at the initial log in page. 		
Postconditions	<ul style="list-style-type: none"> - (refer to parent use case) 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The web user enters their email and password into their respective fields. 2. The web user selects whether they want to persist the log in. 3. The web user chooses to log in. 4. The system verifies the credentials and logs the web user into the system. 5. If the web user desires, the system generates the necessary cookies and data to persist the login. 6. The user is redirected to the home page with a notification confirming the log in 		
Alternative Flows	None		
Exceptions	01.E1: Email not found <ol style="list-style-type: none"> 1. (from 01.3) The system informs the user that no account with that email was found. 2. The system redirects the web user back to the login page. 3. (case end) 01.E2: Password incorrect <ol style="list-style-type: none"> 1. (from 01.3) The system informs the user that the inputted password was incorrect. 2. The system redirects the web user back to the login page. 3. (case end) 		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		

Assumptions	TODO
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4.1.5. UC-05 - Reset Password

UC ID and Name	UC-05 - Reset Password		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	None
Trigger	When a web user wants to reset their password.		
Description	Web users can request to reset their password if they've forgotten it.		
Preconditions	<ul style="list-style-type: none"> - The web user has an account with the system. - The web user is at the login screen. 		
Postconditions	<ul style="list-style-type: none"> - The password is reset for this web user. - The web user is redirected to the login screen. 		
Normal Flow	<p>01: Normal flow</p> <ol style="list-style-type: none"> 1. The web user chooses to reset their password. 2. The system redirects the web user to the password reset page. 3. The web user enters in their email and chooses to continue. 4. The system checks the validity of the email. 5. The system generates a verification code and sends it to the specified email. 6. The web user enters the code sent to them. 7. The system verifies the code. 8. The system redirects the user to the new password screen. 9. The web user enters their new password and confirms it. 10. The system saves the new password to the account. 11. The system redirects the user to the login screen and prompts the web user to log in with their new password 		
Alternative Flows	None		
Recovery Flows	<p>01.R1: Incorrect code (with tries left)</p> <ol style="list-style-type: none"> 1. (from 01.7) The system detects that the inputted code is incorrect and the web user is out of attempts to enter it. 2. The system informs that the entered code did not match the true code and the number of tries they have left to enter it in. 3. (return to 01.6) <p>01.R2: New password and re-entered password for confirmation did not match.</p> <ol style="list-style-type: none"> 1. (from 01.9) The system detects that the new password and confirmation of that password did not match. 2. The system informs the web user of this fact and prompts them to retry. 3. (return to 01.9) 		
Exceptions	01.E1: Bad verification code (out of tries)		

	<ol style="list-style-type: none"> 1. (from 01.7) The system detects that the inputted code is incorrect and the web user is out of attempts to enter it. 2. The system stops the registration process and informs that they have entered the code incorrectly too many times. 3. The system redirects the user to the register page. 4. (case end) <p>01.E2: Code has expired</p> <ol style="list-style-type: none"> 1. (from 01.7) The system detects that the web user has run out of time to enter in the code. 2. The system stops the registration process and informs that they have run out of time to enter in the code. 3. The system redirects the user to the register page. 4. (case end)
Priority	Medium
Frequency of Use	Low
Business Rules	TODO
Other Information	TODO
Assumptions	TODO

4.1.5. UC-09 - Log out

UC ID and Name	UC-09 - Log out		
Created By		Date Created	
Primary Actor	Web users	Secondary Actors	None
Trigger	When a web user wants to log out of the system.		
Description	Web users can log out of the system to end their use session.		
Preconditions	- The web user is logged into the system		
Postconditions	- The web user is logged out of the system - The web user is redirected to the home page. - Relevant temporary data is deleted from the server side.		
Normal Flow	01: Normal flow 1. The web user chooses to log out of the system. 2. The system deletes the customer's temporary data. 3. The system logs the user out. 4. The web user is redirected to the home page.		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.2. FE-W02: Manage account

4.2.1. UC-06 - Manage account

UC ID and Name	UC-06 - Manage account		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	
Trigger	When a web user wants to manage their account.		
Description	Web users can manage their accounts with the website.		
Preconditions	<ul style="list-style-type: none">- The web user has an account in the system- The web user has logged in with the website		
Postconditions	<ul style="list-style-type: none">- (refer to child use cases)		
Normal Flow	01: Viewing account 1. [UC-07] The web user views their account		
Alternative Flows	02: Editing account 1. [UC-08] The web user views their account		
Exceptions	(refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.2.2. UC-07 - View account

UC ID and Name	UC-07 - View account		
Extending	UC-06 - Manage account		
Created By		Date Created	
Primary Actor	Web user	Secondary Actors	
Trigger	When a web user wants to view the details of their account.		
Description	Web users can view the details of their account, including personal information and login credentials.		
Preconditions	- (refer to parent use case)		
Postconditions	- The web user can see their account.		
Normal Flow	01: Normal flow 1. The web user selects to view their account 2. The system retrieves their account's information. 3. The system takes the web user to the details page for their account		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.2.3. UC-08 - Edit account

UC ID and Name	UC-08 - Edit account		
Extending	UC-06 - Manage account		
Created By		Date Created	
Primary Actor	Web users	Secondary Actors	
Trigger	When a web user wants to edit the information of their account.		
Description	Customers can view the details of their account, including personal information and login credentials.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The web user is viewing their account 		
Postconditions	<ul style="list-style-type: none"> - The system saves the changes made by the web user. - The web user is redirected to the details page for their account. 		
Normal Flow	<p>01: Normal flow</p> <ol style="list-style-type: none"> 1. The web user selects to edit their account 2. The system takes the web user to the account edit page 3. The web user makes changes to their password. 4. The web user makes changes to their personal information. 5. The web user inputs their existing password for verification. 6. The web user submits their changes. 7. The system verifies that the web user has correctly inputted their password for verification. 8. The system validates the submitted account information. 9. The system saves the changes made by the web user. 10. The system takes the web user to the details page for their account. 		
Alternative Flows	None		
Recovery Flows	<p>01.R1: Invalid confirmation password (tries left)</p> <ol style="list-style-type: none"> 1. (from 01.7) The system detects that the confirmation password was not correct but the web user can still try again. 2. The system informs the web user of the bad confirmation password and the number of tries left. 3. (continue from 01.3) <p>01.R2: Bad information</p> <ol style="list-style-type: none"> 1. (from 01.8) The system detects that one or more fields had invalid information or was a required field that was left empty. 2. The system informs the web user of the error and prompts to try again. 3. (continue from 01.3) 		

Exceptions	01.E1: Invalid confirmation password (no tries left) <ol style="list-style-type: none"> 1. (from 01.7) The system detects that the confirmation password was not correct, and that the web user is out of tries to enter it. 2. The system informs the web user of this fact, logs them out, and redirects them to the home page. 3. (case end)
Priority	Must have
Frequency of Use	Medium
Business Rules	TODO
Other Information	TODO
Assumptions	TODO

4.3. FE-P01: View products

4.3.1. UC-10 - View products

UC ID and Name	UC-10 - View products		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When a guest wants to view the shop's products		
Description	Guests can view the shop's offerings.		
Preconditions	None		
Postconditions	- The guest can see the products of the shop.		
Normal Flow	01: Normal flow 1. The guest opens the Products page 2. The system retrieves the shop's products 3. The system takes the guest to the Products page with the shop's products displayed. 4. The guest chooses a specific product to view. 5. The system retrieves information of that product 6. The system takes the guest to the details page for that product		
Alternative Flows	02: Viewing latest products 1. [UC-12] The guest views the latest products. 2. (continue from 01.4)		
Exceptions	01.E1: No products to show 1. (from 01.2) The system couldn't find any products to show 2. The system informs that no products can be shown 3. (case end) 01.E2: Product deleted 1. (from 01.4) The system could not find the product requested. 2. The system redirects the web user to the Not Found page. 3. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.3.2. UC-11 - Search and filter products

UC ID and Name	UC-11 - Search and filter products		
Extending	UC-10 - View products		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When a guest wants to search and filter through product listings.		
Description	Guests can search and filter for products to narrow down results.		
Preconditions	- The guest is at the Products page		
Postconditions	- The product listings in the Products page reflects the guest's filtering and searching options		
Normal Flow	01: Normal flow 1. The guest enters in the search terms they want to use 2. The guest chooses what kind of products they wish to show (laptops and/or accessories) 3. The guest chooses the price range of products 4. The guest chooses the brands whose products they want to show 5. The guest chooses the specifications for the laptops they want to see 6. The guest chooses to filter products according to those options 7. The system validates the inputs 8. The system adjusts filtering options depending on the search terms and product type selected. 9. The system filters the product list according to current search and filtering options. 10. The system refreshes the results.		
Alternative Flows	None		
Exceptions	01.E1: Bad search term 1. (from 01.7) The system detects the search term was invalid 2. The system informs the guest of this fact and prompts to retry 3. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.3.3. UC-12 - View latest products

UC ID and Name	UC-12 - View latest products		
Extending	UC-10 - View products		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When the guest wants to see the latest products added to the shop's offerings.		
Description	Guests can view the latest offerings from the shop.		
Preconditions	None		
Postconditions	<ul style="list-style-type: none">- The guest can see the latest products of the shop.- (refer to parent use case)		
Normal Flow	01: Viewing through Home page <ol style="list-style-type: none">1. The guest opens the Home page2. The system retrieves the shop's latest laptops and accessories.3. The system retrieves products grouped by manufacturers.4. The system takes the guest to the Home page with those products displayed.5. (continue from UC-10/02.2)		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.3.4. UC-13 - View reviews

UC ID and Name	UC-13 - View reviews		
Extending	UC-10 - View products		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When a guest wants to view the reviews of a product		
Description	Guests can view reviews left by buyers of a product.		
Preconditions	<ul style="list-style-type: none"> - The guest is at the details page for the product whose reviews they want to see. 		
Postconditions	<ul style="list-style-type: none"> - The guest can see the reviews of the product 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The guest chooses the reviews of the product 2. The system gathers the reviews of the product 3. The system takes the guest to the review section for the product. 		
Alternative Flows	None		
Exceptions	01.E1: No reviews to show <ol style="list-style-type: none"> 1. (from 01.2) The system couldn't find any reviews to show for the product. 2. The system informs that there are no reviews available for this product. 3. (case end) 		
Priority	High		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.3.5. UC-80 - Filter reviews

UC ID and Name	UC-80 - Filter reviews		
Extending	UC-13 - View reviews		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When a guest wants to filter through reviews of a product		
Description	Guests can filter through the reviews of a product		
Preconditions	- The guest is viewing the reviews they want to filter		
Postconditions	- The reviews of the product are filtered according to the guest		
Normal Flow	01: Normal flow 1. The guest chooses the target rating score for displayed reviews 2. The system filters the list of reviews according to the target score 3. The system refreshes the list of reviews to only show reviews with the specified score.		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.3.6. UC-73 - View related products

UC ID and Name	UC-73 - View related products		
Extending	UC-10 - View products		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When the guest wants to see related products to the one they're viewing		
Description	Guests can view related products to the one they are currently viewing		
Preconditions	- The guest is viewing the product whose related ones are to be shown.		
Postconditions	- The guest can see the related products of the current product.		
Normal Flow	01: Normal flow 1. The system retrieves the products related to the current product. 2. The system displays the products on the page.		
Alternative Flows	None		
Exceptions	01.E1: No related products to show 1. The system fails to find products related to the current one. 2. The system avoids displaying the related products section. 3. (end case)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.4. FE-P03: Manage product reviews

4.4.1. UC-23 - Manage product reviews

UC ID and Name	UC-23 - Manage product reviews		
Created By		Date Created	
Primary Actor	Customer	Secondary Actors	
Trigger	When a customer wants to manage their product reviews.		
Description	Customers can manage their product reviews.		
Preconditions	- The customer is logged into the system		
Postconditions	- The ratings of the product are updated. - (refer to child use cases)		
Normal Flow	01: Management through review history 1. [UC-27] The customer opens their review history 2. The customer can select a review and either a. [UC-25] Edit a review b. [UC-26] Delete a review		
Alternative Flows	02: Management through purchase history 1. [UC-28] The customer opens their purchase history 2. The customer selects a product listed in their history 3. The system takes them to the details page for that product 4. [UC-13] The customer views the reviews for that product 5. The customer can either a. [UC-24] Leave a review b. [UC-25] Edit their review c. [UC-26] Delete their review		
Exceptions	(refer to child use cases)		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.4.2. UC-27 - View past reviews

UC ID and Name	UC-27 - View past reviews		
Extending	UC-23 - Manage product reviews		
Created By		Date Created	
Primary Actor	Customer	Secondary Actors	
Trigger	When a customer wants to view their past reviews		
Description	Customers can view their previously made reviews.		
Preconditions	<ul style="list-style-type: none">- (refer to parent use case)- The customer is viewing their account details.		
Postconditions	<ul style="list-style-type: none">- The guest can see their past reviews.		
Normal Flow	01: Normal flow <ol style="list-style-type: none">1. The customer chooses to view their past reviews.2. The system retrieves all of their past reviews.3. The system takes the customer to their review history page.		
Alternative Flows	None		
Exceptions	01.E1: No reviews to show <ol style="list-style-type: none">1. (from 01.2) The system couldn't find any reviews to show.2. The system informs that there are no reviews available to view.3. (case end)		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.4.3. UC-82 - Search & filter past reviews

UC ID and Name	UC-82 - Search & filter past reviews		
Extending	UC-27 - View past reviews		
Created By		Date Created	
Primary Actor	Customer	Secondary Actors	
Trigger	When a customer wants to search and filter through their past reviews		
Description	Customers can search and filter through past reviews		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer is viewing the list of their past reviews 		
Postconditions	<ul style="list-style-type: none"> - The guest can see their past reviews filtered accordingly 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The customer select the target score 2. The customer puts in the search term 3. The customer selects to filter according to that information 4. The system validates the input 5. The system filters in reviews with the target score 6. The system filters in reviews with review content and product name matching the search term 7. The system refreshes the list. 		
Alternative Flows	None		
Exceptions	01.E1: Bad search term <ol style="list-style-type: none"> 1. (from 01.4) The system detects that the search term was invalid 2. The system informs the customer of the error 3. (case end) 		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.4.4. UC-24 - Leave product reviews

UC ID and Name	UC-24 - Leave product reviews		
Extending	UC-23 - Manage product reviews		
Created By		Date Created	
Primary Actor	Customer	Secondary Actors	
Trigger	When a customer wants to leave a review on a product they've previously bought.		
Description	Customers can leave product reviews on products that they've previously bought.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer is currently viewing the reviews section under the details page of the product they want to review - The customer has previously purchased this product - The customer has not yet reviewed this product 		
Postconditions	<ul style="list-style-type: none"> - The review is saved into the database - The ratings for the product change in accordance. - The customer can see the added review. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The customer selects a rating for the product 2. The customer enters their thoughts into the review box 3. The customer chooses to save their review 4. The system saves the review. 5. The system shows the newly created review to the customer. 		
Alternative Flows	None		
Exceptions	01.E1: Product deleted <ol style="list-style-type: none"> 1. (from 01.3) The system could not find the product that is to be reviewed. 2. The system redirects the web user to the Not Found page. 3. (case end) 		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.4.5. UC-25 - Edit product reviews

UC ID and Name	UC-25 - Edit product reviews		
Extending	UC-23 - Manage product reviews		
Created By		Date Created	
Primary Actor	Customer	Secondary Actors	
Trigger	When a customer wants to edit a review they made on a product.		
Description	Customers can edit reviews that they've put down.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer has reviewed this product before - The customer is viewing the review they want to edit. 		
Postconditions	<ul style="list-style-type: none"> - The review is amended according to the customer - The review's date is updated to be the edit time. - The product's ratings are adjusted accordingly. - The customer can see the edited review. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The customer chooses to edit their review 2. The customer changes the rating and/or the content of the review. 3. The customer chooses to save the edited review. 4. The system updates the time of the review to be the current time. 5. The system saves the edited review. 6. The system updates the ratings of the product. 7. The system refreshes the review to have the new content. 		
Alternative Flows	None		
Exceptions	01.E1: Product deleted <ol style="list-style-type: none"> 1. (from 01.3) The system could not find the product which is the subject of the review to be edited. 2. The system redirects the web user to the Not Found page. 3. (case end) 		
Priority	Medium		
Frequency of Use	Low		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.4.6. UC-26 - Delete product reviews

UC ID and Name	UC-26 - Delete product reviews		
Extending	UC-23 - Manage product reviews		
Created By		Date Created	
Primary Actor	Customer	Secondary Actors	
Trigger	When a customer wants to edit their review.		
Description	Customers can delete reviews that they've put down.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer has reviewed this product before - The customer is currently viewing the review they want to delete. 		
Postconditions	<ul style="list-style-type: none"> - The review is deleted. - The customer no longer sees their review. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The customer chooses to delete the review 2. The system prompts if they are sure they want to delete it. 3. The customer confirms their decision 4. The system deletes the review from the database. 5. The ratings of the product are updated 6. The system resets the ratings box in the UI to no longer show the review. 		
Alternative Flows	None		
Exceptions	None		
Priority	Medium		
Frequency of Use	Low		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.5. FE-P02: Purchase products

4.5.1. UC-16 - Purchase products

UC ID and Name	UC-16 - Purchase products		
Created By	DucNM	Date Created	21/05/2024
Primary Actor	Customers	Secondary Actors	
Trigger	When a customer wants to purchase a product from the shop		
Description	Customers can purchase the shop's offerings.		
Preconditions	- The customer is logged in with the system		
Postconditions	- The system records the order generated by the customer. - The customer can see their newly created order.		
Normal Flow	01: Normal flow 1. [UC-22] The customer adds products to their cart. 2. [UC-17] The customer performs checkout 3. [UC-28] The customer checks on their orders		
Alternative Flows	None		
Exceptions	- (refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.5.2. UC-17 - Checkout

UC ID and Name	UC-17 - Checkout		
Extending	UC-16 - Purchase products		
Created By	DucNM	Date Created	21/05/2024
Primary Actor	Customers	Secondary Actors	
Trigger	When Customer wants to confirm their purchases		
Description	Customers can perform a checkout to finalize and confirm their order with the shop.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer has at least 1 product in cart - The customer is viewing their cart. 		
Postconditions	<ul style="list-style-type: none"> - The system registers and queues the order in the system - The order is confirmed and commenced. - The cart is cleared, and quantities of items are reduced. - The customer is redirected to the details page for that order. 		
Normal Flow	<p>01: Normal flow (cash on delivery)</p> <ol style="list-style-type: none"> 1. The customer selects to perform checkout 2. The system takes them to the checkout page. 3. The customer fills in delivery details. 4. The customer selects Cash on Delivery as the method of purchase 5. The customer confirms their purchase. 6. The system verifies the details. 7. The system saves the order and reduces the stock on bought items. 8. The system takes the customer to the details page for that order. 		
Alternative Flows	<p>01.A1: Normal flow (online payment)</p> <ol style="list-style-type: none"> 1. (from 01.3) The customer selects Online Payment as the method of purchase 2. (continue from 01.5) 3. (from 01.6) The system contacts the online banking service to begin transaction 4. The system redirects the customer to the payment page for the banking service. 5. The customer finishes payment in the banking service. 6. The system receives confirmation data from the banking service. 7. (continue from 01.7) <p>01.A2: Apply voucher</p> <ol style="list-style-type: none"> 1. (from 01.3) [UC-18] The customer uses a voucher. 		

	2. (continue from 01.4)
Recovery Flows	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.6) The system detects one or more fields was either invalid or was required but left empty. 2. The system informs the customer of this fact and takes them back to the checkout page and prompts them to try again. 3. (continue from 01.3)
Exceptions	01.E1: Out of stock <ol style="list-style-type: none"> 1. (from TODO) The system detects that one or more of the items in the customer's cart is out of stock with current quantities. 2. The system informs this fact and redirects the user to the cart page. 3. (end case) 01.A1.E1: Payment cancellation or error <ol style="list-style-type: none"> 1. (from 01.A1.5) The system does not receive a successful signal from the online payment service. 2. The system informs this fact and redirects the user to the cart page. 3. (end case) (refer to child use cases)
Priority	Must have
Frequency of Use	High
Business Rules	None
Other Information	None
Assumptions	None

4.5.3. UC-18 - Apply voucher

UC ID and Name	UC-18 - Apply voucher		
Extending	UC-17 - Checkout		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customer	Secondary Actors	
Trigger	When the customer wants to use a voucher to get a discount while checking out.		
Description	Customers can use a voucher while checking out to receive a discount.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer is at the checkout page. 		
Postconditions	<ul style="list-style-type: none"> - The system applies the voucher to the order and displays the discount. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The customer enters the voucher code into the box 2. The customer selects to apply the voucher 3. The system retrieves and verifies the voucher 4. The system applies the voucher to the order 5. The system shows the discount to the customer. 		
Alternative Flows	None		
Exceptions	01.E1: Invalid voucher code <ol style="list-style-type: none"> 1. (from 01.3) The system fails to find a voucher with such a code. 2. The system informs the user of this fact and stops voucher application 3. (case end) 01.E2: Voucher not applicable <ol style="list-style-type: none"> 1. (from 01.3) The system detects that the order cannot use this voucher 2. The system informs the user of this fact and stops voucher application 3. (case end) 01.E3: Voucher has expired <ol style="list-style-type: none"> 1. (from 01.3) The system detects that the voucher has expired and cannot be used 2. The system informs the user of this fact and stops voucher application 3. (case end) 		
Priority	Must have		
Frequency of Use	Medium		

Business Rules	None
Other Information	None
Assumptions	None

4.5.4. UC-19 - Manage cart

UC ID and Name	UC-19 - Manage cart		
Extending	UC-16 - Purchase products		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customers	Secondary Actors	
Trigger	When customer wants to see and edit their cart		
Description	Customers can manage their shopping cart.		
Preconditions	- (refer to parent use case)		
Postconditions	- The system records the customer's changes with their cart		
Normal Flow	01: Normal flow 1. The customer navigates to the cart screen. 2. [UC-20] The customer adds the product to cart 3. [UC-21] The customer removes a product from cart 4. [UC-22] The customer edit quantity of products in cart		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.5.5. UC-20 - Edit quantities

UC ID and Name	UC-20 - Edit quantities		
Extending	UC-19 - Manage cart		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customer	Secondary Actors	
Trigger	When the customer wants to edit the quantities of items in their cart.		
Description	Customers can edit the quantities of the products they're currently purchasing.		
Preconditions	<ul style="list-style-type: none">- (refer to parent use case)- The customer has at least 1 product in cart- The customer is viewing their cart.		
Postconditions	<ul style="list-style-type: none">- (refer to parent use case)- The customer can see the quantity get decremented.		
Normal Flow	01: Normal flow <ol style="list-style-type: none">1. The customer selects to reduce the quantity of an item in their cart.2. The system records the change and refreshes the count to match.		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.5.6. UC-21 - Remove from cart

UC ID and Name	UC-21 - Remove from cart		
Extending	UC-19 - Manage cart		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customer	Secondary Actors	
Trigger	When the customer clicks on the “X” button in a product in cart		
Description	Customers can remove items from their cart.		
Preconditions	<ul style="list-style-type: none">- (refer to parent use case)- The customer has at least 1 product in cart- The customer is viewing their cart		
Postconditions	<ul style="list-style-type: none">- (refer to parent use case)- The customer can no longer see the product in their cart.		
Normal Flow	01: Normal flow <ol style="list-style-type: none">1. Customer selects to remove a product from their cart.2. The system removes that item from their cart and updates the page to reflect the change.		
Alternative Flows	02: Decrementing to zero <ol style="list-style-type: none">1. [UC-20] The customer edits the quantity to get it down to zero.2. The system detects that the quantity is zero and removes the item from the cart.3. (continue from 2)		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.5.7. UC-22 - Add to cart

UC ID and Name	UC-22 - Add to cart		
Extending	UC-19 - Manage cart		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customer	Secondary Actors	
Trigger	When the customer wants to add a new product to their cart		
Description	Customers can add products to their cart for easier bulk purchases.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer is viewing the product they want to add. 		
Postconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer's cart is updated to have the new product. 		
Normal Flow	01: Normal flow 1. The customer selects to add the product to the cart 2. The system checks that the product can be added to the cart. 3. The system updates the customer's cart to have the new product.		
Alternative Flows	None		
Exceptions	01.E1: Product out of stock 1. (from 01.2) The system detects that the product is out of stock 2. The system informs the user of this fact and cancels. 3. (end case) 01.E2: Product already in the cart 1. (from 01.2) The system detects that the product is already in the customer's cart. 2. The system informs the user of this fact and cancels. 3. (end case)		
Priority	Must Have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.5.8. UC-28 - View orders

UC ID and Name	UC-28 - View orders		
Extending	UC-16 - Purchase products		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customer	Secondary Actors	
Trigger	When the customer wants to see their orders.		
Description	Customers can view their purchases and orders.		
Preconditions	- (refer to parent use case)		
Postconditions	- The customer can see their orders.		
Normal Flow	01: Normal flow 1. [UC-07] The customer views the details of their account 2. The customer selects to view their order history. 3. The system retrieves all of their orders. 4. The system takes the customer to the order history page. 5. The customer selects a specific order to view 6. The system retrieves the details for that order. 7. The system takes the customer to the details page for that order.		
Alternative Flows	02: Post-Checkout 1. [UC-17] The customer finishes checking out. 2. The system redirects the user to the details page for that order.		
Exceptions	None		
Priority	Must Have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.5.8. UC-81 - Search & filter orders

UC ID and Name	UC-81 - Search & filter orders		
Extending	UC-28 - View orders		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Customer	Secondary Actors	
Trigger	When the customer wants to search and filter through their orders		
Description	Customers can search and filter through the past orders.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The customer is viewing their list of orders 		
Postconditions	<ul style="list-style-type: none"> - The customer can see their orders filtered according to the customer. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The customer selects the state of the orders to be viewed 2. The customer enters in a search term to search through orders 3. The customer confirms to apply those search terms and filters 4. The system validates the input 5. The system filter their orders and refreshes the list 		
Alternative Flows	None		
Exceptions	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.4) The system detects that the search terms had invalid information 2. The system informs the customer of this fact 3. (case end) 		
Priority	Must Have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.7. FE-P04: View news

4.6.1. UC-14 - View news posts

UC ID and Name	UC-10 - View news posts		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When a guest wants to see the shop's news.		
Description	Guests can view the shop's news posts.		
Preconditions	None		
Postconditions	- The guest can see the shop's news posts.		
Normal Flow	01: Normal flow 1. The guest chooses to view the News page. 2. The system retrieves the latest news of the shop. 3. The system takes the customer to the News page. 4. The guest chooses a news post to view. 5. The system retrieves the content for that news post 6. The system takes the guest to the viewing page for that news post.		
Alternative Flows	None		
Exceptions	01.E1: No news posts to show 1. (from 01.2) The system fails to retrieve any news posts. 2. The system informs that there are no news posts to show 3. (end case)		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.6.2. UC-15 - Search & filter news posts

UC ID and Name	UC-11 - Search & filter news posts		
Extending	UC-14 - View news posts		
Created By		Date Created	
Primary Actor	Guest	Secondary Actors	
Trigger	When a guest wants to search through and filter news posts.		
Description	Guests can search and filter through the shop's news posts to find specific content.		
Preconditions	<ul style="list-style-type: none"> - The guest is at the News page. - There are news posts to show. 		
Postconditions	<ul style="list-style-type: none"> - The list of news posts are adjusted according to search terms and filter conditions. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The guest changes one or more of the following: <ol style="list-style-type: none"> a. Search term for content b. Search term for author c. Post date range d. News post length 2. The guest selects to re-filter the list with those conditions 3. The system validates the data. 4. The system filters the news posts and refreshes the list. 		
Alternative Flows	None		
Exceptions	01.E1: Bad data <ol style="list-style-type: none"> 1. (from 01.3) The system detects that one or more fields was invalid. 2. The system informs the user of the error. 3. (case end) 		
Priority			
Frequency of Use			
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7. FE-A01: Manage products

4.7.1. UC-37 - Manage products

UC ID and Name	UC-37 - Manage products		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to manage the products of the shop.		
Description	Sales Staff can manage the shop's offerings.		
Preconditions	<ul style="list-style-type: none">- The sales member is logged into the system.- The sales member is currently viewing the sales administration page.		
Postconditions	<ul style="list-style-type: none">- (refer to child use cases)		
Normal Flow	01: Normal flow <ol style="list-style-type: none">1. [UC-38] The sales staff opens the product administration page all products2. The sales staff can either<ol style="list-style-type: none">a. [UC-43] Add a productb. [UC-44] Edit a productc. [UC-46] Delete a product		
Alternative Flows	None		
Exceptions	(refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.2. UC-38 - View products

UC ID and Name	UC-38 - View products		
Extending	UC-37 - Manage products		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to view the shop's products		
Description	Sales Staff can quickly view all of the shop's products and execute actions.		
Preconditions	- (refer to parent use case)		
Postconditions	- The sales staff can see the products of the shop.		
Normal Flow	01: Normal flow 1. The sales staff opens the Product management page. 2. The system retrieves the products of the shop and lists them in order of added order. 3. The sales staff selects one to view in detail. 4. The system retrieves the details of the product 5. The system takes the sales staff to the management details page for that product.		
Alternative Flows	None		
Exceptions	01.A1: No products to show 1. (from 01.2) The system couldn't find any products to show 2. The system informs that no products can be shown 3. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.3. UC-83 - Search products

UC ID and Name	UC-83 - Search products		
Extending	UC-38 - View products		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to view the shop's products		
Description	Sales Staff can search through the shop's products.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the list of products 		
Postconditions	<ul style="list-style-type: none"> - The list of products is filtered according to the search terms 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member enters in the search terms 2. The sales member selects to search the list using those terms 3. The system validates the inputs 4. The system filters the products list according to that search term 5. The system refreshes the list. 		
Alternative Flows	None		
Exceptions	01.E1: Bad data <ol style="list-style-type: none"> 1. (from 01.3) The system detects that one or more fields was invalid. 2. The system informs the user of the error. 3. (case end) 		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.4. UC-39 - Add products

UC ID and Name	UC-39 - Add products		
Extending	UC-37 - Manage products		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to add new products into the shop's catalog.		
Description	Sales Staff can add a new product into the shop's offerings.		
Preconditions	<ul style="list-style-type: none"> - The sales member is logged into the system. - The sales member is viewing the product list. 		
Postconditions	<ul style="list-style-type: none"> - The product is added into the shop's catalog. - The sales member is back at the product list. 		
Normal Flow	<p>01: Normal flow</p> <ol style="list-style-type: none"> 1. The sales member chooses to add a new product 2. The system takes the sales member to the product creation screen 3. The sales member fills out information for the product. 4. The sales member inserts product images for the product. 5. The sales member confirms product creation 6. The system validates the data 7. The system registers the new product 8. The sales member is taken back to the product list with the new product shown at the front. 		
Alternative Flows	None		
Recovery Flows	<p>01.R1: Bad information</p> <ol style="list-style-type: none"> 1. (from 01.6) The system detects one or more fields was either invalid or was required but left empty. 2. The system informs the sales member of this fact and prompts them to try again. 3. (continue from 01.3) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Assumptions	TODO		

4.7.5. UC-40 - Edit products

UC ID and Name	UC-40 - Edit products		
Extending	UC-37 - Manage products		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to edit an existing product.		
Description	Sales Staff can edit the information of an existing product.		
Preconditions	<ul style="list-style-type: none"> - The sales member is logged into the system - The sales member is viewing the details of the product they want to edit. 		
Postconditions	<ul style="list-style-type: none"> - The product is amended according to the changes made by the sales member - The product page is refreshed to show the changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member makes changes to the information of the product. 2. The sales member uploads new product images for the product. 3. The sales member confirms the changes 4. The system validates the data. 5. The system saves the changes to the product and refreshes the page to show the changes. 		
Alternative Flows	None		
Exceptions	01.R1: Bad information <ol style="list-style-type: none"> 4. (from 01.4) The system detects one or more fields was either invalid or was required but left empty. 5. The system informs the sales member of this fact and prompts them to try again. 6. (continue from 01.1) 		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.6. UC-41 - Delete products

UC ID and Name	UC-41 - Delete products		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to mark a product as being deleted.		
Description	Sales Staff can delete an existing product.		
Preconditions	<ul style="list-style-type: none">- The sales member is logged into the system.- The sales member is viewing the details page for the product they want to delete.		
Postconditions	<ul style="list-style-type: none">- The product is marked as deleted by the system.- The product is no longer indexable and purchasable.- The sales member is taken back to the product listings.		
Normal Flow	01: Normal flow <ol style="list-style-type: none">1. The sales member selects to delete the product.2. The system asks for confirmation.3. The sales member confirms their choice.4. The product is marked as deleted by the system.5. The sales member is taken back to the product listings.		
Alternative Flows	None		
Exceptions	None		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.7. UC-68 - Manage component series

UC ID and Name	UC-68 - Manage component series		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to manage a component series.		
Description	Sales Staff can manage the products' component series.		
Preconditions	- The sales staff is logged into the system		
Postconditions	- (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-69] The sales staff views the list of component series they want to manage 2. The sales staff can then either a. [UC-70] Add a component series b. [UC-71] Edit a component series c. [UC-72] Delete a component series		
Alternative Flows	None		
Exceptions	- (refer to child use cases)		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.8. UC-69 - View component series

UC ID and Name	UC-69 - View component series		
Extending	UC-68 - Manage component series		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to view the shop's component series		
Description	Sales Staff can view all component series.		
Preconditions	- (refer to parent user case)		
Postconditions	- The sales member can see the details of a component series		
Normal Flow	01: Normal flow 1. The sales member navigates to the component series screen 2. The sales member selects to view a specific component (CPU or GPU) 3. The system retrieves the list of component series for that component in the system. 4. The system takes the sales member to the list of series in the shop. 5. The sales member selects to view a specific component series. 6. The system retrieves information about that series. 7. The system takes the sales member to the details page for that component series.		
Alternative Flows	None		
Exceptions	01.E1: No component series to show 1. (from 01.3) The system couldn't find any series for that component. 2. The system informs the sales member of this fact 3. (case end)		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.9. UC-84 - Search component series

UC ID and Name	UC-84 - Search component series		
Extending	UC-69 - View component series		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to search through the list of component series.		
Description	Sales Staff can search through component series.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent user case) - The sales member is viewing the list of component series 		
Postconditions	<ul style="list-style-type: none"> - The list of component series is refreshed according to the search term 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member enters in the search terms 2. The sales member selects to search the list using those terms 3. The system validates the inputs 4. The system filters the component series list according to that search term 5. The system refreshes the list. 		
Alternative Flows	None		
Exceptions	01.E1: Bad search term <ol style="list-style-type: none"> 1. (from 01.3) The system detects that the search term was invalid. 2. The system informs the user of the error. 3. (case end) 		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.10. UC-70 - Add component series

UC ID and Name	UC-70 - Add component series		
Extending	UC-68 - Manage component series		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to add a component series		
Description	Sales Staff can add new component series.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the list of series of the component they want to add a new series into. 		
Postconditions	<ul style="list-style-type: none"> - The new component series is saved. - The sales member is brought back to the component series list. 		
Normal Flow	<p>01: Normal flow</p> <ol style="list-style-type: none"> 1. The sales member chooses to add a new component series 2. The system takes the sales member to the series creation screen 3. The sales member fills in the information for the new series 4. The sales member confirms the addition 5. The system validates the input 6. The system saves the component series 7. The system takes the sales member back to the component series list. 		
Alternative Flows	None		
Recovery Flow	<p>01.E1: Bad information</p> <ol style="list-style-type: none"> 1. (from 01.5) The system detects that one or more fields had invalid data or was required but was left empty. 2. The system informs the sales member of the errors and prompts them to try again. 3. (continue from 01.3) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.11. UC-71 - Edit component series

UC ID and Name	UC-71 - Edit component series		
Extending	UC-68 - Manage component series		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to edit a component series.		
Description	Sales Staff can edit component series.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the details of the component series they want to edit. 		
Postconditions	<ul style="list-style-type: none"> - The system saves the changes made by the sales member - The page refreshes to show the sales member's changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member changes the information of the series. 2. The sales member confirms their changes 3. The system validates the input 4. The system updates the component series with the new information. 5. The system refreshes the page to show the changes. 		
Recovery Flow	01.E1: Bad information <ol style="list-style-type: none"> 1. (from 01.3) The system detects that one or more fields had invalid data or was required but was left empty. 2. The system informs the sales member of the errors and prompts them to try again. 3. (continue from 01.1) 		
Alternative Flows	None		
Exceptions			
Priority			
Frequency of Use			
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.7.12. UC-72 - Delete component series

UC ID and Name	UC-72 - Delete component series		
Extending	UC-68 - Manage component series		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to delete a component series.		
Description	Sales Staff can delete component series, if they haven't been assigned to a product yet.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the details page for the component series they want to delete. 		
Postconditions	<ul style="list-style-type: none"> - The component series is deleted. - The sales member is taken back to the component series list. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member selects to delete the series. 2. The system asks the sales member to confirm the action 3. The sales member confirms the deletion. 4. The system checks if the component series is assigned to any products. 5. The system removes the component series. 6. The system takes the sales member back to the component series list. 		
Alternative Flows	None		
Exceptions	01.E1: Component series is assigned to one or more products. <ol style="list-style-type: none"> 1. (from 01.4) The system detects that this component series is assigned to one or more products. 2. The system informs the sales member of this fact 3. (case end) 		
Priority	Medium		
Frequency of Use	Low		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.8. FE-A02: Manage brands

4.8.1. UC-32 - Manage brands

UC ID and Name	UC-32 - Manage brands		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to manage a brand.		
Description	Sales Staff can view all the brands in the shop.		
Preconditions	- The sales staff is logged into the system		
Postconditions	- (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-33] The sales staff views the list of brands in the shop 2. The sales staff can then either a. [UC-34] Add a brand b. [UC-35] Edit a brand c. [UC-36] Delete a brand		
Alternative Flows	None		
Exceptions	- (refer to child use cases)		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.8.2. UC-33 - View brands

UC ID and Name	UC-33 - View brands		
Extending	UC-32 - Manage brands		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to view a brand		
Description	Sales Staff can add a new brand to the shop.		
Preconditions	- (refer to parent user case)		
Postconditions	- The sales member can see the details of a brand		
Normal Flow	01: Normal flow 1. The sales member navigates to the brand screen 2. The system retrieves the list of brands 3. The system takes the sales member to the list of brands. 4. The sales member selects to view a specific brand. 5. The system retrieves information about that brand. 6. The system takes the sales member to the details page for that brand.		
Alternative Flows	None		
Exceptions	01.E1: No brands to show 1. (from 01.2) The system couldn't find any brands. 2. The system informs the sales member of this fact 3. (case end)		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.8.3. UC-76 - Search brands

UC ID and Name	UC-76 - Search brands		
Extending	UC-33 - View brands		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales staff wants to search through the brands of the site		
Description	Sales Staff can search through brands		
Preconditions	<ul style="list-style-type: none"> - (refer to parent user case) - The sales member is viewing the list of brands 		
Postconditions	<ul style="list-style-type: none"> - The list of brands is filtered depending on the search term 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member enters in the search term for brands 2. The sales member chooses to search through brands 3. The system validates the input 4. The system filters the brands list according to the search term 5. The system refreshes the brand list 		
Alternative Flows	None		
Exceptions	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.3) The system detects that the search terms had invalid information 2. The system informs the sales member of this fact 3. (continue from 01.1) 		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.8.4. UC-34 - Add brands

UC ID and Name	UC-34 - Add brands		
Extending	UC-32 - Manage brands		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to add a brand		
Description	Sales Staff can add a new brand to the shop.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the list of brands. 		
Postconditions	<ul style="list-style-type: none"> - The new brand is saved. - The sales member is brought back to the list of brands. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member chooses to add a new brand 2. The system takes the sales member to the brand creation screen 3. The sales member fills in the information for the new brand 4. The sales member confirms the addition 5. The system validates the input 6. The system saves the brand 7. The system takes the sales member back to the brand list. 		
Alternative Flows	None		
Recovery Flow	01.E1: Bad information <ol style="list-style-type: none"> 1. (from 01.5) The system detects that one or more fields had invalid data or was required but was left empty. 2. The system informs the sales member of the errors and prompts them to try again. 3. (continue from 01.3) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.8.5. UC-35 - Edit brands

UC ID and Name	UC-35 - Edit brands		
Extending	UC-32 - Manage brands		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to edit a brand.		
Description	Sales Staff can edit the information of a brand.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the details of the brand they want to edit. 		
Postconditions	<ul style="list-style-type: none"> - The system saves the changes made by the sales member - The page refreshes to show the sales member's changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member changes the information of the brand. 2. The sales member confirms their changes 3. The system validates the input 4. The system updates the brand with the new information. 5. The system refreshes the page to show the changes. 		
Recovery Flows	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.3) The system detects that one or more fields had invalid data or was required but was left empty. 2. The system informs the sales member of the errors and prompts them to try again. 3. (continue from 01.1) 		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.8.6. UC-36 - Delete brands

UC ID and Name	UC-36 - Delete brands		
Extending	UC-32 - Manage brands		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to delete a brand.		
Description	Sales Staff can delete a brand from the shop.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the details page for the brand they want to delete. 		
Postconditions	<ul style="list-style-type: none"> - The brand is deleted. - The sales member is taken back to the brands list. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member selects to delete the brand. 2. The system asks the sales member to confirm the action 3. The sales member confirms the deletion. 4. The system checks if the brand is assigned to any products. 5. The system removes the brand. 6. The system takes the sales member back to the brand list. 		
Alternative Flows	None		
Exceptions	01.E1: brand is assigned to one or more products. <ol style="list-style-type: none"> 1. (from 01.4) The system detects that this brand is assigned to one or more products. 2. The system informs the sales member of this fact 3. (case end) 		
Priority	Medium		
Frequency of Use	Low		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.9. FE-A03: Manage orders

4.9.1. UC-29 - Manage orders

UC ID and Name	UC-29 - Manage orders		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to manage the shop's orders		
Description	Sales Staff can manage the shop's orders.		
Preconditions	- The sales member is logged into the system		
Postconditions	- (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-31] The sales member views the list of orders in the shop. 2. [UC-30] The sales member edits one or more orders		
Alternative Flows	None		
Exceptions	(refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.9.2. UC-31 - View orders

UC ID and Name	UC-31 - View orders of the shop		
Extending	UC-29 - Manage orders		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to view the orders in the system.		
Description	Sales Staff can view the orders placed by customers.		
Preconditions	- (refer to parent use case)		
Postconditions	- The sales member can see the list of orders in the system.		
Normal Flow	01: View all orders of the shop 1. The sales member chooses to view the orders page 2. The system retrieves all of the orders in the system. 3. The system shows the list of orders to the sales member. 4. The sales member chooses to view a specific order 5. The system gets the information of that specific order 6. The system takes the sales member to the details page for that order		
Alternative Flows	02: View all orders from a customer 1. [UC-42] The sales member views the account whose orders are to be viewed 2. The sales member chooses to view the orders of this account 3. (continue from 01.2) 03: View all orders of a specific product 1. [UC-10] The sales member views the product whose orders are to be viewed 2. The sales member chooses to view the orders of this product 3. (continue from 01.2)		
Exceptions	01.E1: No orders to view 1. (from 01.2) The system could not find any orders to view 2. The system informs the sales member of this fact 3. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Assumptions	None		

4.9.3. UC-45 - Search & filter orders

UC ID and Name	UC-45 - Search & filter orders		
Extending	UC-31 - View orders of the shop		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to search and filter through the list of orders		
Description	Sales Staff can search and filter through order listings		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing a list of orders 		
Postconditions	<ul style="list-style-type: none"> - The list of orders is filtered according to the sales member. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member chooses the order state to filter in 2. The sales member enter in the search terms 3. The sales member selects to filter the list 4. The system validates the inputs 5. The system filters in orders with the specified order state 6. The system filters in orders which have fields matching the search term 7. The system refreshes the list. 		
Alternative Flows	None		
Exceptions	01.E1: Bad search term <ol style="list-style-type: none"> 1. (from 01.4) The system detects the search term was invalid 2. The system informs the sales member of this fact 3. (case end) 		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Assumptions	None		

4.9.4. UC-30 - Edit orders

UC ID and Name	UC-30 - Edit orders		
Extending	UC-29 - Manage orders		
Created By	DucNM	Date Created	22/05/2024
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to edit the information of orders.		
Description	Sales Staff can edit certain details of orders.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales staff is at the details page of the order to be edited. 		
Postconditions	<ul style="list-style-type: none"> - The system saves the changes to the order - The system refreshes the page to show the changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member makes changes to the order's details 2. The sales member confirms the changes 3. The system validates the input 4. The system saves the changes and refreshes the page 		
Alternative Flows	None		
Recovery Flows	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.3) The system detects that one or more fields had invalid data or was required but was left empty. 2. The system informs the sales member of the errors and prompts them to try again. 3. (continue from 01.1) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.10. FE-A05: Manage vouchers

4.10.1. UC-46 - Manage vouchers

UC ID and Name	UC-46 - Manage vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to manage the shop's vouchers		
Description	Marketing Staff can manage the shop's vouchers.		
Preconditions	- The marketing member is logged into the system		
Postconditions	- (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-48] The marketing staff views the list of vouchers in the system. 2. Here the marketing staff can either a. [UC-47] Add a voucher b. [UC-51] Edit a voucher c. [UC-52] Delete a voucher		
Alternative Flows	None		
Exceptions	(refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.10.2. UC-47 - Add vouchers

UC ID and Name	UC-50 - Add vouchers		
Extending	UC-46 - Manage vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to add a new voucher		
Description	Marketing Staff can add a new voucher.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the voucher list 		
Postconditions	<ul style="list-style-type: none"> - The voucher is saved into the system - The marketing member is taken back to the voucher list with the new voucher shown at the top. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing staff chooses to create a new voucher 2. The system takes the marketing staff to the voucher creation screen 3. The marketing staff fills in the information of the voucher 4. The marketing staff submits the voucher for creation 5. The system validates the input 6. The system creates the voucher 7. The system redirects the marketing member back to the voucher list 		
Alternative Flows	None		
Recovery Flow	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.5) The system detects that one or more fields had invalid information or was a required field that was left empty. 2. The system informs the web user of the error and prompts to try again. 3. (continue from 01.3) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.10.3. UC-48 - View vouchers

UC ID and Name	UC-48 - View vouchers		
Extending	UC-46 - Manage vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to view the vouchers of the shop		
Description	Marketing Staff can view all the vouchers of the shop, including code, discount, etc..		
Preconditions	- (refer to parent use case)		
Postconditions	- The marketing staff can see the vouchers of the shop.		
Normal Flow	01: Normal flow 1. The marketing staff navigates to the vouchers screen. 2. The system retrieves the vouchers of the shop 3. The system shows the list of vouchers to the marketing member 4. The marketing member selects to view a specific voucher 5. The system retrieves information about that voucher. 6. [UC-49] The system retrieves the usages of the voucher 7. The system takes the marketing member to the details page for that voucher.		
Alternative Flows	None		
Exceptions	01.E1: No vouchers to show 1. (from 01.2) The system fails to find any vouchers to show 2. The system informs the marketing member this fact 3. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.10.4. UC-49 - View voucher usages

UC ID and Name	UC-49 - View voucher usages		
Extending	UC-48 - View vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to see the orders which use a voucher.		
Description	Marketing Staff can view all orders which utilize a specific voucher.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing staff is viewing the details page for the voucher 		
Postconditions	<ul style="list-style-type: none"> - The marketing staff can see the usages for the voucher 		
Normal Flow	01: Normal flow 1. The system retrieves the usages of the voucher 2. The system displays the usages in the details page of the voucher.		
Alternative Flows	None		
Exceptions	01.E1: No details to show 1. (from 01.1) The system fails to find any usage for this voucher 2. The system informs the marketing staff of this fact 3. (case end)		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.10.5. UC-50 - Search & filter vouchers

UC ID and Name	UC-50 - Search & filter vouchers		
Extending	UC-48 - View vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to search through vouchers to narrow down results.		
Description	Marketing Staff can search and filter through vouchers based on various criteria.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is currently viewing the list of vouchers 		
Postconditions	<ul style="list-style-type: none"> - The marketing member can see the list of vouchers narrowed down according to their search terms and filters 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing member enters in a search term 2. The marketing member selects the discount type and discount value range 3. The marketing member selects to refresh the list 4. The system validates the input 5. The system refreshes the list with those conditions 		
Alternative Flows	None		
Exceptions	01.E1: Bad information <ol style="list-style-type: none"> 1. (from 01.4) The system detects one or more fields had invalid information 2. The system informs the marketing member of this fact 3. (case end) 		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.10.6. UC-51 - Edit vouchers

UC ID and Name	UC-51 - Edit vouchers		
Extending	UC-46 - Manage vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to edit an existing voucher		
Description	Marketing Staff can edit an existing voucher.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing staff is viewing the voucher to be edited in detail 		
Postconditions	<ul style="list-style-type: none"> - The system saves the changes made by the marketing member to the voucher - The page is refreshed to reflect those changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing staff make their changes to the voucher 2. The marketing staff confirms their edits 3. The system validates the input 4. The system saves the changes and refreshes the page 		
Alternative Flows	None		
Recovery Flows	01.R1: Bad information <ol style="list-style-type: none"> 4. (from 01.3) The system detects that one or more fields had invalid data or was required but was left empty. 5. The system informs the sales member of the errors and prompts them to try again. 6. (continue from 01.1) 		
Exceptions			
Priority			
Frequency of Use			
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.10.7. UC-52 - Delete vouchers

UC ID and Name	UC-52 - Delete vouchers		
Extending	UC-46 - Manage vouchers		
Created By	AnhND	Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing staff wants to delete a voucher		
Description	Marketing Staff can delete vouchers from the shop, marking it as unusable even if it hasn't expired.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing staff is viewing the details page for the voucher to be deleted 		
Postconditions	<ul style="list-style-type: none"> - The voucher is marked as deleted by the system - The voucher is not usable in future purchases - The marketing member is taken back to the voucher list. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing staff chooses to delete the current voucher 2. The system marks the voucher as deleted 3. The system takes the marketing staff back to the voucher list. 		
Alternative Flows	None		
Exceptions	None		
Priority	Medium		
Frequency of Use	Low		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.11. FE-A07: Manage accounts

4.11.1. UC-64 - Manage accounts

UC ID and Name	UC-64 - Manage accounts		
Created By		Date Created	
Primary Actor	Manager	Secondary Actors	
Trigger	When a manager wants to manage the accounts of the shop		
Description	Managers can manage all accounts of the shop.		
Preconditions	- The manager is logged into the system		
Postconditions	- The manager has managed the accounts in the system - (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-42] The manager navigates to the account list 2. The manager can either a. [UC-65] Add an account b. [UC-66] Edit an account c. [UC-67] Delete an account		
Alternative Flows	None		
Exceptions	(refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.11.2. UC-42 - View accounts

UC ID and Name	UC-47 - View accounts		
Extending	UC-64 - Manage accounts		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to view the accounts in the system		
Description	Sales Staff can view all accounts in the system.		
Preconditions	- (refer to parent use case)		
Postconditions	- The sales member can view the accounts in the system		
Normal Flow	01: Normal flow 1. The sales member navigates to the accounts page 2. The system retrieves the accounts in the system 3. The system takes the sales member to the accounts page with the list of accounts 4. The sales member selects a an account to view 5. The system retrieves the details of the account 6. The system takes the sales member to the details page for the account.		
Alternative Flows	None		
Exceptions	01.E1: No account to show 1. (from 01.2) The system fails to find any accounts to show 2. The system informs the sales member of this fact 3. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.11.3. UC-85 - Search accounts

UC ID and Name	UC-85 - Search accounts		
Extending	UC-47 - View accounts		
Created By		Date Created	
Primary Actor	Sales Staff	Secondary Actors	
Trigger	When a sales member wants to search through the accounts in the system.		
Description	Sales Staff can search through accounts in the system		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The sales member is viewing the account list 		
Postconditions	<ul style="list-style-type: none"> - The account list is filtered according to the search terms 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The sales member enters in the search term 2. The sales member chooses to search through accounts 3. The system validates the input 4. The system filters the accounts list according to the search term 5. The system refreshes the accounts list 		
Alternative Flows	None		
Exceptions	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.3) The system detects that the search terms had invalid information 2. The system informs the sales member of this fact 3. (continue from 01.1) 		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.11.4. UC-65 - Add accounts

UC ID and Name	UC-65 - Add accounts		
Extending	UC-64 - Manage accounts		
Created By		Date Created	
Primary Actor	Manager	Secondary Actors	
Trigger	When a manager wants to add a new account into the system		
Description	Managers can add new accounts to the shop without verification challenge steps.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The manager is viewing the account list 		
Postconditions	<ul style="list-style-type: none"> - The account is added into the system - The manager is redirected to the account list with the new account shown at the top 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The manager chooses to add a new account 2. The system takes the manager to the account creation screen 3. The manager enters the details of the new account 4. The manager chooses to add the account 5. The system validates the input 6. The system adds the new account and redirects the manager back to the account list 		
Alternative Flows	None		
Recovery Flows	01.R1: Bad information <ol style="list-style-type: none"> 1. (from 01.5) The system detects that one or more fields had invalid information, or was necessary and left empty 2. The system informs the manager of the errors and prompts to try again 3. (continue from 01.3) 01.R2: Email already used <ol style="list-style-type: none"> 1. (from 01.5) The system detects that the email address already belongs to an existing account 2. The system informs the manager of this fact and prompts to try again 3. (continue from 01.3) 		
Exceptions	None		
Priority	Medium		
Frequency of Use	Medium		

Business Rules	TODO
Other Information	TODO
Assumptions	TODO

4.11.5. UC-66 - Edit accounts

UC ID and Name	UC-66 - Edit accounts		
Extending	UC-64 - Manage accounts		
Created By		Date Created	
Primary Actor	Manager	Secondary Actors	
Trigger	When a manager wants to edit an account		
Description	Managers can edit existing accounts.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The manager is viewing the account to be changed - The account has not been marked as deleted 		
Postconditions	<ul style="list-style-type: none"> - The account is edited according to the changes made by the manager - The page is refreshed to reflect the changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The manager makes their changes to the account 2. The manager confirms their changes 3. The system verifies the input 4. The system saves the changes and refreshes the page 		
Alternative Flows	None		
Recovery Flows	01.R1: Bad information <ol style="list-style-type: none"> 4. (from 01.3) The system detects that one or more fields had invalid information, or was necessary and left empty 5. The system informs the manager of the errors and prompts to try again 6. (continue from 01.2) 01.R2: Email already used <ol style="list-style-type: none"> 4. (from 01.3) The system detects that the email address already belongs to an existing account 5. The system informs the manager of this fact and prompts to try again 6. (continue from 01.2) 		
Exceptions	None		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		

Assumptions	TODO
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4.11.6. UC-67 - Delete accounts

UC ID and Name	UC-67 - Delete accounts		
Extending	UC-64 - Manage accounts		
Created By		Date Created	
Primary Actor	Manager	Secondary Actors	
Trigger	When a manager wants to mark an account as being deleted		
Description	Managers can delete existing accounts.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The manager is viewing the account to be deleted - The account has not already been deleted - The account is not the manager's own 		
Postconditions	<ul style="list-style-type: none"> - The account is marked as deleted and is no longer allowed to do actions - The manager is sent back to the account list 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The manager chooses to delete this account 2. The system ask the manager to confirm their decision 3. The manager confirms their decision 4. The system marks the account as deleted 5. The manager is taken back to the account list 		
Alternative Flows	None		
Exceptions	None		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.12. FE-A06: Manage news

4.12.1. UC-59 - Manage news posts

UC ID and Name	UC-59 - Manage news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to manager the shop's news posts		
Description	Sales Staff can manage news posts.		
Preconditions	- The marketing member is logged into the system		
Postconditions	- (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-60] The marketing member views news post list 2. The marketing member can either a. [UC-61] Create a news post b. [UC-62] Edit a news post c. [UC-63] Delete a news post		
Alternative Flows	None		
Exceptions	(refer to child use cases)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.12.2. UC-60 - View news posts

UC ID and Name	UC-61 - Create news posts		
Extending	UC-59 - Manage news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing staff wants to view a news post.		
Description	Sales Staff can view previously posted news pieces.		
Preconditions	- (refer to parent use cases)		
Postconditions	- The marketing member can view the shop's news posts		
Normal Flow	01: Normal flow 1. The marketing member navigates to the news posts screen 2. The system retrieves the shop's news posts 3. The system takes the marketing member to the news posts screen with the list of news posts 4. The marketing member selects a news post to view in detail 5. The system retrieves the news post's information 6. The system retrieves the news post's content 7. The system takes the marketing member to the details page for that news post		
Alternative Flows	None		
Exceptions	01.E1: No news posts to show 1. (from 01.2) The system fails to find news posts to show 2. The system informs the marketing member of this fact 3. (case end) 01.E2: Missing content 1. (from 01.6) The system fails to find the content for this news post 2. The system fills in "missing content" as the content for this post 3. The system informs the marketing member of this fact. 4. (case end)		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.12.2. UC-90 - Search & filter news posts

UC ID and Name	UC-90 - Search & filter news posts		
Extending	UC-61 - Create news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing staff wants to search and filter through news posts.		
Description	Marketing Staff can search and filter through news posts.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use cases) - The marketing member is viewing the list of news posts. 		
Postconditions	<ul style="list-style-type: none"> - The news post list is adjusted accordingly. 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> The marketing member changes one or more of the following: <ol style="list-style-type: none"> Search term for content Search term for author Post date range News post length The marketing member selects to re-filter the list with those conditions The system validates the data. The system filters the news posts and refreshes the list. 		
Alternative Flows	None		
Exceptions	01.E1: Bad data <ol style="list-style-type: none"> (from 01.3) The system detects that one or more fields was invalid. The system informs the marketing member of the error. (case end) 		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.12.3. UC-61 - Create news posts

UC ID and Name	UC-61 - Create news posts		
Extending	UC-59 - Manage news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to author a new nws post		
Description	Marketing Staff can compose a new news post.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the news post list 		
Postconditions	<ul style="list-style-type: none"> - The news post is created - The marketing member is taken back to the news post list with the new news post shown at the top 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing member chooses to compose a new news post 2. The system takes the marketing member to the news post creation screen 3. The marketing member fills in the textual content of the news post 4. [UC-78] The marketing member modifies the images of the news post. 5. The marketing member confirms the creation of the news post 6. The system validates the news post's content 7. The system saves the news post 8. The system takes the marketing member back to the news post list 		
Alternative Flows	None		
Recovery Flows	01.E1: Bad content <ol style="list-style-type: none"> 1. (from 01.4) The system detects that the content of the news post is invalid 2. The system informs the marketing member of this fact and prompts to try again 3. (continue from 01.3) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	TODO		

Other Information	TODO
Assumptions	TODO

4.12.4. UC-62 - Edit news posts

UC ID and Name	UC-62 - Edit news posts		
Extending	UC-59 - Manage news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to edit a news post		
Description	Marketing Staff can edit an existing news post that they've created.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the details page for the news post. 		
Postconditions	<ul style="list-style-type: none"> - The news post is changed according to the changes made by the marketing staff - The page is refreshed to reflect the changes 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing member makes changes to the texts of the news post 2. [UC-78] The marketing member modifies the images of the news post. 3. The marketing member confirms their changes 4. The system validates the news post's content 5. The system saves the news post 6. The system refreshes the page 		
Alternative Flows	None		
Recovery Flows	01.R1: Bad content <ol style="list-style-type: none"> 1. (from 01.4) The system detects that the content of the news post is invalid 2. The system informs the marketing member of this fact and prompts to try again 3. (continue from 01.3) 		
Exceptions			
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.12.5. UC-78 - Update images

UC ID and Name	UC-78 - Update images		
Extending	UC-61 - Creating news posts UC-62 - Editing news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to update the images of a news post		
Description	Marketing Staff can insert or remove images while authoring a news post.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use cases) - The marketing member is authoring a news post 		
Postconditions	<ul style="list-style-type: none"> - The news post's images are updated accordingly - The images appear in the content of the news post being authored 		
Normal Flow	01: Images insertion <ol style="list-style-type: none"> 1. The marketing member inserts an image for the news post 2. The system receives the image and verifies it 3. The system saves the image and updates the page to have the image in the news post content. 		
Alternative Flows	02: Image removal <ol style="list-style-type: none"> 1. The marketing member selects to remove an image from the news post 2. The system removes the image from resources 3. The system removes the image from the news post's content. 		
Exceptions	01.E1: Bad image <ol style="list-style-type: none"> 1. (from 01.2) The system detects that the image is not valid 2. The system informs the marketing member of this fact and ignores the image 3. (end case) 		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.12.6. UC-63 - Delete news posts

UC ID and Name	UC-63 - Delete news posts		
Extending	UC-59 - Manage news posts		
Created By		Date Created	
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to delete a news post		
Description	Marketing Staff can delete an existing news post that they've created.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the details page of the news post to be deleted 		
Postconditions	<ul style="list-style-type: none"> - The news post is deleted - The marketing member is taken back to the news post list 		
Normal Flow	01: Normal flow 1. The marketing member chooses to delete this news post 2. The system asks the marketing member to confirm their action 3. The marketing member confirms their action 4. The system removes the news post 5. The system takes the marketing member back to the news post list		
Alternative Flows	None		
Exceptions	None		
Priority	Medium		
Frequency of Use	Medium		
Business Rules	TODO		
Other Information	TODO		
Assumptions	TODO		

4.13. FE-A04: View shop sales

4.13.1. UC-54 - View shop sales

UC ID and Name	UC-54 - View shop sales		
Created By	DucNM	Date Created	23/05/2024
Primary Actor	Marketing Staff	Secondary Actors	Admin
Trigger	When a marketing member wants to view the sales figures of the shop		
Description	Marketing Staff can view the shop's product sales in many forms.		
Preconditions	- The marketing member is logged into the system		
Postconditions	- The marketing member can view the sales of the shop		
Normal Flow	01: Normal flow 1. The marketing member navigates to the sales page 2. The system aggregates information about sales 3. The system takes the marketing member to the sales page and shows sales metrics		
Alternative Flows	01.A1: Sales by time 1. (from 01.3) The marketing member selects a specific date range 2. The marketing member chooses to view sales figures in that range 3. The system aggregates information based on the new date range 4. (continue from 01.3)		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.13.3. UC-55 - View sales of items

UC ID and Name	UC-55 - View sales of items		
Extending	UC-54 - View shop sales		
Created By	DucNM	Date Created	23/05/2024
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to view the sales of a specific item		
Description	Marketing Staff can view the sales numbers for a specific item.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the item whose sales are to be assessed 		
Postconditions	<ul style="list-style-type: none"> - The marketing member can view the sales of a particular item 		
Normal Flow	01: Viewing sales of products <ol style="list-style-type: none"> 1. The marketing member chooses to view the sales of the product 2. The system retrieves the sales figures for the product 3. The system takes the marketing member to the sales page for the item. 		
Alternative Flows	02: Viewing sales of brands <ol style="list-style-type: none"> 1. The marketing member chooses to view the sales of the brand 2. The system retrieves the sales figures for the brand 3. The system retrieves the best selling products for that brand 4. (continue from 01.3) 01.A1: Sales by time <ol style="list-style-type: none"> 1. (from 01.3) The marketing member selects a specific date range 2. The marketing member chooses to view sales figures in that range 3. The system aggregates information based on the new date range 4. (continue from 01.3) 		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.13.4. UC-56 - View top selling items

UC ID and Name	UC-56 - View top selling items		
Extending	UC-54 - View shop sales		
Created By	DucNM	Date Created	24/05/2024
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to view the top selling items in the shop.		
Description	Marketing Staff can view the best selling items in the shop, and for each category of items.		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the sales page 		
Postconditions	<ul style="list-style-type: none"> - The marketing member can see the top selling items of the shop, overall and by item category 		
Normal Flow	01: Normal flow 1. The marketing member selects to see the top selling items 2. The system retrieves the top selling items of the shop by category 3. The system displays the top selling items		
Alternative Flows	01.A1: Sales by time 1. (from 01.3) The marketing member selects a specific date range 2. The marketing member chooses to view sales figures in that range 3. The system aggregates information based on the new date range 4. (continue from 01.3)		
Exceptions	None		
Priority	Must have		
Frequency of Use	High		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.13. FE-A08: Manage product reviews

4.13.1. UC-57 - Manage product reviews

UC ID and Name	UC-57 - Manage product reviews		
Created By	DucNM	Date Created	23/05/2024
Primary Actor	Marketing Staff	Secondary Actors	Admin
Trigger	When a marketing member wants to manage the shop's product reviews		
Description	Marketing Staff can manage the reviews of the shop's products.		
Preconditions	- The marketing member is logged into the system		
Postconditions	- (refer to child use cases)		
Normal Flow	01: Normal flow 1. [UC-74] The marketing member views the reviews of the shop's products. 2. [UC-75] The marketing member can delete inappropriate reviews if they see fit.		
Alternative Flows	None		
Exceptions	None		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.13.3. UC-74 - View product reviews

UC ID and Name	UC-74 - View product reviews		
Extending	UC-57 - Manage product reviews		
Created By	DucNM	Date Created	23/05/2024
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to view product reviews of the shop.		
Description	Marketing Staff can view reviews for the shop's products		
Preconditions	- (refer to parent use case)		
Postconditions	- The marketing member can view the product reviews of the shop.		
Normal Flow	01: Viewing all reviews 1. The marketing member navigates to the product reviews screen 2. The system retrieves the product reviews 3. The system takes the marketing member to the reviews list. 4. The marketing member chooses a review to view in detail 5. The system retrieves information on the review, the product, and customer in question 6. The system takes the marketing member to the review details page.		
Alternative Flows	02: Viewing reviews of a specific product 1. [UC-38] The marketing member views the product whose reviews are to be viewed 2. The marketing member chooses to view the product's reviews 3. (continue from 01.2) 03: Viewing reviews from a specific customer 1. [UC-64] The marketing member views the account whose reviews are to be reviewed 2. The marketing member chooses to view the customer's reviews 3. (continue from 01.2)		
Exceptions	01.E1: No reviews to show 1. (from 01.2) The system fails to find any reviews to show 2. The system informs the marketing member of this fact 3. (case end)		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	None		
Other Information	None		

Assumptions	None
-------------	------

4.13.3. UC-89 - Search & filter reviews

UC ID and Name	UC-89 - Search & filter reviews		
Extending	UC-74 - View product reviews		
Created By	DucNM	Date Created	23/05/2024
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member wants to search and filter through reviews listings		
Description	Marketing Staff can search and filter through product review listings		
Preconditions	<ul style="list-style-type: none"> - (refer to parent use case) - The marketing member is viewing the review listings 		
Postconditions	<ul style="list-style-type: none"> - The review listings is refreshed according to the search terms and filter conditions 		
Normal Flow	01: Normal flow <ol style="list-style-type: none"> 1. The marketing member enters the search term to be used 2. The marketing member selects the score to be shown 3. The marketing member selects to filter the list 4. The system validates the input 5. The system filters in reviews which have content matching the search term 6. The system filters in reviews which have the specified score 7. The system refreshes the list 		
Alternative Flows	None		
Exceptions	01.E1: Bad search term <ol style="list-style-type: none"> 1. (from 01.4) The system detects that the search term was invalid 2. The system informs the marketing member of this fact 3. (case end) 		
Priority	Must have		
Frequency of Use	Medium		
Business Rules	None		
Other Information	None		
Assumptions	None		

4.13.4. UC-75 - Delete inappropriate reviews

UC ID and Name	UC-75 - Delete inappropriate reviews		
Created By	DucNM	Date Created	24/05/2024
Primary Actor	Marketing Staff	Secondary Actors	
Trigger	When a marketing member needs to delete an inappropriate review		
Description	Marketing Staff can delete inappropriate reviews.		
Preconditions	<ul style="list-style-type: none">- (refer to parent use case)- The marketing member is viewing the review to be deleted		
Postconditions	<ul style="list-style-type: none">- The review is marked as deleted by the system.- The review is no longer shown to the public and does not count toward the score of the product- The marketing member is taken back to the review list		
Normal Flow	01: Normal flow <ol style="list-style-type: none">1. The marketing member chooses to delete the review2. The marketing member fills in the reason why the review was unfit.3. The marketing member confirm their decision to delete the review4. The system marks the review as unfit.5. The system updates the score of the product.6. The marketing member is taken back to the review list.		
Alternative Flows	None		
Exceptions	None		
Priority	Medium		
Frequency of Use	Low		
Business Rules	None		
Other Information	None		
Assumptions	None		

5. Design Specifications

5.1. SCR/P.10 - Product List

5.1.1. Serving

- FE-P01 - View products
 - UC-10 - View products
 - UC-11 - Search & filter products

5.1.2. Design

Search

Product Type

☐ Show Accessories

☒ Show Laptops

Price Range

1.000 - 1.341.234.234

CPU

☒ Core i5

☒ Core i7

☒ Ryzen 5

☒ Ryzen 9

☒ Ryzen 7

☒ Core Ultra 9

☒ Core i9

GPU

☒ RTX 30

☒ RTX 20

☒ RTX 40

☒ Iris Xe

Brands

☒ Asus (12)

☒ Acer (2)

☒ Dell (3)

☒ Lenovo (3)

☒ MSI (7)

☒ LG (4)

☒ Logitech (2)

☒ Gigabyte (1)

☒ Rapoo (1)


☒ Intel (9)

☒ Newmen (1)

☒ LDNIO (4)


View

PRODUCTS




18,999,000đ

Asus Gaming TUF FX507ZC4-HN074W




16,899,000đ

Asus Gaming TUF FX506HF-HN078W




19,999,000đ

Acer Nitro V ANV15-51-58AN




24,999,000đ

Acer Nitro V ANV15-51-72VS




22,499,000đ

Asus Gaming TUF FA507NU-LP131W




26,999,000đ

Asus Gaming TUF FX507VU-LP198W




31,999,000đ

Asus Gaming TUF FA507UV-LP090W




16,499,000đ

Asus Gaming TUF FA506NF-HN005W




39,999,000đ

Dell Gaming G15 5530




39,999,000đ

Lenovo Legion 5 16IRX9



41,999,000đ

Asus Gaming ROG Strix G614JV-N4156W



27,599,000đ

Asus Gaming TUF FA507NV-LP061W

1

2

3

4

5

Figure 5.1.2/1. SCR/P.10 screen design

Element name	Element type	Description
Search	Textbox	Allows users to enter in a search term which will be used to compare against the titles of products.
Show Accessories	Checkbox	A checkbox that decides whether accessories should be shown.
Show Laptops	Checkbox	A checkbox that decides whether laptops should be shown.
Price range	Slider	A slider bar allows user to set boundary of product prices
CPU	Checkbox array	A list of checkboxes representing the CPUs which the laptops in the product list should have.
GPU	Checkbox array	A list of checkboxes representing the GPUs which the laptops in the product list should have.
Brands	Checkbox array	A list of checkboxes representing the brands which the laptops in the product list should belong to.
View	Button	A button that filters the list according to the current search term and filter options
Product card	Card	A clickable element which displays a product in the current product list and takes the user to the product details page when clicked.
Product card image	Image	The main image of a product shown in a product card
Product card title	Label	The title of the product shown in a product card
Product card price	Label	The price of a product shown in a product card
Pagination button	Button	A button that sends the user to a specific page in the product listings.

Note: Fields with an asterisk (*) are only shown when “Show Laptops” is checked.

5.1.3. Database Access

5.1.3.1. Summary

Table name	CRUD	Operation
Products	R	Get the list of products filtered by the filter conditions and the search term.
Brands	R	Get the information of each product's brand
LaptopGPUSeries	R	Get the information of each product's GPU Series.
LaptopGPUSeries	R	Get the information of each product's GPU Series.

5.1.3.2. SQL Queries

```
SELECT MIN([p].[price])
  FROM [Products] AS [p]
SELECT MAX([p].[price])
  FROM [Products] AS [p]
SELECT [l].[id], [l].[manufacturerID], [l].[name]
  FROM [LaptopCPUSeries] AS [l]

SELECT [l].[id], [l].[manufacturerID], [l].[name]
  FROM [LaptopGPUSeries] AS [l]

SELECT [l].[id]
  FROM [LaptopCPUSeries] AS [l]

SELECT [l].[id]
  FROM [LaptopGPUSeries] AS [l]

SELECT [p].[id], [p].[brandID], [p].[description], [p].[isDeleted], [p].[isLaptop],
[p].[name], [p].[price], [p].[stock], [b].[id], [l].[productID], [p0].[productID],
[p0].[displayIndex], [p0].[token], [b].[country], [b].[description], [b].[name],
[l].[cpuSeries], [l].[gpuSeries], [l].[ram], [l].[refreshRate], [l].[screenAspectRatio],
[l].[screenResolution], [l].[screenSize], [l].[storageSize], [l].[storageType]
  FROM [Products] AS [p]
 INNER JOIN [Brands] AS [b] ON [p].[brandID] = [b].[id]
 LEFT JOIN [Laptops] AS [l] ON [p].[id] = [l].[productID]
 LEFT JOIN [ProductImages] AS [p0] ON [p].[id] = [p0].[productID]
 WHERE [p].[isLaptop] = CAST(1 AS bit)
 ORDER BY [p].[id], [b].[id], [l].[productID], [p0].[productID]
```

5.2. SCR/P.11 - Product Details

5.2.1. Serving

- FE-P01 - View products
 - UC-10 - View products
 - UC-73 - View related products

5.2.2. Design

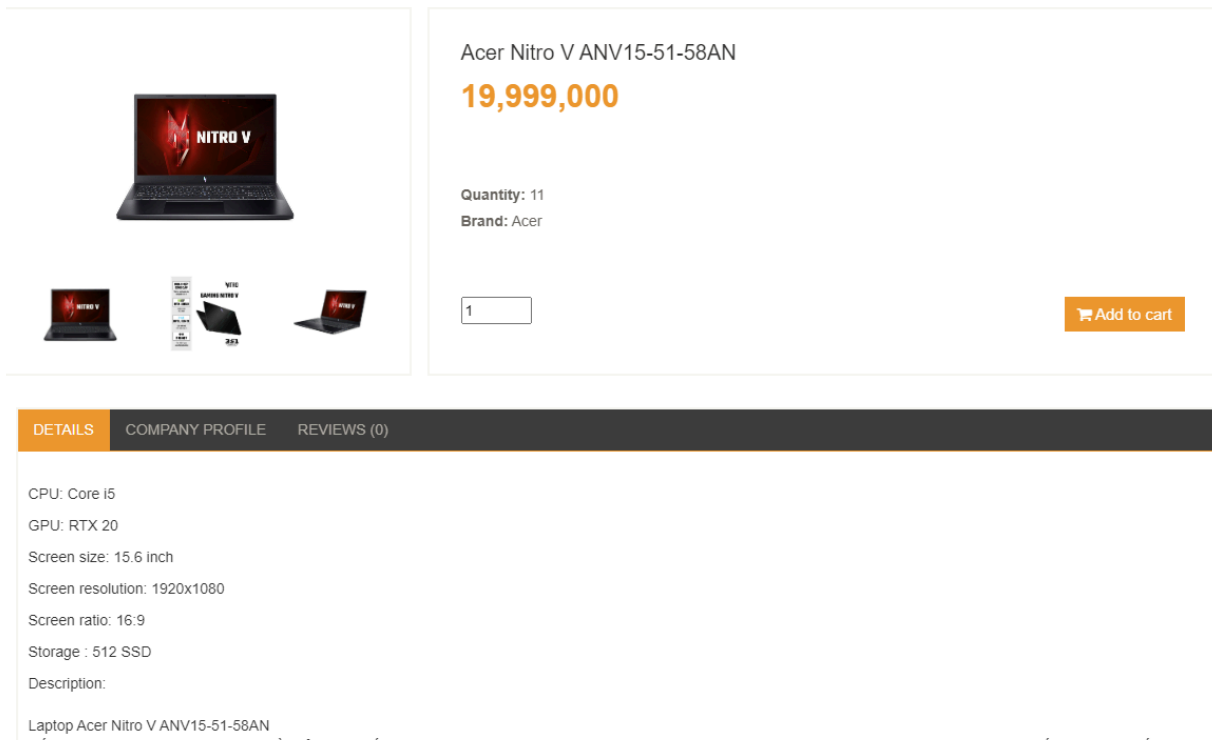


Figure 5.2.2/1. SCR/P.11 screen design

Element name	Element type	Description
Product title	Label	Displays the title of the product
Product price	Label	Displays the price of the product
Product stock	Label	Displays the remaining stock of the product

Product brand name	Label	Displays the name of the product's brand
Product image	Image	Displays an image of the product.
Product carousel image	Carousel image	Previews an image of the product not in the spotlight. When clicked, the image is highlighted.
Details	Paragraph	The details of the product.

5.2.3. Database Access

5.2.3.1. Summary

Table name	CRUD	Operation
Product	R	Get the details of the product
Brand	R	Get the brand of the product
LaptopGPUSeries	R	Get the GPU series of the product
LaptopGPUSeries	R	Get the CPU series of the product
Reviews	R	Get the reviews of product

5.2.3.2. SQL Queries

```

SELECT [t].[id], [t].[brandID], [t].[description], [t].[isDeleted], [t].[isLaptop],
[t].[name], [t].[price], [t].[stock], [t].[id0], [t].[productID], [t].[id1], [t].[id2],
[p0].[productID], [p0].[displayIndex], [p0].[token], [t].[country], [t].[description0],
[t].[name0], [t0].[productID], [t0].[reviewerID], [t0].[content], [t0].[rating],
[t0].[reviewTime], [t0].[id], [t0].[email], [t0].[gender], [t0].[isAdmin], [t0].[isDeleted],
[t0].[isMarketing], [t0].[isSales], [t0].[name], [t0].[passHash], [t0].[phoneNumber],
[t].[cpuSeries], [t].[gpuSeries], [t].[ram], [t].[refreshRate], [t].[screenAspectRatio],
[t].[screenResolution], [t].[screenSize], [t].[storageSize], [t].[storageType],
[t].[manufacturerID], [t].[name1], [t].[manufacturerID0], [t].[name2], [t1].[orderId],
[t1].[productID], [t1].[productPrice], [t1].[quantity], [t1].[id], [t1].[buyerID],
[t1].[discountedPrice], [t1].[district], [t1].[note], [t1].[orderTime], [t1].[paymentMethod],
[t1].[phoneNumber], [t1].[province], [t1].[recipientName], [t1].[status], [t1].[street],
[t1].[totalPrice], [t1].[voucherID], [t1].[ward]
FROM (
    SELECT TOP(1) [p].[id], [p].[brandID], [p].[description], [p].[isDeleted],
[p].[isLaptop], [p].[name], [p].[price], [p].[stock], [b].[id] AS [id0], [b].[country],
[b].[description] AS [description0], [b].[name] AS [name0], [l].[productID], [l].[cpuSeries],
[l].[gpuSeries], [l].[ram], [l].[refreshRate], [l].[screenAspectRatio],
[l].[screenResolution], [l].[screenSize], [l].[storageSize], [l].[storageType], [l0].[id] AS

```

```

[id1], [l0].[manufacturerID], [l0].[name] AS [name1], [l1].[id] AS [id2],
[l1].[manufacturerID] AS [manufacturerID0], [l1].[name] AS [name2]
    FROM [Products] AS [p]
    INNER JOIN [Brands] AS [b] ON [p].[brandID] = [b].[id]
    LEFT JOIN [Laptops] AS [l] ON [p].[id] = [l].[productID]
    LEFT JOIN [LaptopCPUSeries] AS [l0] ON [l].[cpuSeries] = [l0].[id]
    LEFT JOIN [LaptopGPUSeries] AS [l1] ON [l].[gpuSeries] = [l1].[id]
    WHERE [p].[id] = @__id_0
) AS [t]
    LEFT JOIN [ProductImages] AS [p0] ON [t].[id] = [p0].[productID]
    LEFT JOIN (
        SELECT [p1].[productID], [p1].[reviewerID], [p1].[content], [p1].[rating],
        [p1].[reviewTime], [u].[id], [u].[email], [u].[gender], [u].[isAdmin], [u].[isDeleted],
        [u].[isMarketing], [u].[isSales], [u].[name], [u].[passHash], [u].[phoneNumber]
        FROM [ProductReviews] AS [p1]
        INNER JOIN [Users] AS [u] ON [p1].[reviewerID] = [u].[id]
    ) AS [t0] ON [t].[id] = [t0].[productID]
    LEFT JOIN (
        SELECT [o].[orderId], [o].[productID], [o].[productPrice], [o].[quantity], [o0].[id],
        [o0].[buyerID], [o0].[discountedPrice], [o0].[district], [o0].[note], [o0].[orderTime],
        [o0].[paymentMethod], [o0].[phoneNumber], [o0].[province], [o0].[recipientName],
        [o0].[status], [o0].[street], [o0].[totalPrice], [o0].[voucherID], [o0].[ward]
        FROM [OrderDetails] AS [o]
        INNER JOIN [Orders] AS [o0] ON [o].[orderId] = [o0].[id]
    ) AS [t1] ON [t].[id] = [t1].[productID]
    ORDER BY [t].[id], [t].[id0], [t].[productID], [t].[id1], [t].[id2], [p0].[productID],
    [p0].[displayIndex], [t0].[reviewTime] DESC, [t0].[productID], [t0].[reviewerID], [t0].[id],
    [t1].[orderId], [t1].[productID]

```


5.3. SCR/P.12 - Cart Details

5.3.1. Serving

- FE-P02 - Purchase products
 - UC-19 - Manage cart
 - UC-20 - Edit quantities
 - UC-21 - Remove from cart

5.3.2. Design

[Home](#) Shopping Cart

Item	Price	Quantity	Total	Action
 Asus Gaming TUF FX507ZC4-HN074W	18999000	<input type="button" value="+"/> 1 <input type="button" value="-"/>	18999000	<input type="button" value="x"/>

Cart Sub Total	18999000
Shipping Cost	Free
Total	18999000

Figure 5.3.2/1. SCR/P.12 screen design

Element name	Element type	Description
Order detail	Row	An entry in the cart's listings
Order detail/ Product image	Image	The image of the product in an order detail
Order detail/ Product title	Label	The title of the product in an order detail
Order detail/ Product price	Label	The price of the product in an order detail
Order detail/ Product quantity	Label	The quantity of the product in an order detail
Order detail/ Product total	Label	The total price of the product in an order detail

Order detail/ Increment quantity	Button	A button which increments the quantity of the product in an order detail
Order detail/ Decrement quantity	Button	A button which decrements the quantity of the product in an order detail
Order detail/ Remove from cart	Button	A button which removes an order detail from the cart.
Checkout	Button	A button which proceeds to checkout.

5.3.3. Database Access

5.3.3.1. Summary

Table name	CRUD	Operation
Order	R	Get the information of the cart
OrderDetails	RU	Get & update the details of the cart
Products	R	Get the information of the products in the cart
ProductImages	R	Get images of products in the cart

5.3.3.2. SQL Queries

```

SELECT [t].[id], [t].[buyerID], [t].[discountedPrice], [t].[district], [t].[note],
[t].[orderTime], [t].[paymentMethod], [t].[phoneNumber], [t].[province], [t].[recipientName],
[t].[status], [t].[street], [t].[totalPrice], [t].[voucherID], [t].[ward], [t0].[orderId],
[t0].[productID], [t0].[productPrice], [t0].[quantity], [t0].[id], [t0].[brandID],
[t0].[description], [t0].[isDeleted], [t0].[isLaptop], [t0].[name], [t0].[price],
[t0].[RowVersion], [t0].[stock]
FROM (
    SELECT TOP(1) [o].[id], [o].[buyerID], [o].[discountedPrice], [o].[district],
[o].[note], [o].[orderTime], [o].[paymentMethod], [o].[phoneNumber], [o].[province],
[o].[recipientName], [o].[status], [o].[street], [o].[totalPrice], [o].[voucherID],
[o].[ward]
FROM [Orders] AS [o]
WHERE [o].[buyerID] = @__user_ID_0 AND [o].[status] = CAST(0 AS tinyint)
) AS [t]
LEFT JOIN (
    SELECT [o0].[orderId], [o0].[productID], [o0].[productPrice], [o0].[quantity],
[p].[id], [p].[brandID], [p].[description], [p].[isDeleted], [p].[isLaptop], [p].[name],

```

```

[p].[price], [p].[RowVersion], [p].[stock]
FROM [OrderDetails] AS [o0]
INNER JOIN [Products] AS [p] ON [o0].[productID] = [p].[id]
) AS [t0] ON [t].[id] = [t0].[orderID]
ORDER BY [t].[id], [t0].[orderID], [t0].[productID]

```

5.4. SCR/P.13 - Checkout

5.4.1. Serving

- FE-P02 - Purchase products
 - UC-17 - Checkout
 - UC-18 - Apply voucher

5.4.2. Design

Billing Info

Name

Van A

Email Address

anv@gmail.com

Phone

0345678

Country

Viet Nam

City

Select City

District

Select District

Ward

Select Ward

Address

Enter address

Payment Info

VN Pay

Cash on Delivery

Enter voucher code

Submit

Order Summary

Asus Gaming TUF FX507ZC4-HN074W 18999000 * 1	18.999.000
Sub Total	18.999.000
Discount	-0
Total	18.999.000

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SWP391 Project, by Group 2 of SE1820 - SU24.

Figure 5.4.2/1. SCR/P.13 screen design

Element name	Element type	Description
Recipient name	Textbox	The name of the recipient of the order
Recipient email address	Textbox	The email address of the recipient of the order

Recipient phone number	Textbox	The phone number of the recipient of the order
Destination country	Combobox	The country of the order's destination
Destination City	Combobox	The city of the order's destination
Destination District	Combobox	The district of the order's destination
Destination Ward	Combobox	The ward of the order's destination
Destination Address	Textbox	The address of the order's destination
Voucher code	Textbox	The code of the voucher to be applied
Voucher check	Button	A button which applies the voucher code
Order detail	Row	An entry in the order's listings
Order detail/ Product title	Label	The title of the product in an order detail
Order detail/ Product price	Label	The price of the product in an order detail
Order detail/ Product quantity	Label	The quantity of the product in an order detail
Order detail/ Subtotal	Label	The total price of the product in an order detail
Discount	Label	The discount that has been applied onto the order
Total	Label	The total price of the order
VN Pay	Radio button	Whether the order is paid through VNPay
Cash on Delivery	Radio button	Whether the order is paid upon delivery
Confirm	Button	A button which finalizes the checkout.

5.4.3. Database Access

5.4.3.1. Summary

Table name	CRUD	Operation
Order	U	Get the information of the order
OrderDetails	U	Get the details of order
Products	R	Get name and price of the products in the order
Users	R	Get the customer's info to fill in defaults for the recipient

5.4.3.2. SQL Queries

```
UPDATE [Orders] SET [district] = @p0, [orderTime] = @p1, [phoneNumber] = @p2, [province] =  
@p3, [recipientName] = @p4, [status] = @p5, [street] = @p6, [ward] = @p7  
OUTPUT 1  
WHERE [id] = @p8;  
UPDATE [Products] SET [stock] = @p9  
OUTPUT INSERTED.[RowVersion]  
WHERE [id] = @p10 AND [RowVersion] = @p11;
```

6. Appendix

6.1. Assumptions

6.2. Dependencies

6.3. Limitations

6.4. Exclusions

6.5. Business Rules