



Requirement & Design

Specification

Computer Sale System (CSS)

Version: 1.0

SE1812-G2	
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– Summer 2024 –

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	27 thg 7, 2024	A	Vũ Đặng Quang Vinh	
	27 thg 7, 2024	A	Tô Việt Hoàng	

*A - Added

M - Modified

D - Deleted

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Document convention

Basic Content Font:

- **Font:** Calibri
- **Size:** 12pt

Heading Font

- **Font:** Roboto
- **Sizes:**
 - Heading 1 (H1): 30pt
 - Heading 2 (H2): 24pt
 - Heading 3 (H3): 20pt
 - Heading 4 (H4): 18pt
 - Heading 5 (H5): 16pt
 - Heading 6 (H6): 14pt
- **Align**
 - Heading 1 (H1): 0
 - Heading 2 (H2): 0
 - Heading 3 (H3): 0
 - Heading 4 (H4): 1
 - Heading 5 (H5): 1.5
 - Heading 6 (H6):

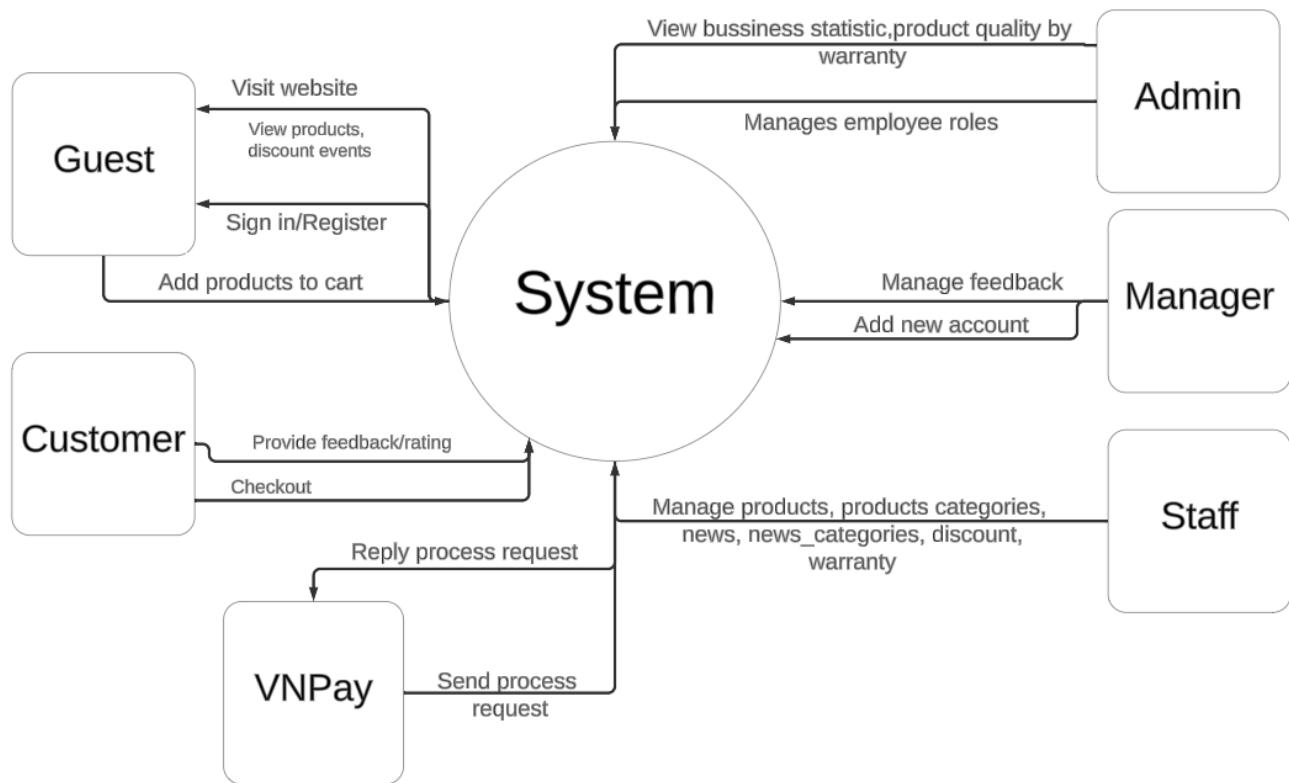
I. Overview

1. User Requirements

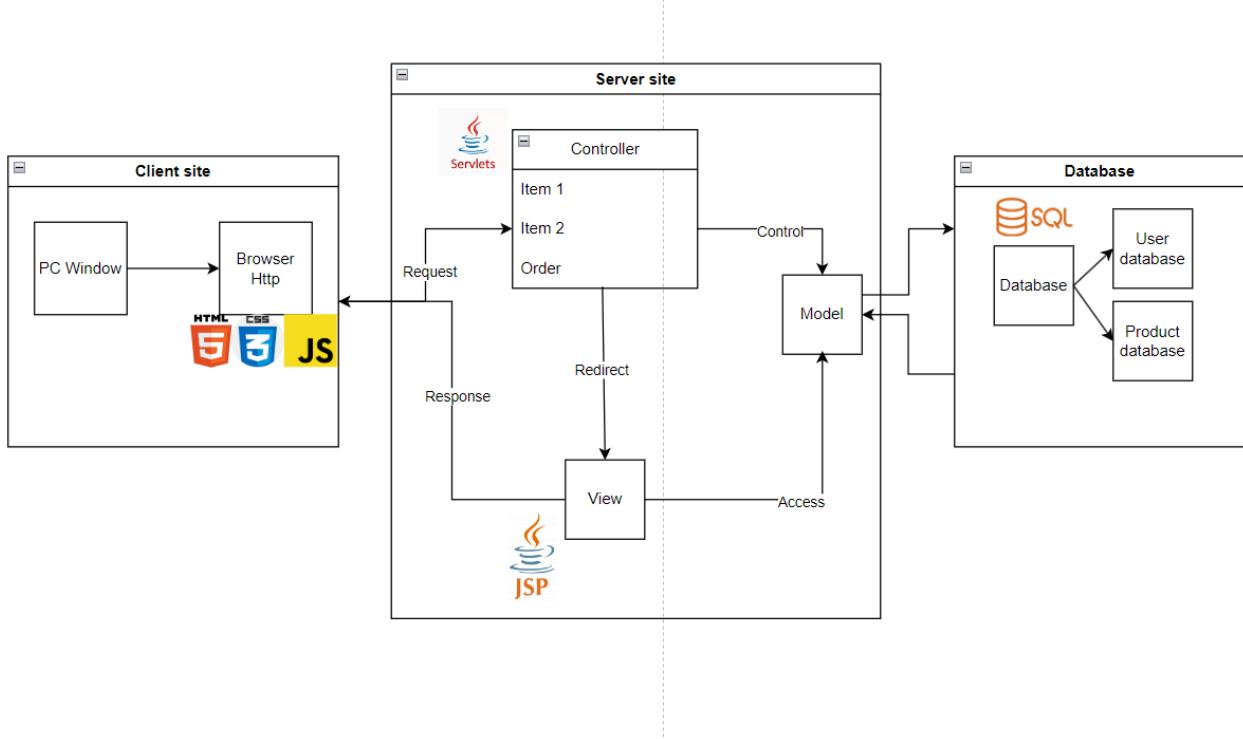
1.1 Actors

#	Actor	Description
1.	Admin	A sole person who have all employee access. <ul style="list-style-type: none">- Manage employees role- View business statistic such as revenue, and total of sold products numbers (Sold products in a month)- View Product Quality (by warranty)
2.	Managers	People have access to some activity, which is approved by Admin. <ul style="list-style-type: none">- Create staff accounts- Manage products feedback (they can delete feedback if their words are not appropriate with the policy or terms, furthermore, fine custom).
3.	Staff	People interact directly with the customers. <ul style="list-style-type: none">- Support customers with issues, directly via hotline- Answers warranty from customer, except or decline- Manage: Products, Category, Brand, News, Discount
4.	Customers	The people paid for the products <ul style="list-style-type: none">- Add to cart- Payment- Tracking the orders in steps, payment, shipping and receiving.- FeedBack/Rate after received products- Warranty
5.	Guest	Potential guest <ul style="list-style-type: none">- View products on the website- Can see discount event on the website- Sign up an account

1.2 Context diagram



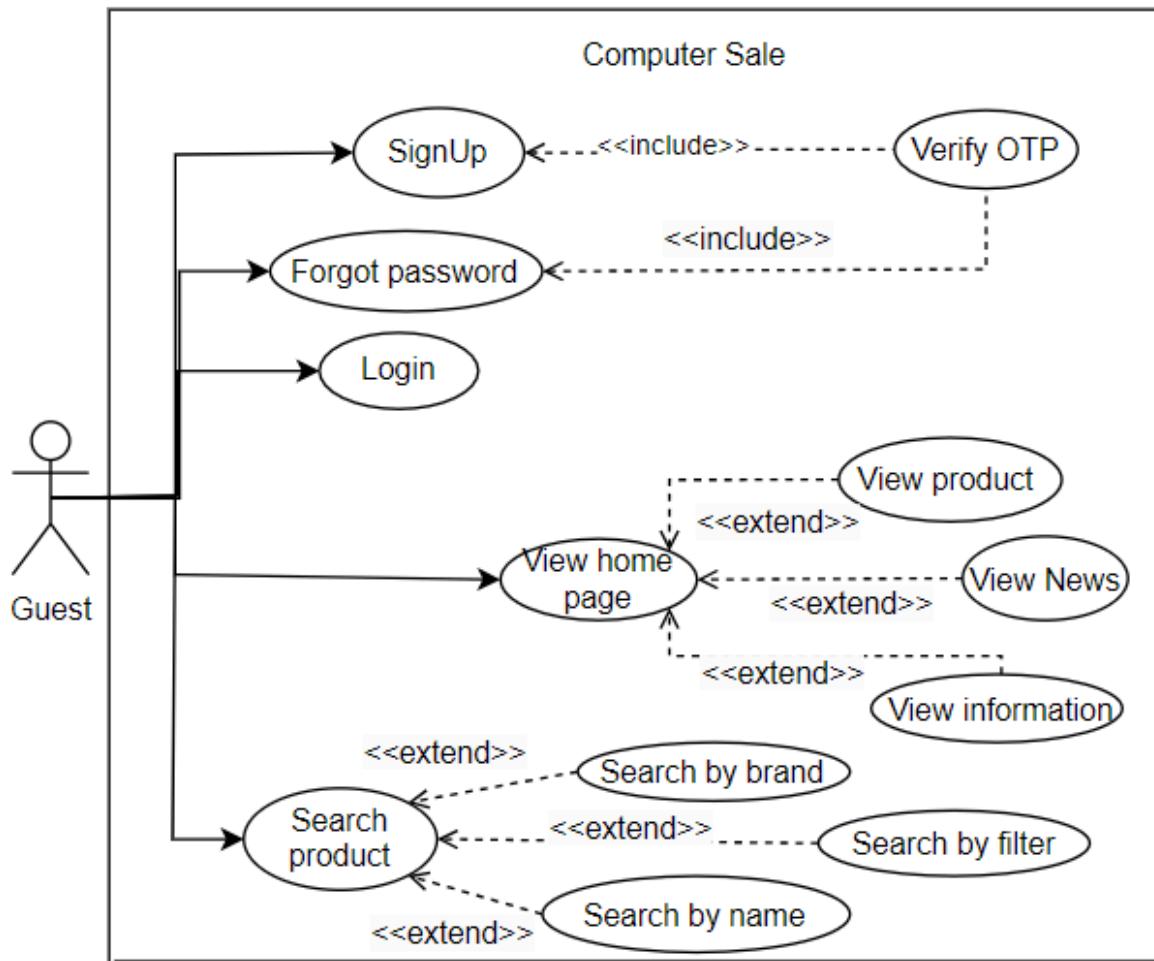
1.3 System diagram



1.4 Use Cases

1.4.1 Guest

a. Diagram(s)

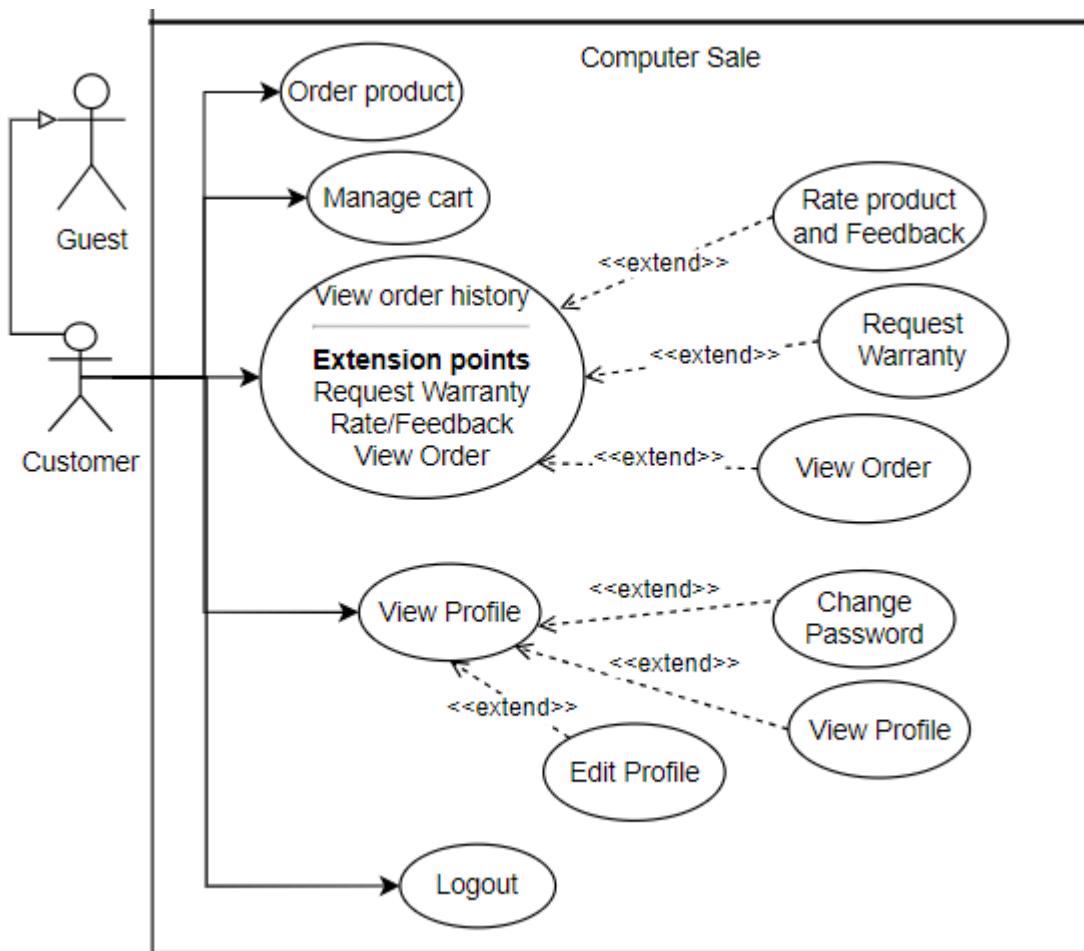


b. Descriptions

ID	Feature	Use Case	Use Case Description
1.	SignUp	Register account	Create new account via email
2.	Login	Login account	Access to personal account for purchasing
3.	Verify OTP	Confirm registration	Verify the One-Time Password (OTP) sent via email during account registration.
4.	Forgot Password	Reset password	Verify email to change the account password
5.	View Product	View product details	Guest can visit the website to view product details including specifications, images, and prices
6.	View News	View product news	Guest can view news articles related to products or the company
7.	View Information	View page info	Guest can access additional page information such as Term, Policy,...
8.	Search Product	Find product	Guest can search for products using various filters like brand, name, category, etc.

1.4.2 Customer

a. Diagram(s)

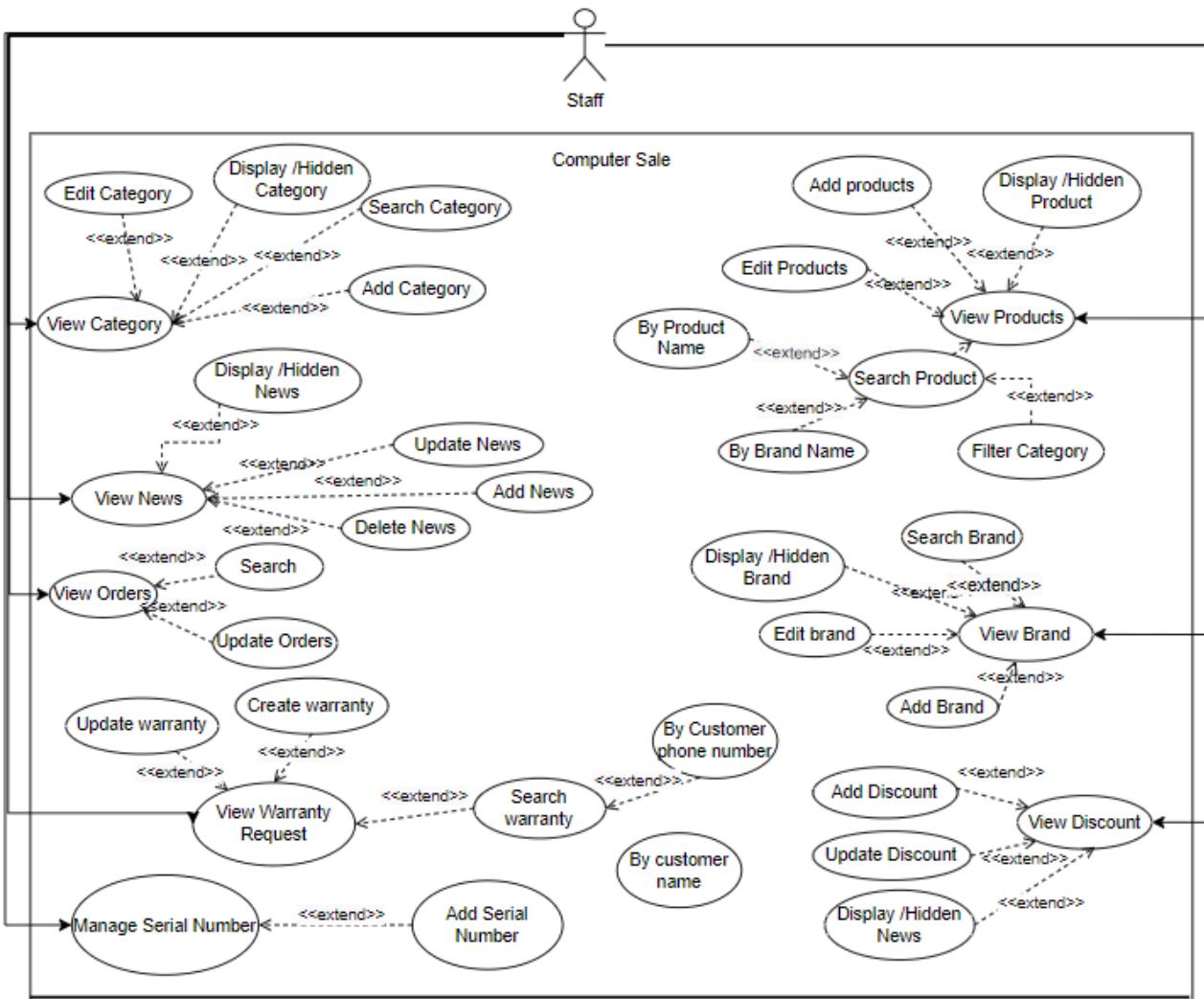


b. Descriptions

ID	Feature	Use Case	Use Case Description
9.	Order Product	Create order	Customer can create an order, specifying the products ordered and the payment method
10.	Manage Cart	Manage products in cart	Add, delete products, change the number of order products before ordering
11.	Manage Order	Manage ordered products	View product shopping history, send warranty request, rate purchased products, and leave feedback
12.	View Profile	View account details	Customer can view their profile details including personal information, order history, and preferences
13.	Edit Profile	Edit account details	Customer can edit their profile details such as name, address, contact information, and preferences
14.	Logout	End session	Customer can log out from their account, ending the session

1.4.3 Staff

a. Diagram(s)



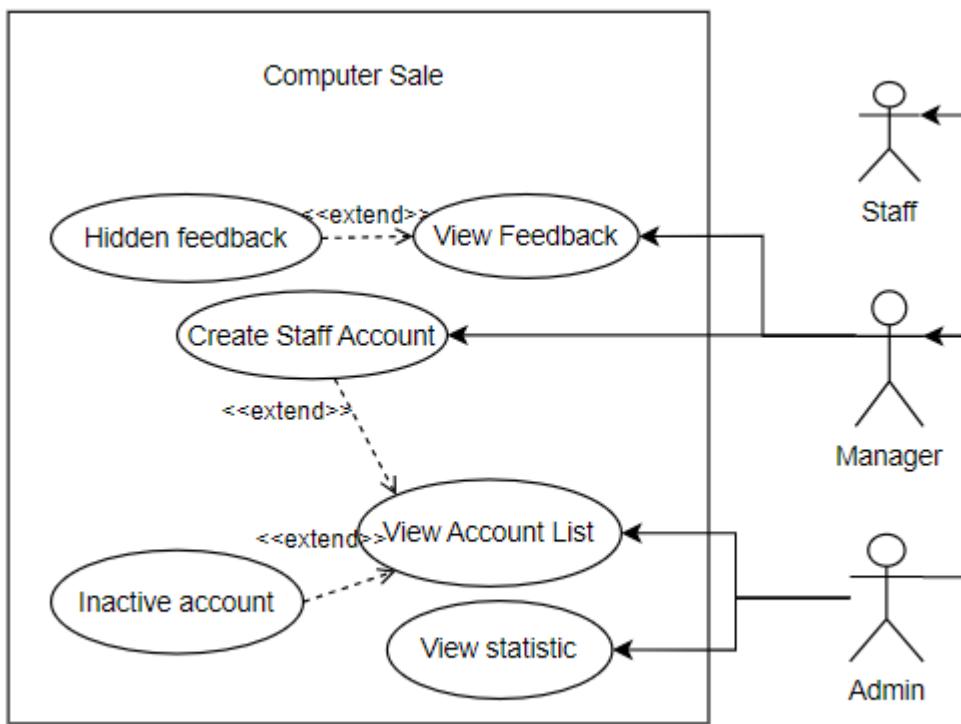
b. Descriptions

ID	Feature	Use Case	Use Case Description
1.	Add Category	Create new category	Add new product categories
2.	Edit Category	Manage categories	Add, Delete, Update product categories
3.	Search Category	Find categories	Search for specific product categories
4.	Display/Hide Category	Manage category visibility	Display or hide categories on the website
5.	Add News	Create news article	Add new news articles related to products or company updates
6.	Update News	Manage news	Add, Update, Delete news article
7.	Delete News	Remove news article	Delete existing news articles
8.	Display/Hide News	Manage news visibility	Display or hide news on the website
9.	View Orders	Access orders	View customer orders including order details and statuses
10.	Search Orders	Find orders	Search based on name products, id
11.	Create Warranty	Add warranty entry	Create warranty entries for products sold
12.	Update Orders	Manage order status	Update the status of customer orders (e.g., processing, shipped, delivered)
13.	View Warranty Requests	Access warranty requests	View customer warranty requests and manage their statuses
14.	Search Warranty	Find warranty	Search for specific warranty entries based on criteria like customer name or phone number
15.	Add Products	Add new product	Create new products
16.	Update Products	Manage product details	Edit product information, including details like name, price, quantity, and description, ...
17.	Display/Hide Product	Manage products visibility	Display or hide products on the website
18.	Search Products	Find products	Search based on name products, brand name, filter category
19.	Add Brand	Create new brand	Add new brands to the system
20.	Edit Brand	Manage brand details	Add, Update, Delete brand details

21.	Display/Hide Category	Manage categories visibility	Display or hide categories on the website
22.	Search Brand	Find brand	Search based on brand name
23.	Add Discount	Create discount	Add new discounts to products
24.	Update Discount	Manage discounts	Update existing discounts, including the discount percentage and validity period
25.	View Discount	Access discounts	View the list of available discounts
26.	Display/Hide Discount	Manage discounts visibility	Display or hide discounts on the website
27.	Hidden Feedback	Manage feedback visibility	Hide or display feedback on the website as necessary
28.	Add Serial Number	Manage Serial Number	Add quantity for generate Serial Number

1.4.4 Manager and Admin

a. Diagram(s)



b. Descriptions

[LINK USE CASE DIA. Trong Drive chon Open with draw.io trên đầu](#)

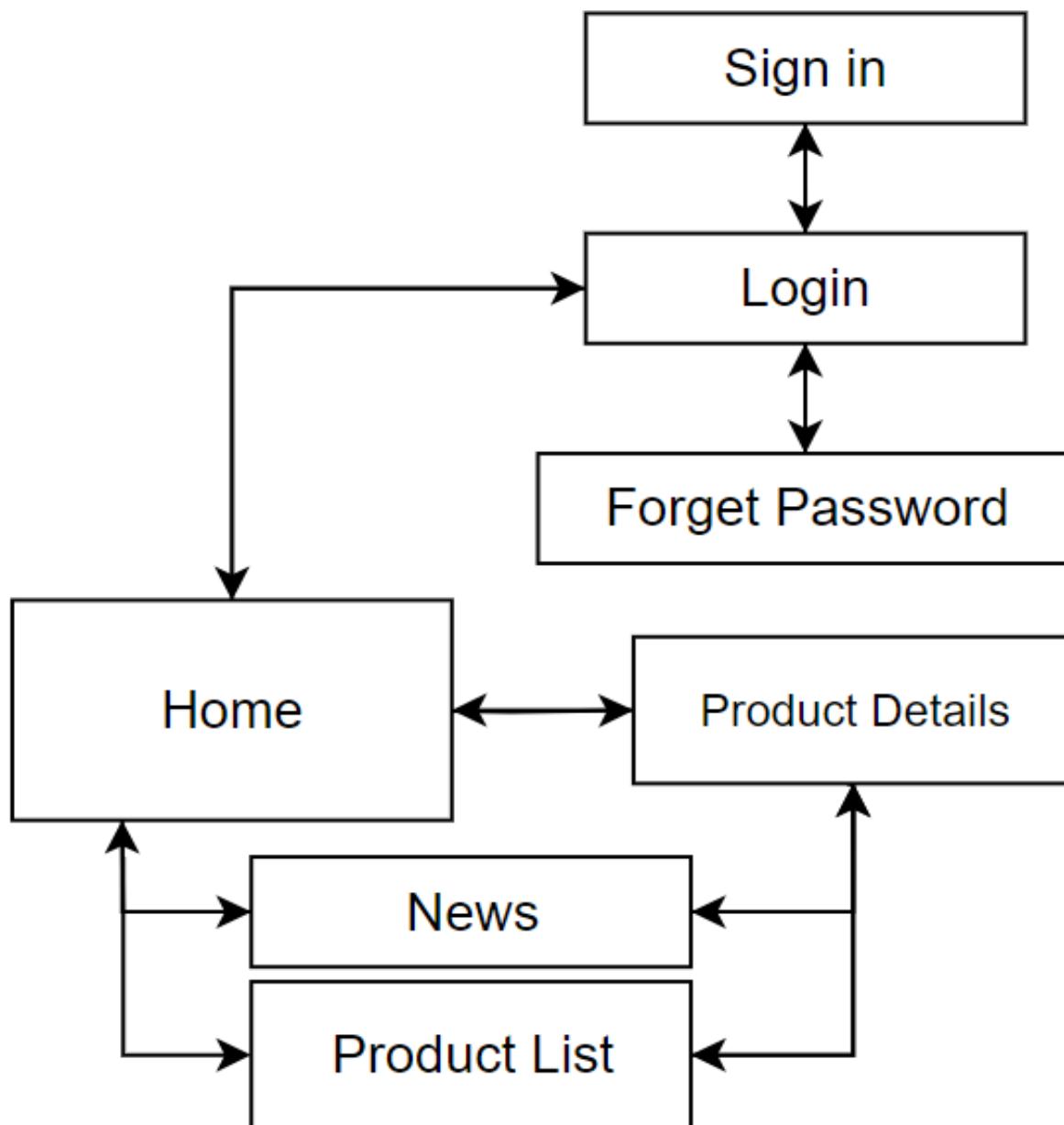
ID	Feature	Use Case	Use Case Description
29.	View Feedback	Access feedback	View customer feedback on products and services
30.	Create Staff Account	Manage staff accounts	Add new staff accounts and assign roles and permissions
31.	Inactive Account	Deactivate account	Mark staff accounts as inactive, preventing them from accessing the system
32.	View Account List	Access staff accounts	View a list of all staff accounts, including active and inactive ones
33.	View Statistics	Access website stats	View website statistics like user activity, sales data, and performance metrics

2. Overall Functionalities

2.1 Screen Flow

2.1.1 Guest

2.1.1.1 Screen Flow

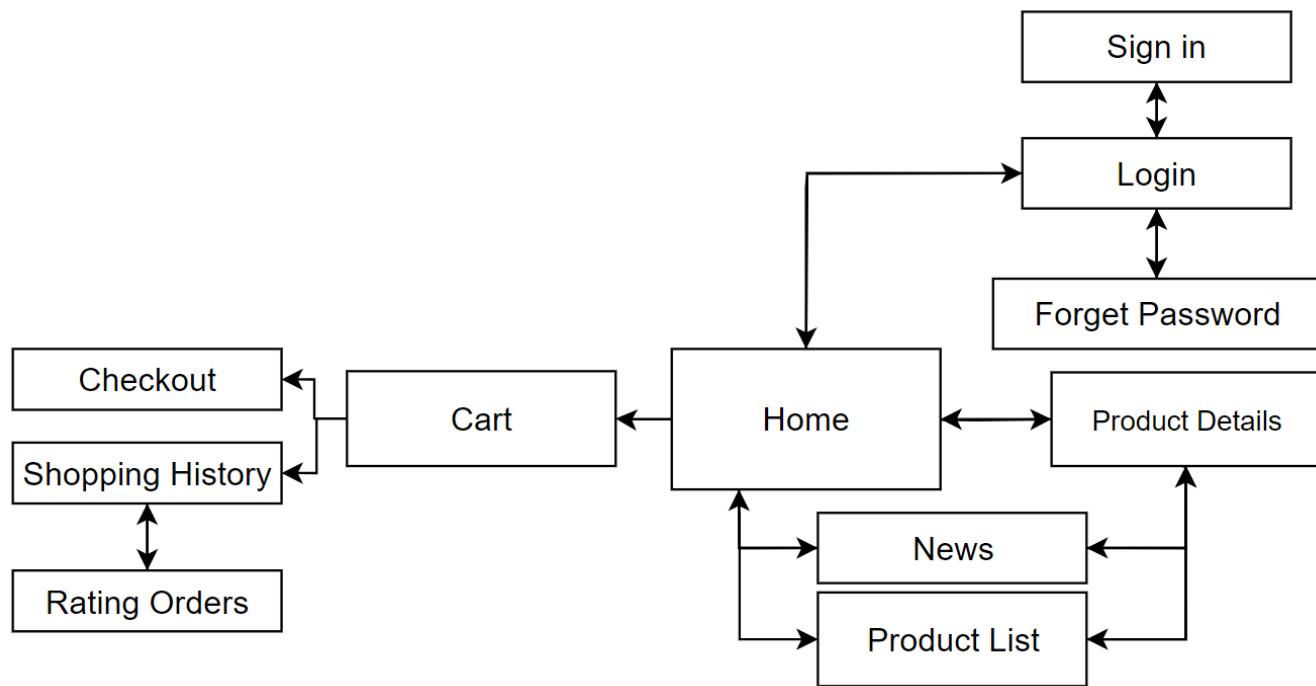


2.1.1.2 Screen Descriptions

ID	Feature	Screen	Description
1.	View overall	Home	View overall about the shop in the home page.
2.	View products	Product List	View all products or filter product by categories.
3.	View a product	Product Details	View details of a product, in terms of product technical specifications, feedback of buyers, related products or news.
4.	View a news	News	View a news which related to products or hot sale in the home page.
5.	Login	Login	Users have account will request login.
6.	Forgot password	Forget Password	Users who had an account request to change account.
7.	Sign in	Sign in	Users do not have an account can create new account

2.1.2 Customer

2.1.2.1 Screen Flow

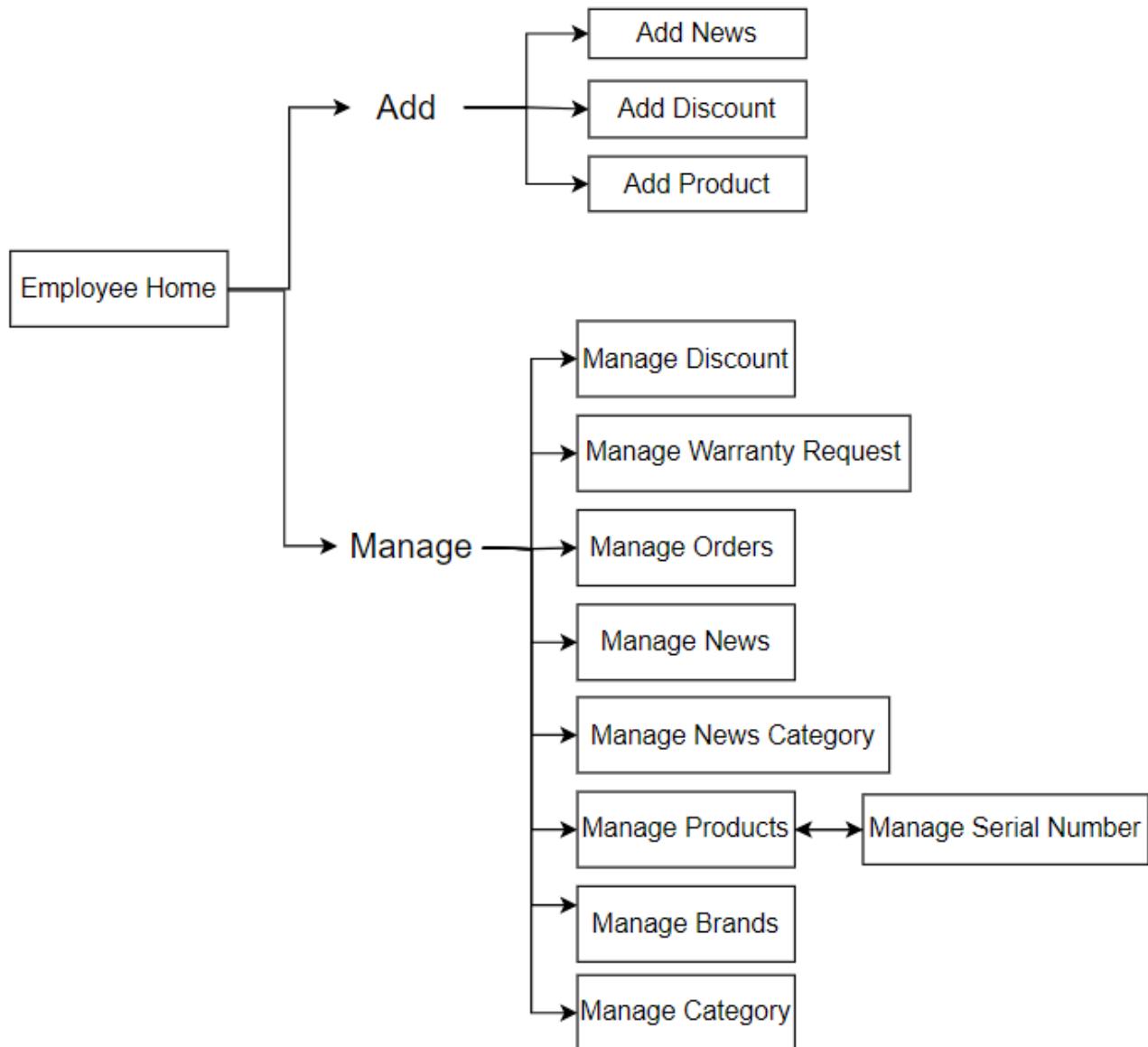


2.1.2.2 Screen Descriptions

ID	Feature	Screen	Description
1.	View overall	Home	View overall about the shop in the home page.
2.	View products	Product List	View all products or filter products by categories.
3.	View a product	Product Details	View details of a product, in terms of product technical specifications, feedback of buyers, related products or news.
4.	View a news	News	View news which is related to products or hot sales on the home page.
5.	Login	Login	Users with an account will request login.
6.	Forgot password	Forget Password	Users who had an account request to change accounts.
7.	Sign in	Sign in	Users do not have an account can create new account
8.	View carts	Cart	Customers view their products in waiting, in the carts page.
9.	Checkout	Checkout	Customers who buy a list of products at once will redirect to the checkout page.
10.	View bought product	Shopping history	Customers tracking products they bought in each orders
11.	View orders status	Shopping history	Customers can follow whether orders' status is packed, shipping or rejected.
12.	Feedback	Rating orders	After receiving products, customers have permission to rate products they have bought.

2.1.3 Staff

2.1.3.1 Screen Flow



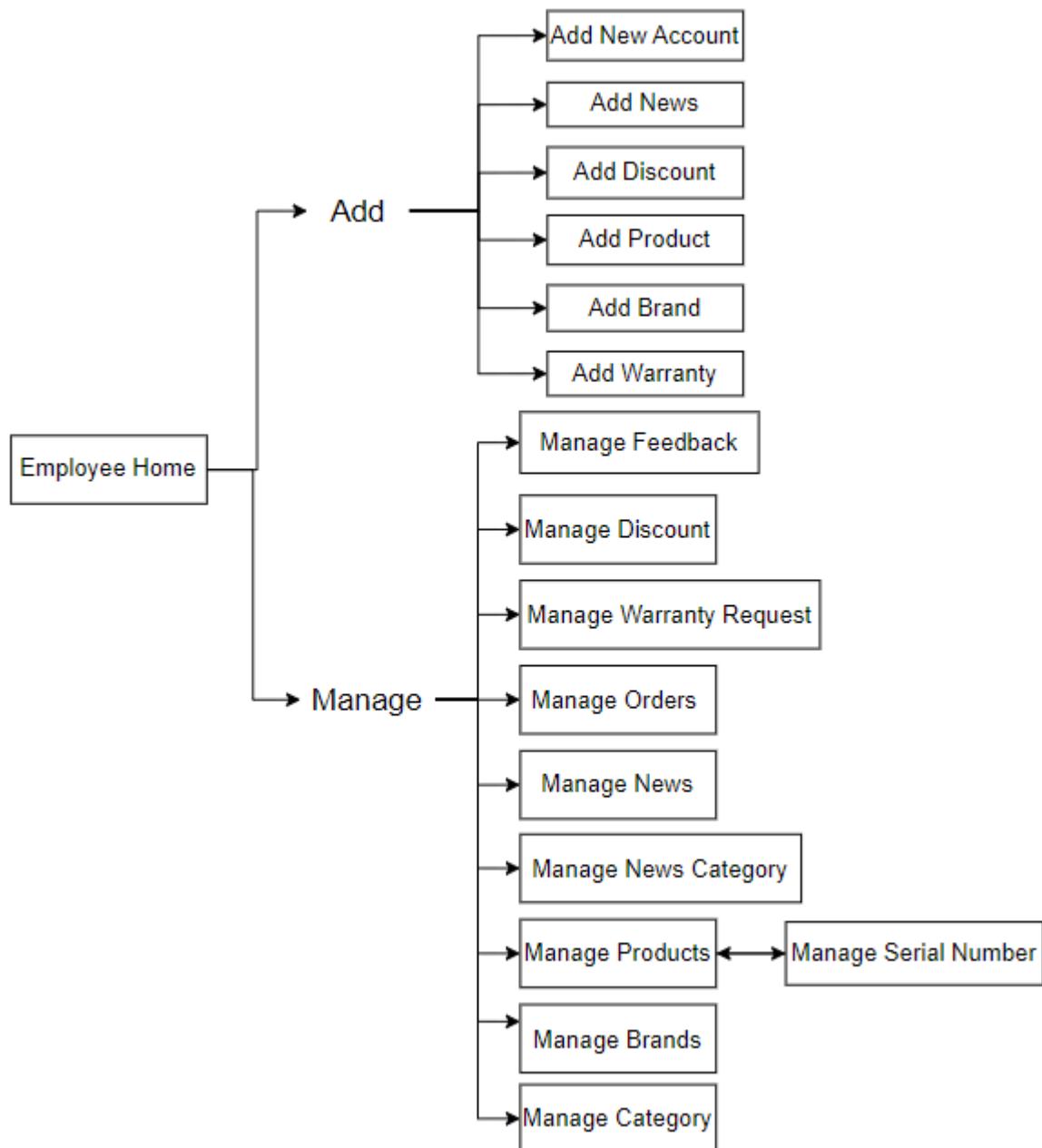
2.1.3.2 Screen Descriptions

ID	Feature	Screen	Description
13.	Add products	Add products	Upload news products to the website
14.	View products	Manage Products	Staff can check all products in the system.
15.	Update Products	Manage Products	Change products details if necessary
16.	Delete Products	Manage Products	Hidden products in the home page
17.	Add Warranty	Add Warranty	Enables adding new warranty information for products.
18.	View Warranty	Manage Warranty	Allows viewing all warranty details for products.
19.	Update Warranty	Manage Warranty	Allows updating warranty details for products if needed.
20.	Delete Warranty	Manage Warranty	Allows deleting warranty information for products.
21.	View Orders	Manage Orders	Enables staff to view all orders placed by customers.
22.	Update Order Status	Manage Orders	Allows updating the status of orders (e.g., processing, shipped, delivered).
23.	Cancel Order	Manage Orders	Enables cancellation of customer orders.
24.	Add News Article	Add News	Allows adding new news articles or updates.
25.	View All News	Manage News	Enables viewing all published news articles.
26.	Update News Article	Manage News	Allows updating details of existing news articles.
27.	Delete News Article	Manage News	Allows deleting news articles from the system.
28.	Add News Category	Add News Category	Allows adding new categories for organizing news articles.
29.	View News Categories	Manage News Category	Enables viewing all existing news categories.

ID	Feature	Screen	Description
30.	Update News Category	Manage News Category	Allows updating details of news categories (e.g., renaming, reordering).
31.	Delete News Category	Manage News Category	Allows deleting news categories if no longer needed.
32.	Add Brand	Add Brands	Enables adding new brands to the system.
33.	View Brands	Manage Brands	Allows viewing all existing brands.
34.	Update Brand Details	Manage Brands	Allows updating details of existing brands (e.g., logo, description).
35.	Delete Brand	Manage Brands	Allows deleting brands from the system.
36.	Add Product Category	Add Product Category	Enables adding new product categories for organizing products.
37.	View Product Categories	Manage Product Category	Allows viewing all existing product categories.
38.	Update Product Category	Manage Product Category	Allows updating details of product categories (e.g., renaming, restructuring).
39.	Delete Product Category	Manage Product Category	Allows deleting product categories if no longer needed.
40.	View Serial Numbers	Manage Serial Numbers	Allows viewing all existing product Serial Numbers.
41.	Add Serial Numbers	Manage Serial Numbers	Enables adding new Serial Numbers for existed products.

2.1.4 Manager

2.1.4.1 Screen Flow



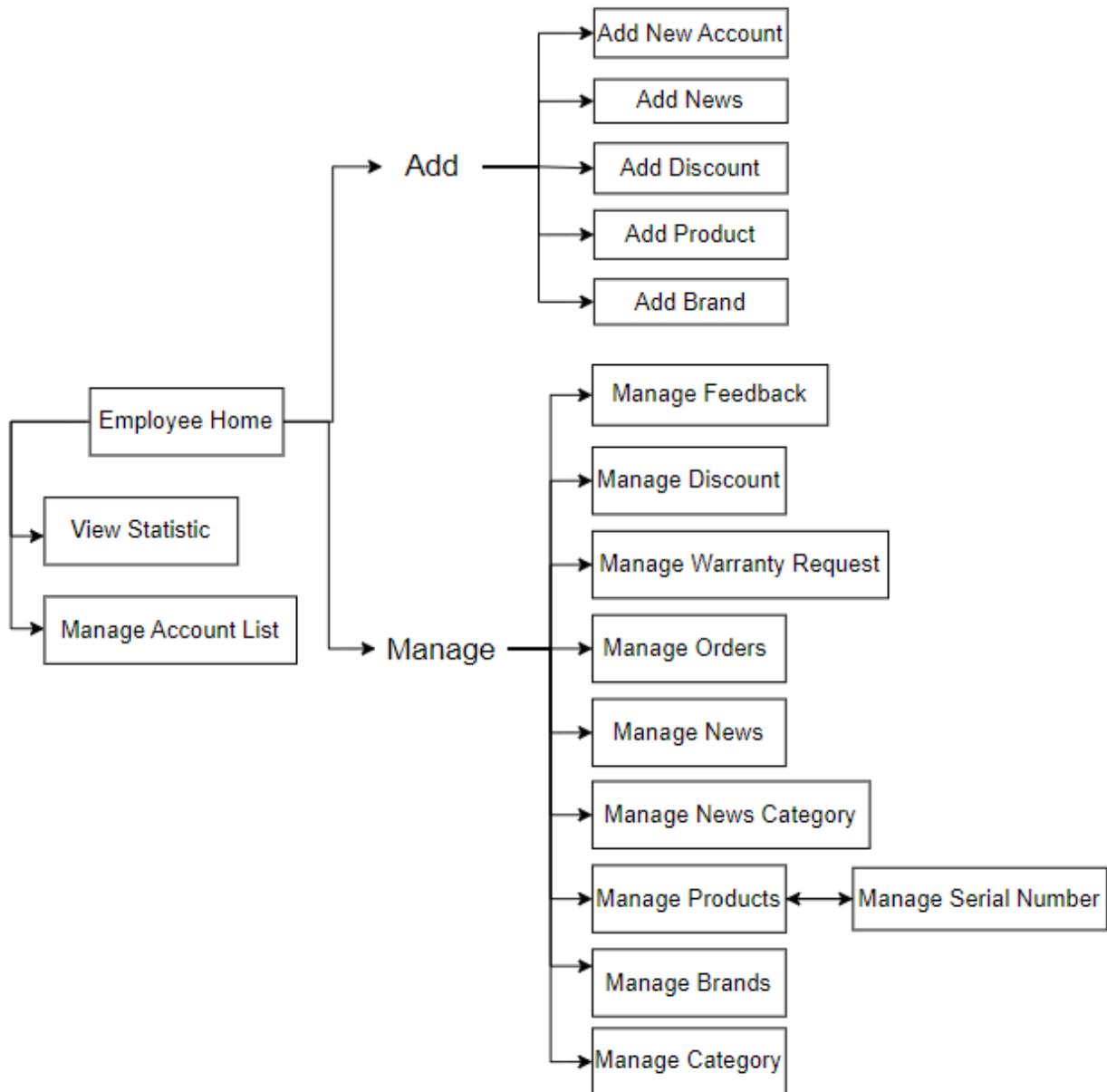
2.1.4.2 Screen Descriptions

ID	Feature	Screen	Description
1.	Add products	Add products	Upload news products to the website
2.	View products	Manage Products	Staff can check all products in the system.
3.	Update Products	Manage Products	Change products details if necessary
4.	Delete Products	Manage Products	Hidden products in the home page
5.	View Feedback	Manage Feedback	Enables viewing all existing feedback entries in the system.
6.	Delete Feedback	Manage Feedback	Allows deleting feedback entries from the system.
7.	Add Warranty	Add Warranty	Enables adding new warranty information for products.
8.	View Warranty	Manage Warranty	Allows viewing all warranty details for products.
9.	Update Warranty	Manage Warranty	Allows updating warranty details for products if needed.
10.	Delete Warranty	Manage Warranty	Allows deleting warranty information for products.
11.	View Orders	Manage Orders	Enables staff to view all orders placed by customers.
12.	Update Order Status	Manage Orders	Allows updating the status of orders (e.g., processing, shipped, delivered).
13.	Cancel Order	Manage Orders	Enables cancellation of customer orders.
14.	Add News Article	Add News	Allows adding new news articles or updates.
15.	View News	Manage News	Enables viewing all published news articles.
16.	Update News Article	Manage News	Allows updating details of existing news articles.
17.	Delete News Article	Manage News	Allows deleting news articles from the system.
18.	Add News Category	Add News Category	Allows adding new categories for organizing news articles.

19.	View News Categories	Manage News Category	Enables viewing all existing news categories.
20.	Update News Category	Manage News Category	Allows updating details of news categories (e.g., renaming, reordering).
21.	Delete News Category	Manage News Category	Allows deleting news categories if no longer needed.
22.	Add Brand	Add Brands	Enables adding new brands to the system.
23.	View Brands	Manage Brands	Allows viewing all existing brands.
24.	Update Brand Details	Manage Brands	Allows updating details of existing brands (e.g., logo, description).
25.	Delete Brand	Manage Brands	Allows deleting brands from the system.
26.	View Serial Numbers	Manage Serial Numbers	Allows viewing all existing product Serial Numbers.
27.	Add Serial Numbers	Manage Serial Numbers	Enables adding new Serial Numbers for existed products.
28.	Add Product Category	Add Product Category	Enables adding new product categories for organizing products.
29.	View Product Categories	Manage Product Category	Allows viewing all existing product categories.
30.	Update Product Category	Manage Product Category	Allows updating details of product categories (e.g., renaming, restructuring).
31.	Delete Product Category	Manage Product Category	Allows deleting product categories if no longer needed.
32.	Add new employee account	Add new Account	Allow created a new account for new employees.

2.1.5 Admin

2.5.1 Screen Flow



2.5.2 Screen Descriptions

ID	Feature	Screen	Description
1.	Add products	Add products	Upload news products to the website
2.	View products	Manage Products	Staffs can check all products in the system.
3.	Update Products	Manage Products	Change products details if necessary
4.	Delete Products	Manage Products	Hidden products in the home page
5.	View Feedback	Manage Feedback	Enables viewing all existing feedback entries in the system.
6.	Update Feedback	Manage Feedback	Allows updating details of existing feedback entries if necessary.
7.	Delete Feedback	Manage Feedback	Allows deleting feedback entries from the system.
8.	Add Warranty	Add Warranty	Enables adding new warranty information for products.
9.	View Warranty	Manage Warranty	Allows viewing all warranty details for products.
10.	Update Warranty	Manage Warranty	Allows updating warranty details for products if needed.
11.	Delete Warranty	Manage Warranty	Allows deleting warranty information for products.
12.	View Orders	Manage Orders	Enables staff to view all orders placed by customers.
13.	Update Order Status	Manage Orders	Allows updating the status of orders (e.g., processing, shipped, delivered).
14.	Cancel Order	Manage Orders	Enables cancellation of customer orders.
15.	Add News Article	Add News	Allows adding new news articles or updates.
16.	View News	Manage News	Enables viewing all published news articles.
17.	Update News Article	Manage News	Allows updating details of existing news articles.

18.	Delete News Article	Manage News	Allows deleting news articles from the system.
19.	Add News Category	Add News Category	Allows adding new categories for organizing news articles.
20.	View News Categories	Manage News Category	Enables viewing all existing news categories.
21.	Update News Category	Manage News Category	Allows updating details of news categories (e.g., renaming, reordering).
22.	Delete News Category	Manage News Category	Allows deleting news categories if no longer needed.
23.	Add Brand	Manage Brands	Enables adding new brands to the system.
24.	View Brands	Manage Brands	Allows viewing all existing brands.
25.	Update Brand Details	Manage Brands	Allows updating details of existing brands (e.g., logo, description).
26.	Delete Brand	Manage Brands	Allows deleting brands from the system.
27.	Add Product Category	Add Product Category	Enables adding new product categories for organizing products.
28.	View Product Categories	Manage Product Category	Allows viewing all existing product categories.
29.	Update Product Category	Manage Product Category	Allows updating details of product categories (e.g., renaming, restructuring).
30.	Delete Product Category	Manage Product Category	Allows deleting product categories if no longer needed.
31.	Add new employee account	Add new Account	Allow created a new account for new employees.
32.	Update account	Manage account	Allow updating account status, active or inactive
33.	View Serial Numbers	Manage Serial Numbers	Allows viewing all existing product Serial Numbers.
34.	Add Serial Numbers	Manage Serial Numbers	Enables adding new Serial Numbers for existed products.
35.	Views Statistic	View Statistic	Show the store's purchasing status

2.2 Screen Authorization

Screen	Guest	Customer	Staff	Manager	Admin
Home					
- Search product - View product list - View hot/best seller/new product - View news	<input checked="" type="checkbox"/>				
Product detail					
- View product detail - View product rates - View customer feedbacks - View products related by brand	<input checked="" type="checkbox"/>				
- News Articles	<input checked="" type="checkbox"/>				
- Login/Sign up	<input checked="" type="checkbox"/>				
Cart					
- View products in cart - Checkout: Pay for product(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orders History					
- View purchase history - View orders status	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orders Details					
- Rate and Feedback	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff Dashboard					
- Manage : + Product + Categories + Discount + Brand + News + Serial numbers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Add	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
+ Product	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
+ Categories	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
+ Discount	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
+ Brand	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
+ News	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- Handling orders and warranty	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Manager dashboard					
- Add new staffs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- Manage customer feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Admin dashboard					
- View statistic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Manage Accounts Role	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Manage employee modify, customer feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

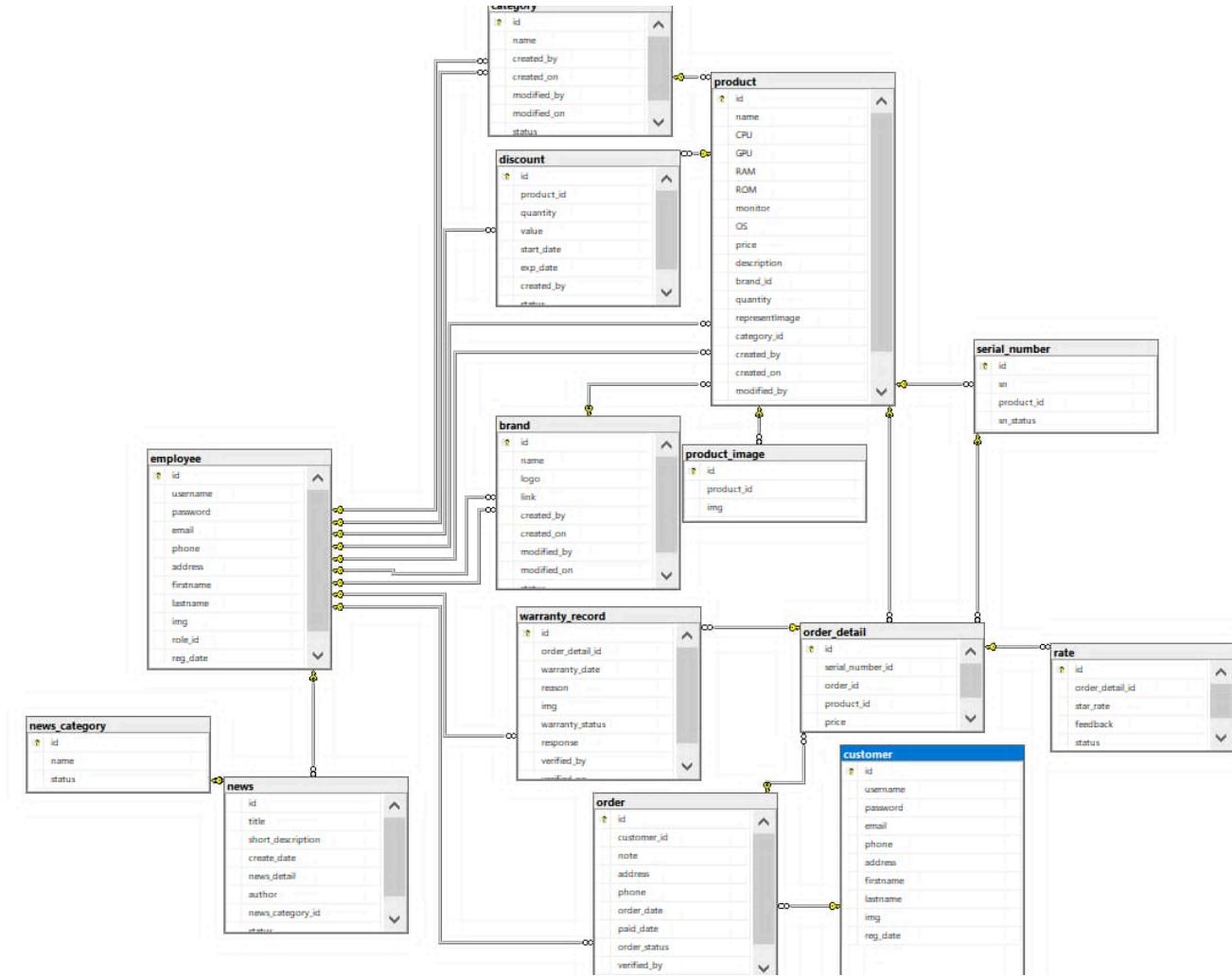
2.3 Non-UI Functions

#	Feature	System Function	Description
1	Logout	Logout	Click Logout Button to exit the system
2	Register with Google Account	Register	Click Logout Button to exit the system
3	Pay via VNPay	Pay	Choose VNPay method and pay for ticket
4	Auto send Email	Send Email	After paying successfully, an Email will automatically be sent to the customer's Email.

3. System High Level Design

3.1 Database Design

a. Database Schema



b. Table Descriptions

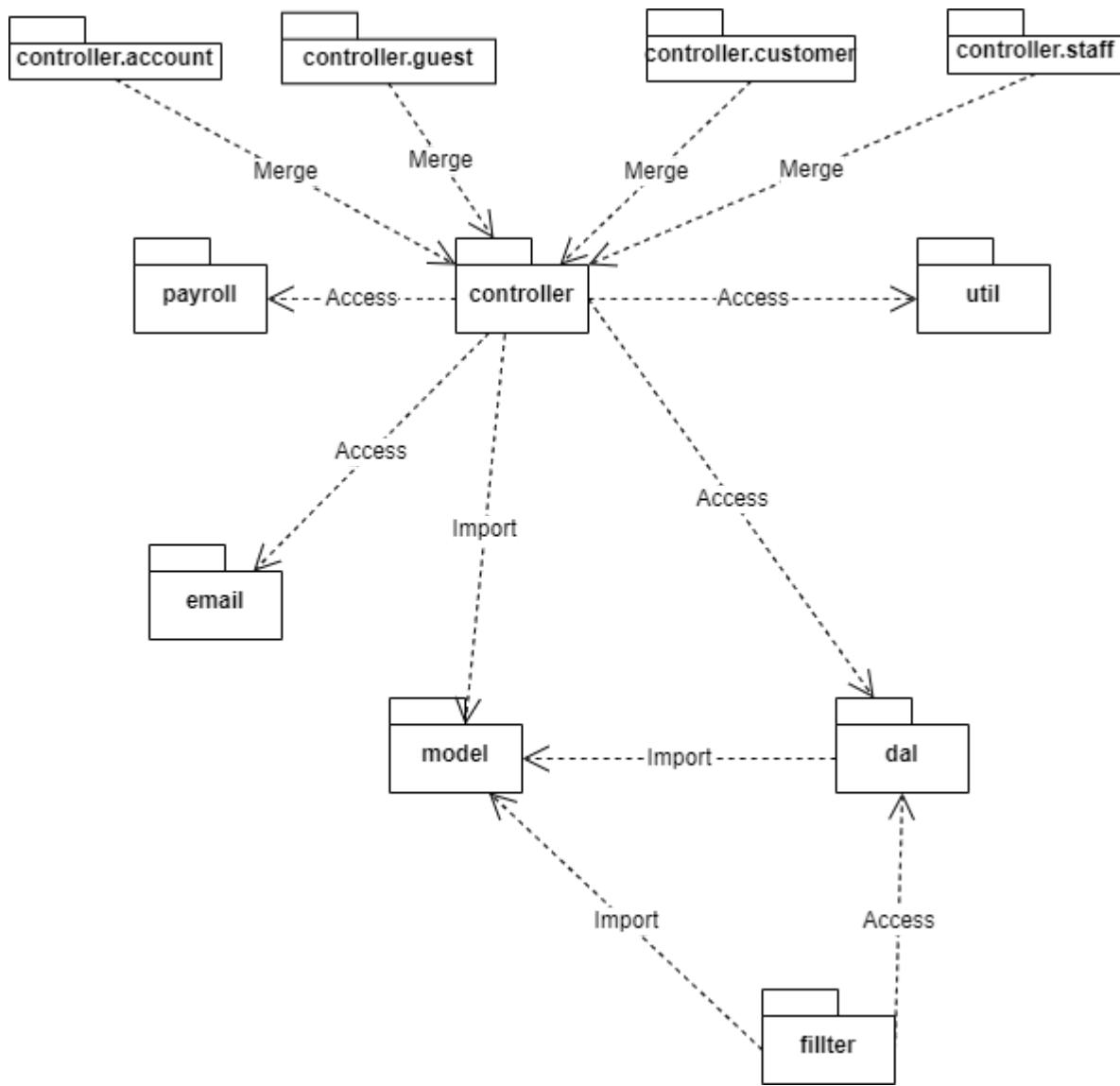
No	Table	Description
----	-------	-------------

1.	customer	id username password email phone address firstname lastname img reg_date	int identity(1,1) varchar(50) varchar(50) varchar(100) varchar(20) nvarchar(100) nvarchar(50) nvarchar(50) nvarchar(100) date	primary key
2.	employee	id username password email phone address firstname lastname img role_id reg_date status	int identity(1,1) varchar(50) varchar(50) varchar(100) varchar(20) nvarchar(100) nvarchar(50) nvarchar(50) nvarchar(100) int date tinyint	primary key
3.	category	id name created_by created_on modified_by modified_on status	int identity(1,1) nvarchar(255) int date int date tinyint	primary key reference key reference key
4.	brand	id name logo link created_by created_on modified_by modified_on status	int identity(1,1) nvarchar(255) varchar(100) varchar(100) int date int date int	primary key reference key reference key
5.	product	id name CPU GPU RAM	int identity(1,1) nvarchar(255) varchar(100) varchar(100) varchar(100)	primary key

		ROM monitor OS price [description] brand_id quantity img category_id created_by created_on modified_by modified_on status	varchar(100) varchar(100) varchar(100) int ntext int int varchar(100) int int date int date int	reference key reference key reference key reference key
6.	product_image	id product_id img	int int varchar(100)	primary key reference key
7.	discount	id product_id quantity value exp_date created_by created_on status	int identity(1,1) int int tinyint date int date int	primary key reference key reference key
8.	serial_number	id sn product_id sn_status	int identity(1,1) varchar(100) int tinyint	primary key reference key
9.	[order]	id customer_id note [address] phone order_date paid_date order_status verified_by verified_on	int identity(1,1) int nvarchar(255) nvarchar(255) varchar(20) date date tinyint int date	primary key reference key reference key
10.	order_detail	id serial_number_id order_id product_id	int identity(1,1) int int int	primary key reference key reference key reference key

		price	int	
11.	rate	id order_detail_id star_rate feedback status	int identity(1,1) int tinyint nvarchar(255) int	primary key reference key
12.	warranty_record	id order_detail_id warranty_date reason img warranty_status response verified_by verified_on	int identity(1,1) int date nvarchar(255) varchar(255) tinyint nvarchar(255) int date	primary key reference key reference key
13.	news_category	id [name] status	int identity(1,1) varchar(100) int	primary key
14.	news	id title short_description create_date news_detail author news_category_id status	int identity(1,1) nvarchar(100) nvarchar(255) date text int int int	reference key reference key

3.2 Code Packages



Package descriptions

No	Package	Description
1.	controller	for all function in the system
2.	dal	access database and return data
3.	email	use api to send email
4.	payroll	api to online bank to create qr code and return status of order to the system
5.	pdf	use api to convert from html to pdf
6.	filter	to create filter class to check role of current user for access window
7.	model	class of objects which are created form tables in the database
8.	util	contain functions like random a string of numbers, sublist an array for paging,...

II. Requirement Specifications

1. Account

1.1 UC1_SignUp

a. Functionalities

UC ID and Name:	UC1_SignUp		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	Guest	Secondary Actors:	System
Trigger:	The guest want to register for ordering product(s) on website		
Description:	Guests have to have an account if they want to order the product(s). The personal information when they register is needed for the order process.		
Preconditions:	Must have Internet connection		
Postconditions:	Create add new account if it not exist		
Normal Flow:	1. Full fill the input form to register 2. Verify code in gmail 3. Their account will be register successfully and go through the login page		
Alternative Flows:			
Exceptions:	+Register fail +Wrong code verify +Guest back to login page +The input(s) form are empty or wrong format		
Priority:	High		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

1.2 UC2_Login System

a. Functional Description

UC ID and Name:	UC2_Login		
Created By:	Vinh	Date Created:	16/06/2023
Primary Actor:	Users	Secondary Actors:	System
Trigger:	The user wants to log in to their account on the website		
Description:	As a user, I want to be able to log into the system so that I can use the system's authenticated features and access my personalized account.		
Preconditions:	Must have Internet connection and a registered account.		
Postconditions:	User will be logged into their account if credentials are correct.		
Normal Flow	<p>2.0 Login System</p> <ol style="list-style-type: none"> 1. User enters username and password. 2. User clicks in the login button. 3. System verifies credentials. 4. Users are logged into their account and redirected to the homepage. 		
Alternative Flows:	<p>2.1 Google Login</p> <ol style="list-style-type: none"> 1. User chooses to login system using Google account 2. System redirects the user to the Google's Login screen 3. User types in the Google account details and chooses to login 4. Google validates user's login information successfully and redirect him/her back to the system 5. System verifies credentials. 6. Users are logged into their account and redirected to the homepage. 		
Exceptions:	<ul style="list-style-type: none"> - Login failed due to incorrect username/password. - System error. - Account not verified. 		
Priority:	High		
Frequency of Use:	Frequent		
Business Rules:	FR1, FR2, FR3		
Other Information:			
Assumptions:			

b. Business Rules

ID	Business Rule	Business Rule Description
FR1	Password Encoding	User's password must be encoded with MD5 hashing
FR2	Invalid Logging In	<p>User can't be authenticated to login the system if below cases</p> <ul style="list-style-type: none">• His/her logging-in details are incorrect• His/her account has not been verified• His/her account has been locked or blocked
FR3	Account Locking	If user inputs wrong logging-in details 6 times continuously, his/her account would be locked in 30 minutes

1.3 UC3_Logout

a. Functionalities

UC ID and Name:	UC3_Logout		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	User	Secondary Actors:	System
Trigger:	The user wants to log out of their account on the website.		
Description:	Users can log out of their account to ensure their session is secure.		
Preconditions:	Must have Internet connection and be logged in.		
Postconditions:	User will be logged out of their account.		
Normal Flow:	<ol style="list-style-type: none">1. User clicks the logout button.2. System terminates the session.3. User is redirected to the homepage or login page.		
Alternative Flows:			
Exceptions:	1. Logout fail due to system error.		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

1.4 UC_ForgetPassword

a. Functionalities

UC ID and Name:	UC_ForgetPassword		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	User	Secondary Actors:	System
Trigger:	The user wants to reset their password		
Description:	Users can reset their password if they forget it.		
Preconditions:	Must have an Internet connection.		
Postconditions:	Password reset instructions are sent to the user's email.		
Normal Flow:	<ol style="list-style-type: none">1. The user navigates to the "Login" page.2. The user clicks the "Forgot Password" link.3. The system redirects the user to the "Reset Password" form.4. The user enters their registered email address.5. The user clicks the "Submit" button.6. The system validates the email address.7. If the email is valid, the system sends password reset instructions to the user's email.8. The system updates the user's password in the database and sends a new password to the user.9. The user receives an email with new password.		
Alternative Flows:	<p>User enters an invalid email address</p> <ul style="list-style-type: none">• The system displays an error message indicating the email address is not found.		
Exceptions:	<p>Email address is not valid. Database connection error. Email service is not available.</p>		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

2. Guest

2.1 UC4_ProductList

UC ID and Name:	UC4_ProductList		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	User	Secondary Actors:	System
Trigger:	The guest or user wants to view the list of products on the website.		
Description:	Guests and users can browse through the available products on the website.		
Preconditions:	Must have Internet connection.		
Postconditions:	The list of products is displayed.		
Normal Flow:	1. Guest/User navigates to the product list page. 2. System retrieves and displays the list of products.		
Alternative Flows:	None		
Exceptions:	1. Fail to retrieve product list due to system error.		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

2.2 UC5 _ View Product Details

UC ID and Name:	UC5 _ View Product Details		
Created By:	Trần Khánh Linh	Date Created:	15/07/2024
Primary Actor:	Guest, Customer	Secondary Actors:	System
Trigger:	User clicks on a product link from the hot product sale section, product list, news section with related products, or suggested products on the product details page.		
Description:	This use case describes the steps involved when a user views the details of a product. Users can access product details from various sections including the hot product sale on the home page, the general product list, related products in the news section, or suggestions on the product details page.		
Preconditions:	<ol style="list-style-type: none"> Users must be on the website. There must be products available in the database. Relevant sections (hot product sale, product list, news, suggestions) must be present and accessible. The user will see detailed information about the selected product. The system logs the user's interaction for analytics and recommendation purposes. 		
Postconditions:	<ol style="list-style-type: none"> The user will see detailed information about the selected product. The system logs the user's interaction for analytics and recommendation purposes. 		
Normal Flow:	<ol style="list-style-type: none"> The user navigates to the website. The user selects a product from: <ul style="list-style-type: none"> ○ The hot product sale section on the home page. ○ The general product list. ○ The related products in the news section. ○ The suggested products on a product details page. The system retrieves the product details from the database. The system displays the product details to the user, including: <ul style="list-style-type: none"> ○ Product name ○ Description ○ Price ○ Images ○ Availability ○ Reviews and ratings The user views the product details. (Optional) The user may add the product to their cart, wishlist, or compare it with other products. 		

Alternative Flows:	<p>Product Not Available</p> <ul style="list-style-type: none"> If the selected product is not available, the system displays an appropriate message and may suggest alternative products.
Exceptions:	<p>Database Connection Error</p> <ul style="list-style-type: none"> If there is a problem connecting to the database, the system displays an error message and prompts the user to try again later. <p>No Product Details Found</p> <ul style="list-style-type: none"> If the system cannot find details for the selected product, it displays an error message and suggests the user select a different product.
Priority:	High
Frequency of Use:	High (frequent user action)
Business Rules:	<ol style="list-style-type: none"> Product details must be accurate and up-to-date. The system should log user interactions for recommendation and analytics purposes. User preferences and browsing history may be used to generate product suggestions.
Other Information:	<p>Ensure that the product details page is optimized for quick loading and user-friendly.</p> <p>Provide easy navigation back to the previous sections or similar products.</p>
Assumptions:	<ol style="list-style-type: none"> Users have access to the internet and a web browser. The website is operational and accessible. The product database is maintained and regularly updated.

2.3 UC6 _Add to cart

UC ID and Name:	UC6 _Add to cart		
Created By:	Trần Khánh Linh	Date Created:	15/07/2024
Primary Actor:	Guest, Customer	Secondary Actors:	System
Trigger:	User clicks on either of the two "Add to Cart" buttons on the product details page.		
Description:	This use case describes the steps involved when a user adds a product to their shopping cart from the product details page. There are two buttons: one that adds the product to the cart without redirecting the user and another that adds the product to the cart and redirects the user to the checkout page.		
Preconditions:	<ol style="list-style-type: none"> 1. User must be on the product details page. 2. Product must be available for purchase. 3. User must be logged in (if necessary for cart functionality). 		
Postconditions:	<ol style="list-style-type: none"> 1. The product is added to the user's cart. 2. If redirected to checkout and the user is not logged in, they are prompted to log in. 3. Logged-in users are redirected to the checkout page for order completion. 		
Normal Flow:	<ol style="list-style-type: none"> 1.The user navigates to the product details page. 2.The user clicks one of the two "Add to Cart" buttons: <ul style="list-style-type: none"> ● Button 1: Adds the product to the cart without redirecting to checkout. ● Button 2: Adds the product to the cart and redirects to the checkout page. 3.If Button 1 is clicked: <ol style="list-style-type: none"> 3.1 The system adds the product to the user's cart. 3.2 The system displays a confirmation message (e.g., "Product added to cart"). 4.If Button 2 is clicked: <ol style="list-style-type: none"> 4.1 The system adds the product to the user's cart. 4.2 The system checks if the user is logged in. <ul style="list-style-type: none"> 4.2.1 If the user is not logged in, the system redirects the user to the login page. 4.2.2 If the user is logged in, the system redirects the user to the checkout page 		
Alternative Flows:	Product Not Available		
Exceptions:	Database Connection Error No Product Details Found		
Priority:			
Frequency of Use:	High (frequent user action)		
Business Rules:	Product details and availability must be accurate and up-to-date.		

	<p>The system should maintain the user's session state to determine login status.</p> <p>User interactions (add to cart, redirect to checkout) should be logged for analytics.</p>
Other Information:	<p>Ensure the "Add to Cart" buttons are prominently displayed and clearly labeled.</p> <p>Provide a smooth and user-friendly experience for both logged-in and non-logged-in users.</p>
Assumptions:	<p>Users have access to the internet and a web browser.</p> <p>The website and database are operational and accessible.</p> <p>The product database is maintained and regularly updated.</p> <p>Users have valid accounts for logging in and checking out.</p>

2.4 UC7 - Read News

UC ID and Name:	UC7 - Read News		
Created By:	Trần Khánh Linh	Date Created:	15/07/2024
Primary Actor:	Guest, Customer	Secondary Actors:	System
Trigger:	User clicks on a news link from the home page or the product details page.		
Description:	This use case describes the steps involved when a user reads news articles. Users can access news articles from the hot sale section on the home page or the suggested news section on the product details page.		
Preconditions:	<ol style="list-style-type: none"> 1. Users must be on the website. 2. There must be news articles available in the database. 3. Relevant sections (hot sale, product details) must be present and accessible. 		
Postconditions:	<ol style="list-style-type: none"> 1. The user will see detailed information about the selected news article. 2. The system logs the user's interaction for analytics. 		
Normal Flow:	<ol style="list-style-type: none"> 1. The user navigates to the website. 2. The user selects a news article from: <ul style="list-style-type: none"> • The hot sale section on the home page. • The suggested news section on a product details page. 3. The system retrieves the news article details from the database. 4. The system displays the news article details to the user, including: <ul style="list-style-type: none"> • Title • Date • Content • Related images • Related products or news 5. The user reads the news article. 6. (Optional) The user may share the article, add comments, or view related content 		
Alternative Flows:	<ul style="list-style-type: none"> • AF1: News Article Not Available <ul style="list-style-type: none"> • If the selected news article is not available, the system displays an appropriate message and may suggest alternative articles. 		
Exceptions:	E1: Database Connection Error E3: No News Details Found		

Priority:	Medium
Frequency of Use:	Medium (occasional user action)
Business Rules:	<ul style="list-style-type: none"> 1. News details must be accurate and up-to-date. 2. The system should log user interactions for recommendation and analytics purposes. 3. User preferences and browsing history may be used to generate news suggestions.
Other Information:	<p>Ensure that the news details page is optimized for quick loading and user-friendly.</p> <p>Provide easy navigation back to the previous sections or similar articles.</p>
Assumptions:	<ul style="list-style-type: none"> 1. Users have access to the internet and a web browser. 2. The website is operational and accessible. 3. The news database is maintained and regularly updated

3.Customer

3.1 UC8_Checkout

UC ID and Name:	UC-8_Checkout		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to checkout and complete their purchase on the website.		
Description:	Users proceed to checkout to finalize their purchase, provide shipping information, and make payment.		
Preconditions:	Must have Internet connection, have items in the cart and be logged in.		
Postconditions:	Order is placed successfully.		
Normal Flow:	<ol style="list-style-type: none">1. Users review their cart.2. User provides shipping information.3. User selects the payment method and enters payment details.4. System processes the payment and confirms the order.5. User receives an order confirmation.		
Alternative Flows:			
Exceptions:	<ol style="list-style-type: none">1. Payment fails due to incorrect details or system error.2. Shipping information incomplete or incorrect.3. Insufficient stock for the items.		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

3.2 UC9_OrderHistory

UC ID and Name:	UC9_OrderHistory		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to view their past orders on the website.		
Description:	Users can access their order history to review previous purchases and check order status.		
Preconditions:	Must have Internet connection and be logged in.		
Postconditions:	Order history is displayed.		
Normal Flow:	1. User navigates to the order history page. 2. System retrieves and displays the user's past orders.		
Alternative Flows:			
Exceptions:	1. Fail to retrieve order history due to system error. 2. Shipping information incomplete or incorrect. 3. Insufficient stock for the items.		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

3.2 UC9_OrderDetail

UC ID and Name:	UC9_OrderDetail		
Created By:	Hoang	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to view their detail of the order which in the past on the website.		
Description:	Users can access their order history and choose an order to view a list of products that were bought.		
Preconditions:	Must have Internet connection and be logged in.		
Postconditions:	Order history is displayed and user select an order to view detail infor of product (products, price, ordered date).		
Normal Flow:	3. User navigates to the order history page. 4. System retrieves and displays the user's past orders.		
Alternative Flows:			
Exceptions:	4. Fail to retrieve order history due to system error. 5. Shipping information incomplete or incorrect. 6. Insufficient stock for the items.		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

3.2 UC-10_RequestWarranty

UC ID and Name:	UC10_RequestWarranty		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to request a warranty service for a purchased product.		
Description:	Users can request warranty service for products that are under warranty.		
Preconditions:	Must have Internet connection, be logged in, and have an eligible product under warranty.		
Postconditions:	Warranty request is submitted successfully.		
Normal Flow:	<ol style="list-style-type: none"> User navigates to the warranty request page. User selects the product and provides details of the issue. User submits the warranty request. System acknowledges the request and provides a reference number. 		
Alternative Flows:	None		
Exceptions:	<ol style="list-style-type: none"> Fail to submit warranty request due to system error. Product not eligible for warranty. 		
Priority:	Must Have		
Frequency of Use:	Occasional		
Business Rules:			
Other Information:			
Assumptions:			

3.3 UC11_WarrantyHistory

UC ID and Name:	UC11_WarrantyHistory		
Created By:	Vinh	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to view the history of their warranty requests on the website.		
Description:	Users can review the history and status of their warranty requests.		
Preconditions:	Must have Internet connection and be logged in.		
Postconditions:	Warranty history is displayed.		
Normal Flow:	<ol style="list-style-type: none">1. User navigates to the warranty history page.2. System retrieves and displays the user's warranty request history.		
Alternative Flows:			
Exceptions:	4. Fail to retrieve warranty history due to system error.		
Priority:	Must Have		
Frequency of Use:	Occasional		
Business Rules:			
Other Information:			
Assumptions:			

3.4 UC12_View Profile

UC ID and Name:	UC12_Profile		
Created By:	Hoang	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to change their personal information		
Description:	Users can view and edit their information		
Preconditions:	Must have an Internet connection and be logged in as a customer.		
Postconditions:	Profile page is displayed with user information table.		
Normal Flow:	<ol style="list-style-type: none"> 1. The user navigates to the "Profile" section. 2. The user goes to the profile page containing their information. 3. The user clicks the "Edit" button. 4. The system redirects the user to the "Edit Profile" form. 5. The user updates their new personal information. 6. Click the button "save" to submit the form. 7. The system updates their information in the database and sends a success message back to the profile page. 		
Alternative Flows:	AF1: User change edit form		
Exceptions:	E1: First name or Last name is too short. E2: Phone Number is not valid. E3: Email is not valid. E4: Address is not valid. E5: The image upload is not valid. E6: Database connection error		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

3.5 UC13_Change Password

UC ID and Name:	UC13_Change Password in Profile page		
Created By:	Hoang	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to change their account password		
Description:	Users can view and change password in profile page		
Preconditions:	Must have an Internet connection and be logged in as a customer.		
Postconditions:	'Change Password' form is displayed.		
Normal Flow:	<ol style="list-style-type: none"> 1. The user navigates to the "Profile" section. 2. The user views the page containing their information. 3. The user selects an action Change Password: 4. The user selects a product from the list and clicks the "Change Password" button. 5. The system redirects the user to the "Change Password" form. 6. The user input an old password and a new password then confirm the new password. 7. The user submits the form. 8. The system updates their information in the database and sends a success message back to the profile page. 		
Alternative Flows:	<p>Change Password by 'Forgot Password' page</p> <ol style="list-style-type: none"> 1. User go to login page 2. Click 'Forgot Password' 3. Website let the user go to the 'Forgot Password' form 4. Users enter their email 5. Click 'Send new password' to submit 6. System will send a new password to the email then let customer to login page 7. User enter username and enter new password which are sent on email. 8. System accesses the Home Page. 		
Exceptions:	E1: Old Password is wrong. E2: New Password is the same with old password. E3: New Password is not following format. E4: Confirm Password is not matched. E5: Database connection error		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:	BR-01, BR-02, BR-03, BR-04		
Other Information:			
Assumptions:			

4.Employee

4.1 Staff

4.1.1 UC13 _ Manage Product

UC ID and Name:	UC13 _ Manage Product		
Created By:	Trần Khánh Linh	Date Created:	15/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects manage product option		
Description:	This use case describes the steps involved when a user manages products. This includes viewing the list of products, adding a new product, editing an existing product, and hidden/display a product. Adding or editing a product redirects to another page. While hidden/display will change the status of the product.		
Preconditions:	Users must be logged in with appropriate permissions to manage products. The product management section must be accessible.		
Postconditions:	The user will be able to view, add, edit, or hidden/display a product. The system logs the user's actions for audit and tracking purposes.		
Normal Flow:	<ol style="list-style-type: none">The user navigates to the "Manage Products" section.The user views the list of existing products.The user selects an action:<ul style="list-style-type: none">Add a Product:<ol style="list-style-type: none">The user clicks the "Add Product" button.The system redirects the user to the "Add Product" page.The user enters the product details (e.g., name, description, price, category).The user submits the form.The system adds the new product to the database and redirects the user back to the product list.Edit a Product:<ol style="list-style-type: none">The user selects a product from the list and clicks the "Edit" button.The system redirects the user to the "Edit Product" page.The user updates the product details.The user submits the form.The system updates the product in the database and redirects the user back to the product list.Mange a Product serial numbers		

	<ol style="list-style-type: none"> 1. The user selects a product from the list and clicks the "Barcode" button. 2. The system redirects the user to the "Manage Serial Numbers" page. 3. The user updates the quantity. 4. The user submits the quantity. 5. The system updates the serial numbers in the database and redirects the user back to the product list.
Alternative Flows:	BR-06: User Cancels Add/Edit function
Exceptions:	BR-07 Database Connection Error BR-08 No detail found The image upload is not valid.
Priority:	High, Must Have
Frequency of Use:	Daily
Business Rules:	<ol style="list-style-type: none"> 1. Product details must be accurate and up-to-date. 2. The system should maintain a log of all add, edit, and hidden/display actions for audit purposes. 3. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes.
Other Information:	<p>Ensure that the product management pages are optimized for quick loading and user-friendly.</p> <p>Provide clear and easy-to-use navigation for adding, editing, and hidden/display products.</p>
Assumptions:	Users have appropriate permissions to manage products. The website and database are operational and accessible. The product database is maintained and regularly updated.

4.1.2 UC14 _ Manage Product Categories

UC ID and Name:	UC14 _ Manage Discounts		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects manage product categories option		
Description:	<p>This use case describes the steps involved when a user manages product categories. This includes viewing the list of product categories, adding a new product category, editing an existing product category. Adding or editing a product category redirects to another page, while hidden/display will change the status of the product category.</p>		
Preconditions:	<ol style="list-style-type: none"> Users must be logged in with appropriate permissions to manage product categories. The product category management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> The user will be able to view, add, edit, or delete product categories. The system logs the user's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> The user navigates to the "Manage Product Categories" section. The user views the list of existing product categories. The user selects an action: <ul style="list-style-type: none"> Add a Product Category: <ol style="list-style-type: none"> The user clicks the "Add Product Category" button. The system redirects the user to the "Add Product Category" page. The user enters the product category details (e.g., name, description). The user submits the form. The system adds the new product category to the database and redirects the user back to the product category list. Edit a Product Category: <ol style="list-style-type: none"> The user selects a product category from the list and clicks the "Edit" button. The system redirects the user to the "Edit Product Category" page. The user updates the product category details. The user submits the form. The system updates the product category in the database and redirects the user back to the product category list. Hidden/Display a Product Category: 		

	<ol style="list-style-type: none"> 1. The user selects a product category from the list and clicks the "Hidden/Display" button. 2. The product category status will be updated in the database. 3. All products which match with the product category will be hidden/displayed.
Alternative Flows:	BR-06 : User Cancels Add/Edit function
Exceptions:	System error: User is notified of the issue
Alternative Flows:	BR-06 : User Cancels Add/Edit function
Exceptions:	BR-07 Database Connection Error BR-08 No detail found The image upload is not valid.
Priority:	Medium, Should Have
Frequency of Use:	Monthly
Business Rules:	<ol style="list-style-type: none"> 1. Product category details must be accurate and up-to-date. 2. The system should maintain a log of all add, edit, and hidden/display actions for audit purposes. 3. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes.
Other Information:	<p>Ensure that the product category management pages are optimized for quick loading and user-friendly.</p> <p>Provide clear and easy-to-use navigation for adding, editing, and hidden/display product categories.</p>
Assumptions:	<ol style="list-style-type: none"> 1. Users have appropriate permissions to manage product categories. 2. The website and database are operational and accessible. 3. The product category database is maintained and regularly updated.

4.1.3 UC15 _ Manage News

UC ID and Name:	UC15 _ Manage News		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects manage categories option		
Description:	This use case describes the steps involved when a user manages news. This includes viewing the list of news articles, adding a new news article, editing an existing news article, and deleting a news article. Adding or editing a news article redirects to another page, while deleting a news article opens a confirmation pop-up window.		
Preconditions:	1. Users must be logged in with appropriate permissions to manage news. 2. The news management section must be accessible.		
Postconditions:	1. The user will be able to view, add, edit, or delete news articles. 2. The system logs the user's actions for audit and tracking purposes.		
Normal Flow:	1. The user navigates to the "Manage News" section. 2. The user views the list of existing news articles. 3. The user selects an action: <ul style="list-style-type: none"> ● Add a News Article: <ol style="list-style-type: none"> 1. The user clicks the "Add News Article" button. 2. The system redirects the user to the "Add News Article" page. 3. The user enters the news article details (e.g., title, content, date, category). 4. The user submits the form. 5. The system adds the new news article to the database and redirects the user back to the news list. ● Edit a News Article: <ol style="list-style-type: none"> 1. The user selects a news article from the list and clicks the "Edit" button. 2. The system redirects the user to the "Edit News Article" page. 3. The user updates the news article details. 4. The user submits the form. 5. The system updates the news article in the database and redirects the user back to the news list. - ● Delete a News Article: <ol style="list-style-type: none"> 1. The user selects a news article from the list and clicks the "Delete" button. 2. The system opens a confirmation pop-up window. 3. The user confirms the deletion. 		

	4. The system deletes the news article from the database and updates the news list.
Alternative Flows:	No categories found: System displays a message
Exceptions:	System error: User is notified of the issue
Alternative Flows:	<u>BR-06</u> : User Cancels Add/Edit function
Exceptions:	<u>BR-07</u> Database Connection Error <u>BR-08</u> No detail found
Priority:	Medium, Should Have
Frequency of Use:	Weekly
Business Rules:	<ol style="list-style-type: none"> 1. News article details must be accurate and up-to-date. 2. The system should maintain a log of all add, edit, and delete actions for audit purposes. 3. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes
Other Information:	<ol style="list-style-type: none"> 1. Ensure that the news management pages are optimized for quick loading and user-friendly. 2. Provide clear and easy-to-use navigation for adding, editing, and deleting news articles.
Assumptions:	<ol style="list-style-type: none"> 1. Users have appropriate permissions to manage news articles. 2. The website and database are operational and accessible. 3. The news database is maintained and regularly updated.

4.1.4 UC16 _ Manage News Categories

UC ID and Name:	UC17 _ Manage News Categories		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects manage news option		
Description:	<p>This use case describes the steps involved when a user manages news categories. This includes viewing the list of news categories, adding a new news category, editing an existing news category, and deleting a news category. Adding or editing a news category redirects to another page, while deleting a news category opens a confirmation pop-up window.</p>		
Preconditions:	<ol style="list-style-type: none"> User must be logged in with appropriate permissions to manage news categories. The news category management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> The user will be able to view, add, edit, or delete news categories. The system logs the user's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> The user navigates to the "Manage News Categories" section. The user views the list of existing news categories. The user selects an action: <ul style="list-style-type: none"> Add a News Category: <ol style="list-style-type: none"> The user clicks the "Add News Category" button. The system redirects the user to the "Add News Category" page. The user enters the news category details (e.g., name, description). The user submits the form. The system adds the new news category to the database and redirects the user back to the news category list. Edit a News Category: <ol style="list-style-type: none"> The user selects a news category from the list and clicks the "Edit" button. The system redirects the user to the "Edit News Category" page. The user updates the news category details. The user submits the form. The system updates the news category in the database and redirects the user back to the news category list. Delete a News Category: <ol style="list-style-type: none"> The user selects a news category from the list and clicks the "Delete" button. The system opens a confirmation pop-up window. The user confirms the deletion. 		

	4. The system deletes the news category from the database and updates the news category list.
Alternative Flows:	No news articles found: System displays a message
Exceptions:	System error: User is notified of the issue
Alternative Flows:	BR-06 : User Cancels Add/Edit function
Exceptions:	BR-07 Database Connection Error BR-08 No detail found
Priority:	Medium, Should Have
Frequency of Use:	Weekly
Business Rules:	<ul style="list-style-type: none"> 1. News category details must be accurate and up-to-date. 2. The system should maintain a log of all add, edit, and delete actions for audit purposes. 3. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes.
Other Information:	<ul style="list-style-type: none"> 1. Ensure that the news category management pages are optimized for quick loading and user-friendly. 2. Provide clear and easy-to-use navigation for adding, editing, and deleting news categories.
Assumptions:	<ul style="list-style-type: none"> 1. Users have appropriate permissions to manage news categories. 2. The website and database are operational and accessible. 3. The news category database is maintained and regularly updated.

4.1.5 UC17_Manage Discounts

UC ID and Name:	UC17_Manage Discounts		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects manage discounts option		
Description:	This use case describes the steps involved when a user manages discounts. This includes viewing the list of discounts, adding a new discount, editing an existing discount, and deleting a discount. Adding or editing a discount redirects to another page, while deleting a discount opens a confirmation pop-up window.		
Preconditions:	<ol style="list-style-type: none"> Users must be logged in with appropriate permissions to manage discounts. The discount management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> The user will be able to view, add, edit, or delete discounts. The system logs the user's actions for audit and tracking purposes. 		
Normal Flow:	<p>The user navigates to the "Manage Discounts" section. The user views the list of existing discounts. The user selects an action:</p> <ul style="list-style-type: none"> ● Add a Discount: <ol style="list-style-type: none"> The user clicks the "Add Discount" button. The system redirects the user to the "Add Discount" page. The user enters the discount details (e.g., name, description, percentage, start date, end date). The user submits the form. The system adds the new discount to the database and redirects the user back to the discount list. ● Edit a Discount: <ol style="list-style-type: none"> The user selects a discount from the list and clicks the "Edit" button. The system redirects the user to the "Edit Discount" page. The user updates the discount details. The user submits the form. The system updates the discount in the database and redirects the user back to the discount list. ● Delete a Discount: <ol style="list-style-type: none"> The user selects a discount from the list and clicks the "Delete" button. The system opens a confirmation pop-up window. The user confirms the deletion. 		

	4. The system deletes the discount from the database and updates the discount list.
Alternative Flows:	No discounts found: System displays a message
Exceptions:	System error: User is notified of the issue
Alternative Flows:	<u>BR-06</u> : User Cancels Add/Edit function
Exceptions:	<u>BR-07</u> Database Connection Error <u>BR-08</u> No detail found
Priority:	Medium, Should Have
Frequency of Use:	Monthly
Business Rules:	<ul style="list-style-type: none"> 1. Discount details must be accurate and up-to-date. 2. The system should maintain a log of all add, edit, and delete actions for audit purposes. 3. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes.
Other Information:	<ul style="list-style-type: none"> 1. Ensure that the discount management pages are optimized for quick loading and user-friendly. 2. Provide clear and easy-to-use navigation for adding, editing, and deleting discounts.
Assumptions:	<ul style="list-style-type: none"> 1. Users have appropriate permissions to manage discounts. 2. The website and database are operational and accessible. 3. The discount database is maintained and regularly updated.

4.1.6 UC18 _ Manage Brand

UC ID and Name:	UC18 _ Manage Brand		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User want to Update List Brand		
Description:	Describe the steps involved when a user View, Add, Edit, and Hidden/Display Brand on the Manage Brands page		
Preconditions:	User must be logged in and have the required role		
Postconditions:	Brand data is updated in the system		
Normal Flow:	<p>The user navigates to the "Manage Brands" section. The user views the list of existing brands. The user selects an action:</p> <ul style="list-style-type: none"> ● Add a Brand: <ol style="list-style-type: none"> 1. The user clicks the "Add Brand" button. 2. The system redirects the user to the "Add Brand" page. 3. The user enters the brand details (e.g., name, description). 4. The user submits the form. 5. The system adds the new brand to the database and redirects the user back to the brand list. ● Edit a Brand: <ol style="list-style-type: none"> 1. The user selects a brand from the list and clicks the "Edit" button. 2. The system redirects the user to the "Edit Brand" page. 3. The user updates the brand details. 4. The user submits the form. 5. The system updates the brand in the database and redirects the user back to the brand list. ● Hidden/Display a Brand: <ol style="list-style-type: none"> 1. The user selects a brand from the list and clicks the "Hidden/Display" button. 2. The brand status will be updated in the database. 3. All products which match with the brand will be hidden/displayed. 		
Alternative Flows:	BR-06 : User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	Medium, Should Have		
Frequency of Use:	Monthly		

Business Rules:	Brand name must be unique The image must be fit with the system image size suggest The brand link must be active
Other Information:	<ol style="list-style-type: none"> 1. Ensure that the brand management pages are optimized for quick loading and user-friendly. 2. Provide clear and easy-to-use navigation for adding, editing, and hidden/display brands.
Assumptions:	Users have appropriate permissions to manage brands. The website and database are operational and accessible. The brand database is maintained and regularly updated.

4.1.7 UC19 _ Manage Orders

UC ID and Name:	UC19 _ManageOrders		
Created By:	Trần Khánh Linh	Date Created:	15/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects the "Manage Orders" option from the menu.		
Description:	This use case describes the steps involved when a user manages orders. This includes viewing the list of orders, updating the status of an order, and deleting an order. Updating the order status or deleting an order involves interacting with a confirmation pop-up window.		
Preconditions:	<ol style="list-style-type: none"> User must be logged in with appropriate permissions to manage orders. The order management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> The user will be able to view, update, or delete orders. The system logs the user's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> The user navigates to the "Manage Orders" section. The user views the list of existing orders. Update Order Status: <ol style="list-style-type: none"> The user selects an order from the list and clicks the "Update Status" button. The system opens a status update form. The user updates the order status (e.g., processing, shipped, delivered). The user submits the form. The system updates the order status in the database and refreshes the order list. 		
Alternative Flows:			
Exceptions:			
Alternative Flows:	BR-06 : User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	High		
Frequency of Use:	High (frequent staff action)		
Business Rules:	<ol style="list-style-type: none"> Order details must be accurate and up-to-date. The system should maintain a log of all update and delete actions for audit purposes. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes. 		
Other Information:	<ol style="list-style-type: none"> Ensure that the order management pages are optimized for quick loading and user-friendly. 		

	<ol style="list-style-type: none">2. Provide clear and easy-to-use navigation for updating and deleting orders.
Assumptions:	<ol style="list-style-type: none">1. Users have appropriate permissions to manage orders.2. The website and database are operational and accessible.3. The order database is maintained and regularly updated.

4.1.8 UC20 _ Manage Warranty

UC ID and Name:	UC20 _ ManageWarranty		
Created By:	Trần Khánh Linh	Date Created:	15/07/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	User selects the "Manage Warranty" option from the menu.		
Description:	This use case describes the steps involved when a user manages warranties. This includes viewing the list of warranties, adding a new warranty, editing an existing warranty, and deleting a warranty. Adding or editing a warranty redirects to another page, while deleting a warranty opens a confirmation pop-up window.		
Preconditions:	<ol style="list-style-type: none"> 1. User must be logged in with appropriate permissions to manage warranties. 2. The warranty management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> 1. The user will be able to view, add, edit, or delete warranties. 2. The system logs the user's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> 1. The user navigates to the "Manage Warranty" section. 2. The user views the list of existing warranties. 3. The user selects an action: <ul style="list-style-type: none"> • Add a Warranty: <ol style="list-style-type: none"> 1. The user clicks the "Add Warranty" button. 2. The system redirects the user to the "Add Warranty" page. 3. The user enters the warranty details (e.g., product, duration, terms). 4. The user submits the form. 5. The system adds the new warranty to the database and redirects the user back to the warranty list. • Edit a Warranty: <ol style="list-style-type: none"> 1. The user selects a warranty from the list and clicks the "Edit" button. 2. The system redirects the user to the "Edit Warranty" page. 3. The user updates the warranty details. 4. The user submits the form. 5. The system updates the warranty in the database and redirects the user back to the warranty list. 		
Alternative Flows:			
Exceptions:			
Alternative Flows:	BR-06: User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		

Priority:	High
Frequency of Use:	High (frequent admin action)
Business Rules:	<ol style="list-style-type: none"> 1. Warranty details must be accurate and up-to-date. 2. The system should maintain a log of all add, edit, and delete actions for audit purposes. 3. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental changes.
Other Information:	<ol style="list-style-type: none"> 1. Ensure that the warranty management pages are optimized for quick loading and user-friendly. 2. Provide clear and easy-to-use navigation for adding, editing, and deleting warranties.
Assumptions:	<ol style="list-style-type: none"> 1. Users have appropriate permissions to manage warranties. 2. The website and database are operational and accessible. 3. The warranty database is maintained and regularly updated.

4.1.8 UC21 _ Edit Staff Profile

UC ID and Name:	UC21_Edit Staff Profile		
Created By:	Hoang	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The staff wants to change their personal information		
Description:	Staff can view and edit their information		
Preconditions:	Must have an Internet connection and be logged in as a staff.		
Postconditions:	Profile page is displayed with a staff information table.		
Normal Flow:	8. The staff navigates to the "Profile" section. 9. The staff goes to the profile page containing their information. 10. The staff clicks the "Edit" button. 11. The system redirects the user to the "Edit Profile" form. 12. The staff updates their new personal information. 13. Click the button "save" to submit the form. 14. The system updates their information in the database and sends a success message back to the profile page.		
Alternative Flows:	User change edit form		
Exceptions:	First name or Last name is too short. Phone Number is not valid. Email is not valid. Address is not valid. The image upload is not valid. Database connection error		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:			
Other Information:			
Assumptions:			

4.1.8 UC22 _ Change Employee Password

UC ID and Name:	UC22_Change Password in Profile page		
Created By:	Hoang	Date Created:	20/05/2024
Primary Actor:	Customer	Secondary Actors:	System
Trigger:	The user wants to change their account password		
Description:	Users can view and change password in profile page		
Preconditions:	Must have an Internet connection and be logged in as a customer.		
Postconditions:	'Change Password' form is displayed.		
Normal Flow:	<ol style="list-style-type: none"> 1. The user navigates to the "Profile" section. 2. The user views the page containing their information. 3. The user selects an action Change Password: 4. The user selects a product from the list and clicks the "Change Password" button. 5. The system redirects the user to the "Change Password" form. 6. The user input an old password and a new password then confirm the new password. 7. The user submits the form. 8. The system updates their information in the database and sends a success message back to the profile page. 		
Alternative Flows:	<p>Change Password by 'Forgot Password' page</p> <ol style="list-style-type: none"> 1. User go to login page 2. Click 'Forgot Password' 3. Website let the user go to the 'Forgot Password' form 4. Users enter their email 5. Click 'Send new password' to submit 6. System will send a new password to the email then let customer to login page 7. User enter username and enter new password which are sent on email. 8. System accesses the Home Page. 		
Exceptions:	E1: Old Password is wrong. E2: New Password is the same with old password. E3: New Password is not following format. E4: Confirm Password is not matched. E5: Database connection error		
Priority:	Must Have		
Frequency of Use:	Frequent		
Business Rules:	BR-01 , Password Encoding BR-02 , Validate password BR-03 , Validate name BR-04 Validate phone number		
Other Information:			

Assumptions:

4.1.8 UC23 _ Add Serial Numbers

UC ID and Name:	UC23_Add Serial Numbers		
Created By:	Hoang	Date Created:	20/05/2024
Primary Actor:	Staff	Secondary Actors:	System
Trigger:	Staff want to add more number of products		
Description:	This use case allows staff to add new products to the inventory and automatically generate unique serial numbers based on the specified quantity. The serial numbers are then saved in the system along with the product information.		
Preconditions:	The staff member is logged into the system. The product information is available and ready to be added. The system is connected to the database.		
Postconditions:	New products are added to the inventory. Unique serial numbers are generated and saved for each new product. The inventory is updated with the new products and their serial numbers.		
Normal Flow:	1. Staff accesses the product addition interface. 2. Staff enters the product details, including name, description, and quantity. 3. Staff specifies the quantity of new units being added to the stock. 4. The system automatically generates a series of unique serial numbers based on the specified quantity. 5. The system saves the generated serial numbers along with the product information in the database. 6. The system confirms that the new product and its serial numbers have been successfully added to the inventory.		
Alternative Flows:	BR-06 : User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	High		
Frequency of Use:	As needed whenever new products are added to the inventory.		
Business Rules:	<ul style="list-style-type: none"> Serial numbers must be unique and sequential for each product. Product information must be complete and accurate before serial numbers can be generated. 		
Other Information:	The system should provide a user-friendly interface for adding products and generating serial numbers.		
Assumptions:			

4.2 Manager

4.2.1 UC21 _ Add New Staff

UC ID and Name:	UC21_Add New Staff		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Manager	Secondary Actors:	System
Trigger:	User selects add new staff option		
Description:	This use case describes the steps involved when an admin adds a new staff member. This includes filling out the staff member's details and submitting the form to create the new staff account.		
Preconditions:	<ol style="list-style-type: none"> Admin must be logged in with appropriate permissions to add new staff. The staff management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> The new staff member's account is created and added to the database. The system logs the admin's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> The admin navigates to the "Add New Staff" section. The admin fills out the new staff member's details (e.g., name, email, role, password). The admin submits the form. The system adds the new staff member to the database and confirms the creation. 		
Alternative Flows:	Duplicate staff ID: System displays an error message		
Exceptions:	System error: User is notified of the issue		
Alternative Flows:	BR-06 : User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	High		
Frequency of Use:	Medium (occasional managers, admin action)		
Business Rules:	<ol style="list-style-type: none"> Staff details must be accurate and complete. The system should maintain a log of all add actions for audit purposes. New staff members should be notified of their account creation via email. 		
Other Information:	<ol style="list-style-type: none"> Ensure that the add staff pages are optimized for quick loading and user-friendly. Provide clear and easy-to-use navigation for adding new staff members. 		
Assumptions:	<ol style="list-style-type: none"> Admins have appropriate permissions to add new staff. The website and database are operational and accessible. 		

3. The staff database is maintained and regularly updated.

4.2.2 UC22_Manage Customer Feedback

UC ID and Name:	UC22_Manage Customer Feedback		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Manager	Secondary Actors:	System
Trigger:	User selects manage customer feedback option		
Description:	This use case describes the steps involved when a user manages customer feedback. This includes viewing the list of customer feedback and deleting feedback. Deleting feedback involves interacting with a confirmation pop-up window.		
Preconditions:	<ol style="list-style-type: none"> User must be logged in with appropriate permissions to manage customer feedback. The customer feedback management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> The user will be able to view and delete customer feedback. The system logs the user's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> The user navigates to the "Manage Customer Feedback" section. The user views the list of existing customer feedback. The user selects an action: <ul style="list-style-type: none"> Delete Feedback: <ol style="list-style-type: none"> The user selects feedback from the list and clicks the "Delete" button. The system opens a confirmation pop-up window. The user confirms the deletion. The system deletes the feedback from the database and updates the feedback list. 		
Alternative Flows:	No feedback found: System displays a message		
Exceptions:	System error: User is notified of the issue		
Alternative Flows:	BR-06: User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	Medium		
Frequency of Use:	Medium (occasional admin action)		
Business Rules:	<ol style="list-style-type: none"> Customer feedback must be reviewed before deletion. The system should maintain a log of all delete actions for audit purposes. User actions should be confirmed (e.g., delete confirmation pop-up) to prevent accidental deletions. 		
Other Information:	<ol style="list-style-type: none"> Ensure that the feedback management pages are optimized for quick loading and user-friendly. Provide clear and easy-to-use navigation for viewing and deleting customer feedback. 		

Assumptions:	<ol style="list-style-type: none">1. Users have appropriate permissions to manage customer feedback.2. The website and database are operational and accessible.3. The feedback database is maintained and regularly updated.
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4.3 Admin

4.3.1 UC23 _ View Statistic

UC ID and Name:	UC 23_ View Statistics		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Admin	Secondary Actors:	System
Trigger:	User selects view statistics option		
Description:	This use case describes the steps involved when a user views statistics. This includes displaying various statistics related to the application (e.g., sales, user activity, system performance) in graphical or tabular form.		
Preconditions:	<ol style="list-style-type: none">User must be logged in with appropriate permissions to view statistics.The statistics section must be accessible.		
Postconditions:	<ol style="list-style-type: none">The user will be able to view the statistics.The system updates and presents the latest statistics.		
Normal Flow:	<ol style="list-style-type: none">The user navigates to the "View Statistics" section.The system retrieves the latest statistics from the database.The system displays the statistics in graphical or tabular form.		
Alternative Flows:	No statistics available: System displays a message		
Exceptions:	System error: User is notified of the issue		
Alternative Flows:			
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	Medium, Should Have		
Frequency of Use:	Weekly		
Business Rules:	<ol style="list-style-type: none">Statistics must be accurate and up-to-date.The system should refresh the statistics periodically or upon user request.		
Other Information:	<ol style="list-style-type: none">Ensure that the statistics pages are optimized for quick loading and user-friendly.Provide clear and easy-to-understand visualizations for the statistics.		
Assumptions:	<ol style="list-style-type: none">Users have appropriate permissions to view statistics.The website and database are operational and accessible.The statistics database is maintained and regularly updated.		

4.3.2 UC24 _ Manage Account

UC ID and Name:	UC24_ Manage Account		
Created By:	Trần Khánh Linh	Date Created:	08/07/2024
Primary Actor:	Admin	Secondary Actors:	System
Trigger:	User selects manage employee role option		
Description:	This use case describes the steps involved when an admin manages employee roles. This includes adding a new account, activating or deactivating accounts.		
Preconditions:	<ol style="list-style-type: none"> 1. Admin must be logged in with appropriate permissions to manage employee roles. 2. The employee role management section must be accessible. 		
Postconditions:	<ol style="list-style-type: none"> 1. The admin will be able to add new accounts, activate or deactivate existing accounts. 2. The system logs the admin's actions for audit and tracking purposes. 		
Normal Flow:	<ol style="list-style-type: none"> 1. The admin navigates to the "Manage Employee Role" section. 2. The admin selects an action: <ul style="list-style-type: none"> ● Add a New Account: <ol style="list-style-type: none"> 1. The admin clicks the "Add Account" button. 2. The system redirects the admin to the "Add Account" page. 3. The admin enters the new account details (e.g., name, email, role, password). 4. The admin submits the form. 5. The system adds the new account to the database and confirms the creation. ● Activate/Deactivate an Account: <ol style="list-style-type: none"> 1. The admin selects an account from the list. 2. The admin toggles the active/inactive status. 3. The system updates the account status in the database. 		
Alternative Flows:	No employees found: System displays a message		
Exceptions:	System error: User is notified of the issue		
Alternative Flows:	BR-06 : User Cancels Add/Edit function		
Exceptions:	BR-07 Database Connection Error BR-08 No detail found		
Priority:	Medium (occasional admin action)		
Frequency of Use:	Monthly		
Business Rules:	<ol style="list-style-type: none"> 1. Ensure that the employee role management pages are optimized for quick loading and user-friendly. 2. Provide clear and easy-to-use navigation for adding new accounts and managing account statuses. 		
Other Information:	<ol style="list-style-type: none"> 1. Ensure that the employee role management pages are optimized for quick loading and user-friendly. 		

	<ol style="list-style-type: none">2. Provide clear and easy-to-use navigation for adding new accounts and managing account statuses.
Assumptions:	<ol style="list-style-type: none">1. Admins have appropriate permissions to manage employee roles.2. The website and database are operational and accessible.3. The employee role database is maintained and regularly updated.

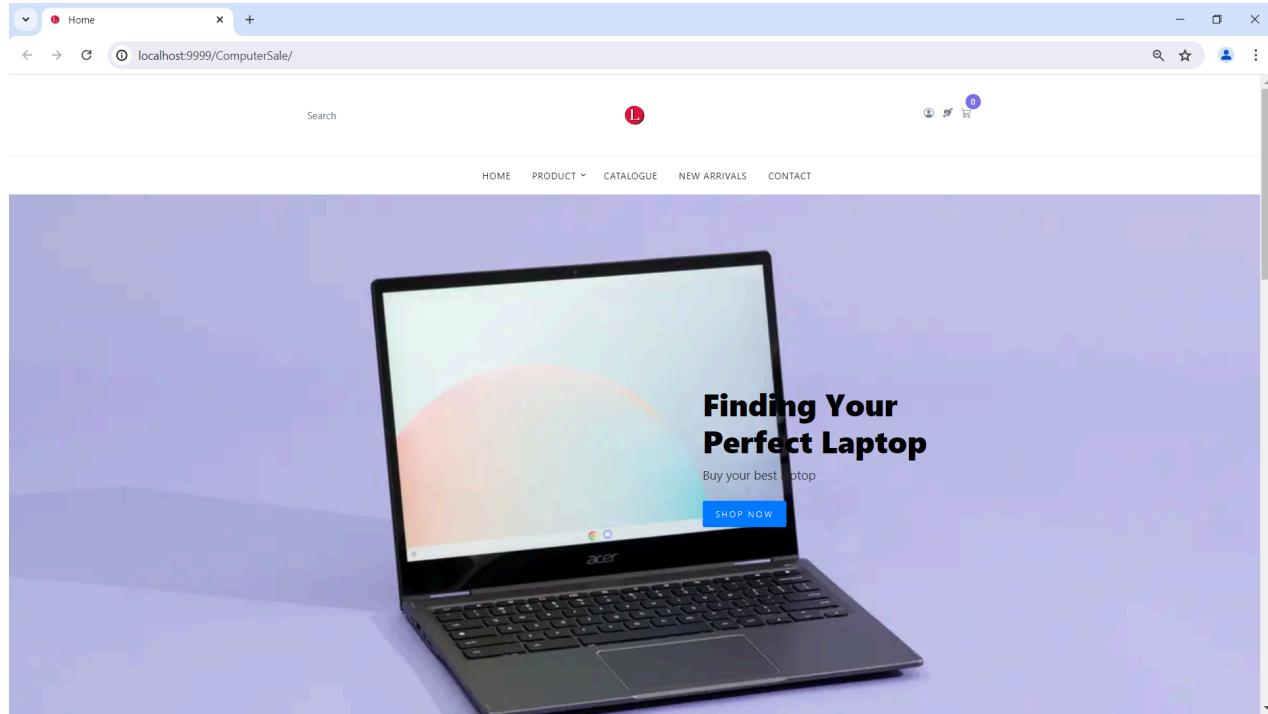
III. Design Specifications

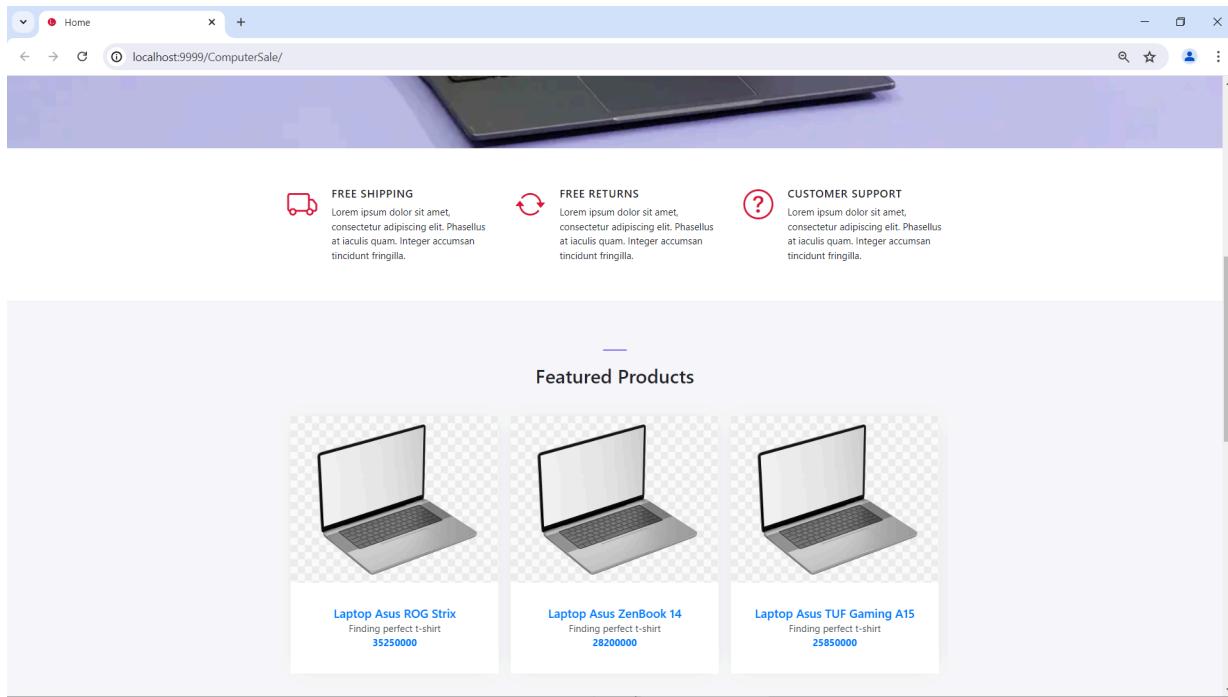
1, Guest

1.1 Home

Related use cases: UC

UI Design





1.2 Product list

Related use cases: [2.1 UC4_ProductList](#)

UI Design

The screenshot displays a product listing page for laptops. At the top, there's a navigation bar with "Home" and "Shop". Below it is a search bar with the placeholder "Search products". On the left side, there's a sidebar with filtering options:

- CATEGORIES:** A dropdown menu set to "All Categories".
- FILTER BY PRICE:** A "Price range" slider with a minimum value of \$0.
- BRAND:** A list of checkboxes for brands: Asus, Dell, HP, MSI, Apple, Acer, and Lenovo. All checkboxes are currently unchecked.

At the bottom of the sidebar is a blue "FILTER" button.

The main content area shows a grid of 12 laptop products, arranged in three rows of four. Each product card includes an image of the laptop, its name, and its price. The products are:

- Laptop Asus ROG Strix \$35250000
- Laptop Asus ZenBook 14 \$28200000
- Laptop Asus TUF Gaming A15 \$25850000
- Laptop Asus VivoBook S15 \$21150000
- Laptop Asus ProArt StudioBook \$58750000
- Laptop Asus Chromebook Flip \$14100000
- Laptop Asus ROG Zephyrus G14 \$42300000
- Laptop Asus VivoBook Flip 14 \$16450000
- Laptop Asus ExpertBook B9 \$39950000

At the bottom right of the grid, there's a pagination control with a series of numbered circles (1, 2, 3, 4, 5) and arrows for navigating through multiple pages of results.

1.3 Product detail

Related use cases: [2.2 UC5 _ View Product Details](#)

UI Design

HOME PRODUCT ▾ BRAND ▾ SALESOFF ▾

Home / Laptop Asus Chromebook Flip



Laptop Asus Chromebook Flip

Name: Laptop Asus Chromebook Flip

CPU: Intel Core m3-8100Y

GPU: Integrated Graphics

RAM: 4GB LPDDR3

ROM: 64GB eMMC

Monitor: 12.5-inch FHD Touch

Operating System: Chrome OS

Description: Versatile and portable Chromebook.

14.100.000 VND

3.525.000 VND **75%**

ADD TO CART

BUY NOW

Comment

user2

Feedback: Rất hài lòng, sản phẩm tốt.

Similar Product



Laptop Asus ROG Strix
Finding perfect t-shirt
35250000



Laptop Asus ZenBook 14
Finding perfect t-shirt
28200000



Laptop Asus TUF Gaming A15
Finding perfect t-shirt
25850000

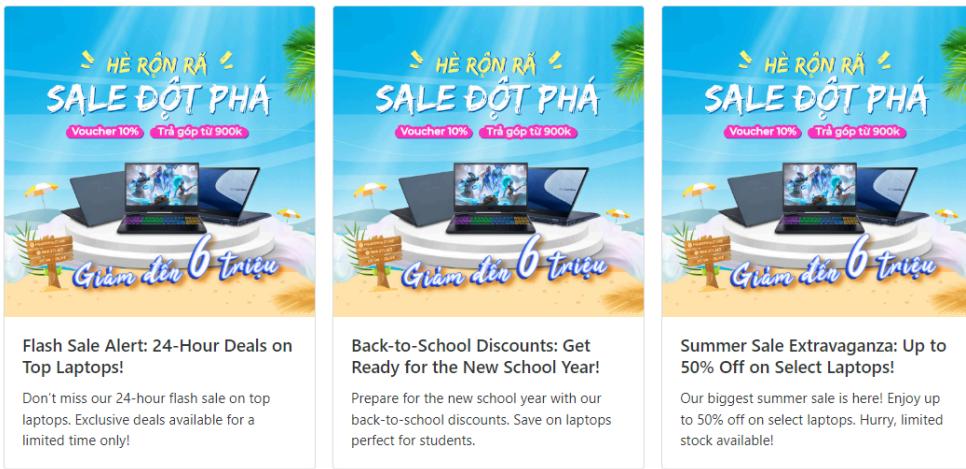
< →

1.4 News

1.4.1 Home News

UI Design

Big Sale!



Field Name	Field Type	Description
Title	Text	Display the title of the news
Short Description	Text	Display the short description of the news
Card	href	Click to go to the news detail page

Database Access

Table	CRUD	Description
Guess	R	View the news

SQL Commands:

1/ Create a new product discount

"SELECT top 3 * FROM news where news_category_id =1 order by create_date"

1.4.1 News detail

Related use case [2.4 UC7 - Read News](#)

UI Design

Flash Sale Alert: 24-Hour Deals on Top Laptops!

2024-07-10



Attention shoppers! Linh's Lap is thrilled to announce a **24-Hour Flash Sale** featuring unbeatable deals on top laptops. For just one day, you can snag **exclusive discounts** on some of our best-selling models.

Flash Sale Highlights:

- Limited-time discounts** on high-end gaming laptops, perfect for gamers who want the best performance.
- Big savings** on ultra-portable laptops for professionals on the go.
- Special offers** on laptops with the latest Intel and AMD processors.
- Extra discounts** on accessories when you purchase a laptop during the flash sale.

This is a **one-time opportunity** to save big on the laptops you've been eyeing. Set your alarms and get ready to shop because these deals will be gone in a flash. **Shop now** and don't miss out on these incredible savings!

Vu Vinh

Field Name	Field Type	Description
Product*	Form Select	This is for Admin to choose the product to have a discount
Quantity*	Text Box	This is for Admin to input valid quantity of selected product
Value*	Text Box	This is for Admin to input valid value for discount
Start Date*	Text Box	This is for Admin to pick the valid discount start date
Expiration Date*	Date picker	This is for Admin to pick the valid discount end date
Add Discount	Button	Clicks to create a new product discount

Database Access

Table	CRUD	Description
Admin	C	Create a new product discount

SQL Commands:

1/ Create a new product discount

```
"INSERT INTO discount (product_id, quantity, value, start_date, exp_date, created_by)  
VALUES (?, ?, ?, ?, ?, ?)"
```

1.5 Cart

UI Design

Database Access

SQL Commands

2.Account

2.1 User Login

Related use cases: [UC02_Login System](#)

UI Design

The image displays a clean, modern login interface. At the top center is a large red circular icon containing a white letter 'L'. To its right, the word 'Login' is written in a bold, dark blue sans-serif font. Below this, there are two rectangular input fields with rounded corners. The first field is labeled 'Username' and the second is labeled 'Password'. Underneath the password field is a small gray checkbox labeled 'Show Password'. To the right of the checkbox is a blue link labeled 'Forgot Password'. A large blue rectangular button with the word 'Login' in white is centered below the input fields. Below this button is a red rectangular button featuring the Google 'G' logo and the text 'Login with Google' in white. At the bottom left, there is a link 'Don't have an Account? [Sign Up](#)'.

Field Name	Field Type	Description
Email*	Text Box	This is for user to input valid email address for logging in

Password*	Password	This is for user to input password for logging in
Login	Button	User clicks to authenticate him/herself into the system with provided email & password
Register	Button	User clicks to redirect to the User Register page for registering new user account to access the system
Forgot Password?	Hyperlink	User clicks to redirect to the Password Reset page for resetting his/her forgot password
Login with Google	Hyperlink	Allow user to login with his/her Google account

Database Access

Table	CRUD	Description
User	R	Verify UserName & Password information
Setting, User	R	Specify the authorizations of the logged-in user

SQL Commands:

1/ Verify UserName & Password information

```
SELECT user_id, full_name, email, image_url, status
FROM user WHERE user_name = ? AND password = ?
```

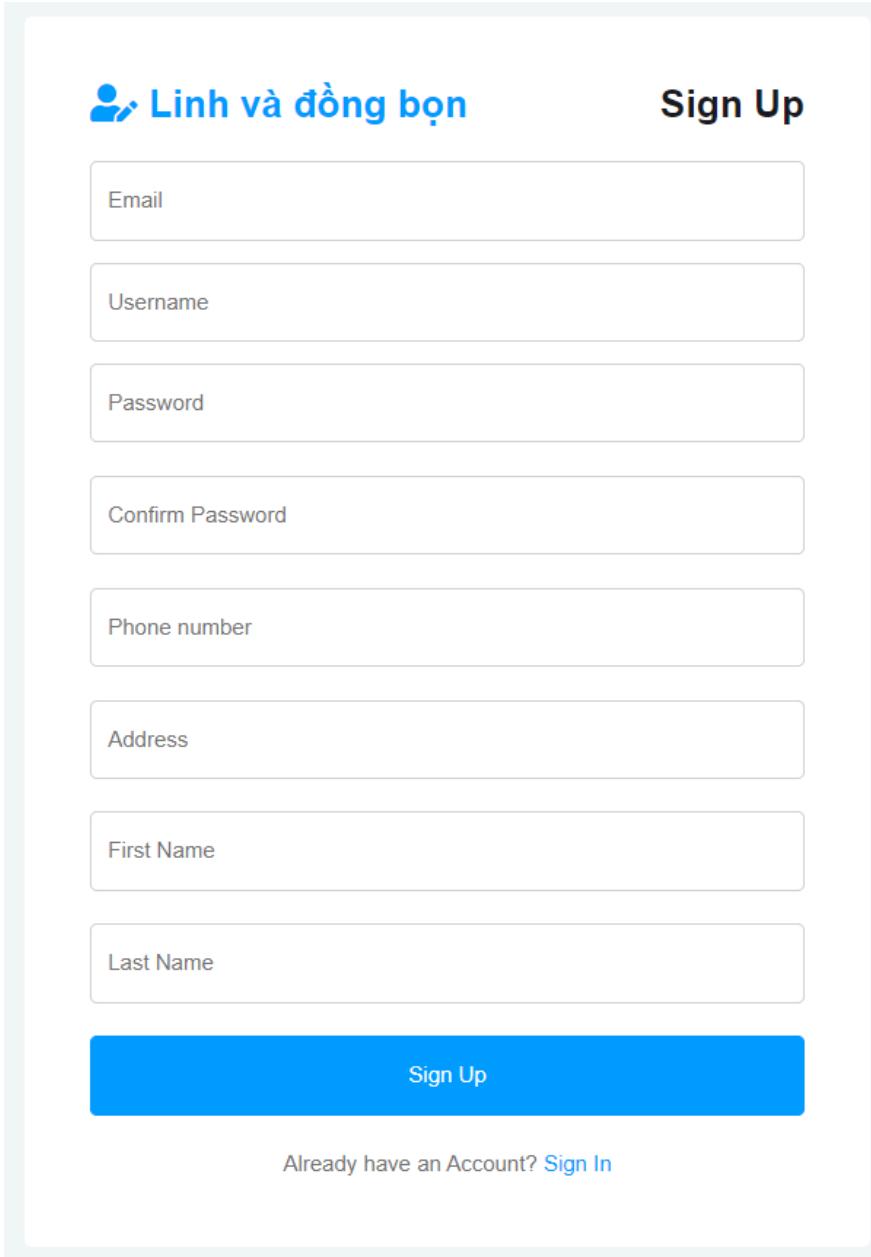
2/ Specify the authorizations of the logged-in user

```
SELECT mapped_values FROM setting WHERE setting_id = ?
SELECT setting_name, mapped_values FROM setting WHERE setting_id IN (?)
```

2.2. Sign up

Related use cases: [1.1 UC1_SignUp](#)

UI Design

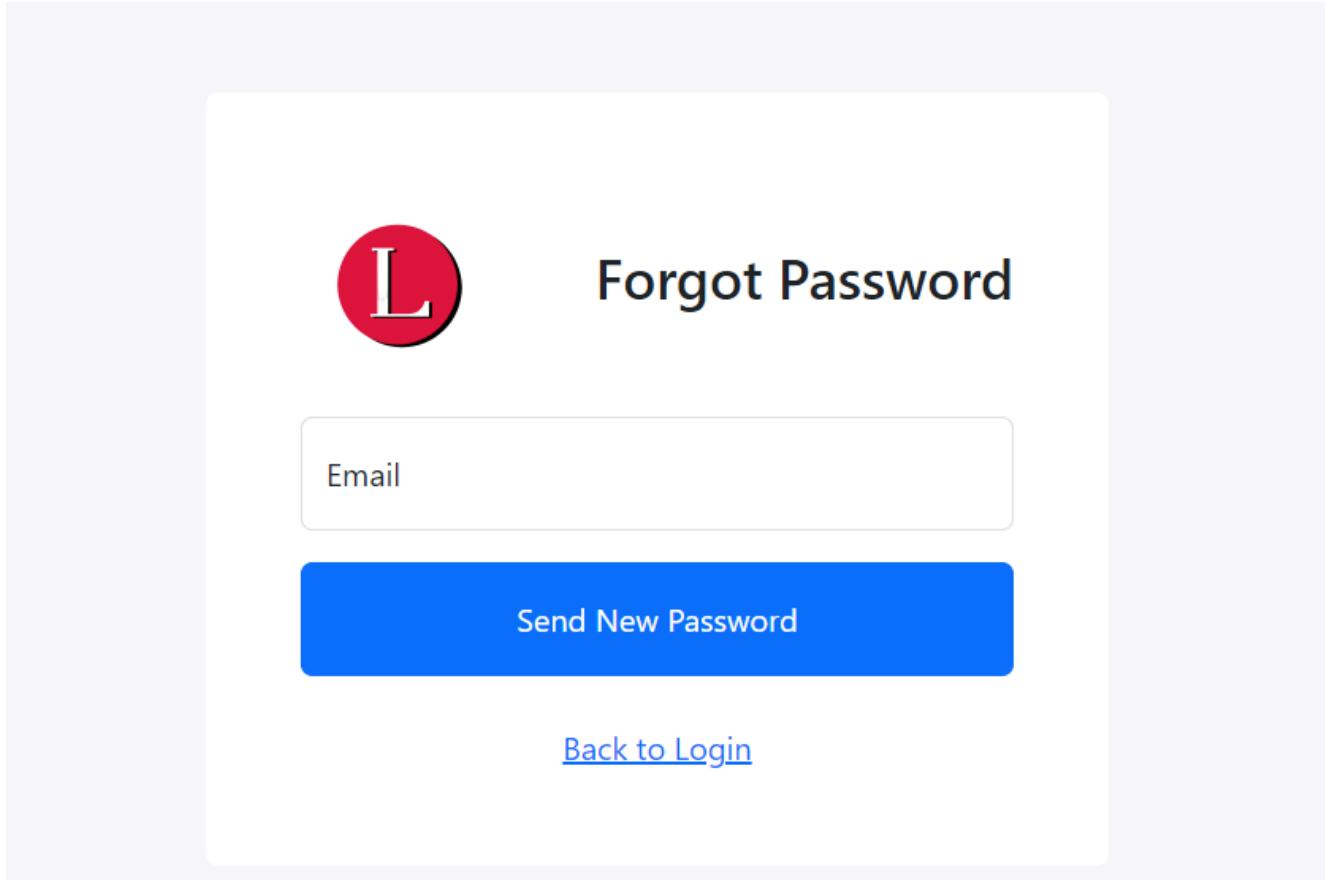


The image shows a user interface for a sign-up form. At the top left is a logo consisting of two blue people icons and the text "Linh và đồng bọn". To the right of the logo is the word "Sign Up" in a bold, dark blue font. Below these are eight input fields arranged vertically, each with a placeholder text: "Email", "Username", "Password", "Confirm Password", "Phone number", "Address", "First Name", and "Last Name". A large blue button at the bottom contains the text "Sign Up" in white. Below the button, a link in blue text says "Already have an Account? [Sign In](#)".

2.2 Forgot password

Related use cases: [2.2 Forgot password](#)

UI Design



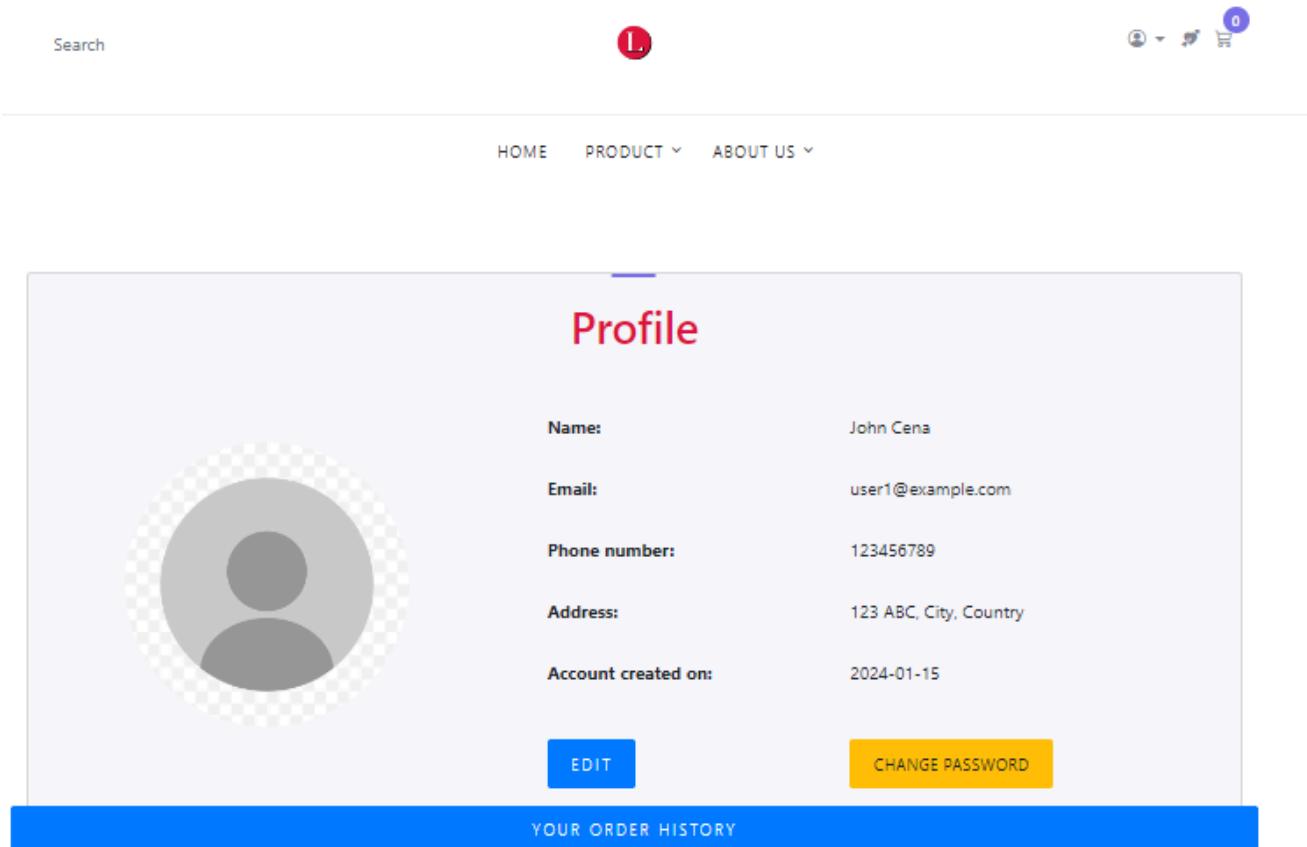
3. Customer

3.1 Profile

3.1.1, Profile Page

Related use cases: [3.4 UC12 Edit Profile](#)

UI Design



Field Name	Field Type	Description
Edit	button	Display the form for user to update their profile
Change Password	button	Display the short description of the news
Name	text	Display name of customer
Email	text	Display customer email
Phone number	text	Display customer phone number
Address	text	Display customer address
Account created on	date	Display created date

Your Order History	href	Click to go to the Order History page
--------------------	----------------------	---------------------------------------

3.1.2, Edit Profile Form

Related use cases: [3.4 UC12_Edit Profile](#)

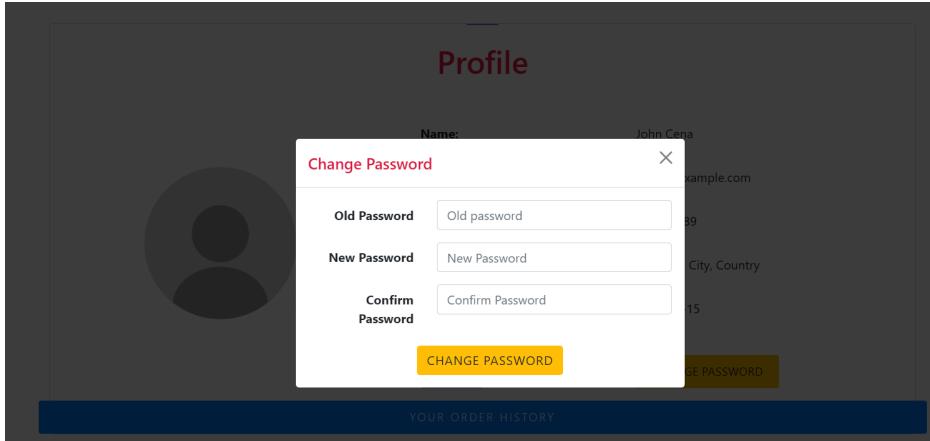
UI Design

Field Name	Field Type	Description
Avatar	File	This is for Customer to upload new image for avatar
First name	Text	This is for Customer change their first name and must be 2-20 characters long and contain only text.
Last name	Text	This is for Customer change their last name and must be 2-20 characters long and contain only text.
Phone number	Text	This is for Customer change their phone number. Phone number does not start with 09, 03, 07, or 08 and must be 10-11 digits long.
Address	Text	This is for Customer change their address receiver product
Save Changes	Button	Clicks to save information changes

3.1.3, Change Password Form

Related use cases: [3.4 UC12_Edit Profile](#)

UI Design



Field Name	Field Type	Description
Old Password	Text	This is for Customer to validate password after change
New Password	Text	This is for the Customer enter password that customer wants to change and Passwords must contain at least 8 characters including one uppercase letter, one special character. Cannot contain space!
Confirm Password	Text	This is for Customer to confirm the new password
Change Password	Button	Click to submit form update profile information

Database Access

Table	CRUD	Description
Customer	RU	<ul style="list-style-type: none">View the personal profileUpdate information (name, phone number, email, address, email, avatar) and change password.

SQL Commands

1/Update Profile Information

```
"UPDATE [dbo].[customer]\n"
+ " SET [email] = ?\n"
+ " ,[phone] = ?\n"
+ " ,[address] = ?\n"
+ " ,[firstname] = ?\n"
+ " ,[lastname] = ?\n"
+ " ,[img] = ?\n"
+ " WHERE [id] = ?"
```

2/Change Password

```
"UPDATE [dbo].[customer] SET [password] = ? WHERE [id] = ?"
```


3.2 Shopping History

3.2.1, Shopping History Page

Related use cases: [3.2 UC9_OrderHistory](#)

UI Design

The screenshot shows a web application interface for a shopping history. At the top, there is a navigation bar with a search bar, a logo (a red circle with 'L'), and user account icons. Below the navigation bar, there are links for HOME, PRODUCT, and ABOUT US. A breadcrumb navigation shows 'Home / Cart'. The main content area is titled 'Shopping History' and displays a table of six orders. The table has columns for Order Date, Status, Total Price, and View Detail. Each row in the table contains a link labeled 'View Detail'.

Order Date	Status	Total Price	View Detail
2023-05-10	2	1800 VND	View Detail
2024-05-10	1	2800 VND	View Detail
2024-05-15	1	1100 VND	View Detail
2024-06-15	1	1400 VND	View Detail
2024-07-05	4	1500 VND	View Detail
2024-08-25	7	3300 VND	View Detail

Field Name	Field Type	Description
Order Date	Table data	This is display the order is ordered on which day
Status	Table data	This is display status of order (Received, Rejected, Shipping, Receive goods back, Return goods)
Total Price	Table data	This is display price of order (include discount)
View Detail	href	Click to go through order detail

Database Access

Table	CRUD	Description
Customer	R	View the order(s) which had bought

SQL Commands

1/ Display all customer's order

“SELECT * FROM [order] where [customer_id] = ?”

3.3 Order Detail

3.3.1, Order Detail Page

Related use cases: [3.2 UC9_OrderDetail](#)

UI Design

Order Detail

Customer: Jack Ma

Order date: 2024-07-10

Note:

Address: HCMC

Paid date: 2024-07-11

Phone: 090456789

Status: Received

	Laptop Asus TUF Gaming A15	15 days return	đ25.850.000
ID : 3	SERI: 22		
Rating:	<div style="border: 1px solid #ccc; padding: 5px; width: 100%;">1 Star</div>		
Feedback:	<div style="border: 1px solid #ccc; padding: 5px; height: 100px;">Leave your feedback here</div>		
SUBMIT FEEDBACK			

Field Name	Field Type	Description
Customer	Text	This is the customer order name.
Address	Text	This is the customer order address
Phone	Text	This is the customer order phone
Order date	date	This is the customer order date.
Paid date	date	This is the customer order paid date
Status	number	This is the customer order status
Note	Text	This is the customer order note
Rating	select option	This is drop down option to let customer select star rating
Feedback	Text box	This is text box where customer leave their feedback
Submit Feedback	button submit	Click to submit customer feedback and rate

Database Access

Table	CRUD	Description
Customer	R	Get the customer details in the order.

Order_detail	R	Show list products were ordered, feedbacked and rated
Rate	C	Add feedback and rate for product which had bought
Product	R	Show products information which were ordered

SQL Commands

1/ Display list products were ordered

“SELECT * FROM [order_detail] where [order_id] = ?”

2/ Display products were ordered

“SELECT * FROM [product] where [id] = ?”

3/ Display list products were ordered

“SELECT * FROM [rate] where [order_detail_id] = ?”

3.4 Checkout

Related use cases: [3.1 UC8_Checkout](#)

UI Design

Database Access

SQL Commands

4, Employee

The screenshot shows the 'Employee Profile' page. On the left is a sidebar with a user icon and the name 'Hoang To Staff'. Below it are links for 'Website', 'Create New', and 'Manage'. The main content area has a title 'Employee Profile' and a placeholder image for the user's profile picture. To the right, there are five data fields with their corresponding values:

Name:	Hoang To
Email:	staff3@example.com
Phone number:	555666777
Address:	789 ABC, Village, Country
Account created on:	2024-03-25

At the bottom are two buttons: 'Edit' (blue) and 'Change Password' (yellow).

At the very bottom of the page, there is a copyright notice: '© Your Site Name, All Right Reserved.' and credits: 'Designed By [HTML Codex](#)' and 'Distributed By: [ThemeForest](#)'.

The screenshot shows an 'Edit Profile' modal window. It contains a placeholder image for the user's profile picture labeled 'Avatar(*)'. Below it are four input fields: 'First Name' (Hoang), 'Last Name' (To), 'Phone number' (555666777), and 'Address' (789 ABC, Village, Country). There are also two buttons: 'Chọn tệp' (Select file) and 'Không có tệp... được chọn' (No file selected). At the bottom is a 'Save Changes' button.

The background of the modal is semi-transparent, showing the original 'Employee Profile' page from the previous screenshot.

Field Name	Field Type	Description
Avatar	File	This is for Customer to upload new image for avatar
First name	Text	This is for employees to change their first name and must be 2-20 characters long and contain only text.
Last name	Text	This is for employees to change their last name and must be 2-20 characters long and contain only text.
Phone number	Text	This is for employees to change their phone number. Phone number does not start with 09, 03, 07, or 08 and must be 10-11 digits long.

Address	Text	This is for Employee change their address receiver product
Save Changes	Button	Clicks to save information changes

Database Access

Table	CRUD	Description
Admin		
Manage	RU	
Staff		<ul style="list-style-type: none"> ● View the personal profile ● Update information (name, phone number, address, email, avatar) and change password.

SQL Commands

1/Update Profile Information

```
"UPDATE [dbo].[customer]\n"
+ " SET [email] = ?\n"
+ " ,[phone] = ?\n"
+ " ,[address] = ?\n"
+ " ,[firstname] = ?\n"
+ " ,[lastname] = ?\n"
+ " ,[img] = ?\n"
+ " WHERE [id] = ?"
```

2/Change Password

```
"UPDATE [dbo].[customer] SET [password] = ? WHERE [id] = ?"
```

4.1 Staff

4.1.1 Add Discount

Related use cases: [4.1.5 UC17 Manage Discounts](#)

UI Design

UI Design

The screenshot shows a user interface for adding discounts. On the left is a sidebar with navigation links: Website, Dashboard, Account, Create New (with a dropdown menu), and Manage (with a dropdown menu). The main content area is titled "Add Discounts". It contains several input fields: "Product" (a dropdown menu showing "Laptop Asus ROG Strix"), "Quantity" (a text input field), "Value" (a text input field), "Start Date" (a text input field with a placeholder "dd/mm/yyyy"), and "Expiration Date" (a text input field with a placeholder "dd/mm/yyyy"). Below these fields is a blue "Add Discount" button. At the bottom of the page, there is a footer with the text "© Your Site Name, All Right Reserved." and credits: "Designed By [HTML Codex](#)" and "Distributed By [ThemeWagon](#)".

Field Name	Field Type	Description
Product*	Form Select	This is for Admin to choose the product to have a discount
Quantity*	Text Box	This is for Admin to input valid quantity of selected product
Value*	Text Box	This is for Admin to input valid value for discount
Start Date*	Text Box	This is for Admin to pick the valid discount start date
Expiration Date*	Date picker	This is for Admin to pick the valid discount end date
Add Discount	Button	Clicks to create a new product discount

Database Access

Table	CRUD	Description
Admin	C	Create a new product discount

SQL Commands:

1/ Create a new product discount

```
"INSERT INTO discount (product_id, quantity, value, start_date, exp_date, created_by) VALUES (?, ?, ?, ?, ?, ?)"
```


4.1.2 Add News

Related use cases: [4.1.3 UC15 Manage News](#)

UI Design

The screenshot shows a user interface for adding news. On the left is a sidebar with a user profile (Vu Vinh, Admin), navigation links (Website, Dashboard, Account, Create New, Manage), and a 'Come back Manage News' button. The main area has a title 'Add News'. It contains several input fields: 'Title' (text box), 'Category' (dropdown menu showing 'SalesOff'), 'Short Description' (text box), and 'News Details' (a rich text editor with a toolbar for file, edit, view, insert, format, tools, and table). Below the editor is a status section with 'Status' (radio buttons for Active and Inactive, with Active selected), a word count (0 words), and a note about build with tinyMCE. At the bottom right is a blue 'Add News' button.

Field Name	Field Type	Description
Title*	Text Box	This is for Admin to input valid title for the news
Category*	Form select	This is for Admin to choose the news category
Short description	Text Box	This is for Admin to input valid short description
News Detail	tox tox-tinymce	This is for Admin to input valid news detail
Status*	Radio	This is for Admin set the status of the news
Add Discount	Button	Clicks to create a new news

Database Access

Table	CRUD	Description
Admin	C	Create a new news

SQL Commands:

1/ Create a new news

```
"INSERT INTO [dbo].[news]\n"
+ "    ([title]\n"
+ "    ,[short_description]\n"
+ "    ,[create_date]\n"
+ "    ,[news_detail]\n"
```

```
+ "      ,[author]\n"
+ "      ,[news_category_id]\n"
+ "      ,[status])"
+ " VALUES\n"
+ "      (?,?,?,?,?,?)"
```

4.1.3 Manage Orders

4.1.3.1 Manage Orders

Related use cases: [4.1.7 UC19 _ Manage Orders](#)

UI Design

Code	Customer Name	Phone	Customer Note	Verify by	Verify on	Status	Action
50	Ronaldo Messi	444777888				Rejected	
46	Tony Stark	333222111				Receive goods back	
45	Ronaldo Messi	444777888				Return goods	
44	Tony Stark	333222111				Received	
43	Tony Stark	333222111				Shipping	
42	Jack Ma	987654321				Rejected	
39	Ronaldo Messi	444777888				Receive goods back	
38	Bill Gate	555666777				Return goods	
37	Tony Stark	333222111				Received	
36	Bill Gate	555666777				Shipping	

Field Name	Field Type	Description
Search bar	Text Box	This is for Staff to search for customer name, username, phone or address
Status filter	Form select	This is for Staff to filter the status
Customer Name	Text	Display the customer name
Phone	Text	Display the customer Phone number
Customer Note	Text	Display the order note
Verify by	Text	Display the staff who verify the order
Verify on	Text	Display the day the order was verified
Status	Text	Display the status of the order
Action	View Button	Display the Order detail

Database Access

Table	CRUD	Description
Staff	R	View the Order

SQL Commands:

- 1/ Create a new news
“SELECT * FROM [order]”

4.1.3.2 Manage Orders Detail

Related use cases: [4.1.7 UC19 Manage Orders](#)

UI Design

The screenshot shows a modal window titled "Order Details" over a dark-themed dashboard. The modal contains sections for "Linh và đồng bợn Store" (Address: Đại học FPT-HL, Điện thoại: 123456789), "Orders" (Ngày: 01/01/2024), "THÔNG TIN KHÁCH HÀNG" (Customer info: Ronaldo Messi, Tony Stark, etc.), "THÔNG TIN ĐƠN HÀNG" (Order info: Mã vận đơn: 50), and a table of products. The table has columns: STT, Tên hàng, Đơn giá, Số lượng, and Thành tiền. It lists one item: Laptop Asus VivoBook S15 at 21150000 VND, quantity 1100. A total row shows "Tổng tiền" (Total amount) as 21150000 VND.

Field Name	Field Type	Description
Date	Text	Display the order date
Customer Name	Text	Display the customer name
Phone	Text	Display the customer Phone number
Order ID	Text	Display the order ID
Product List	List	Display the products in the order
ID	Text	Display the Product ID
Product name	Text	Display the Product Name
Price	Text	Display the product price
Quantity	Text	Display the product quantity
Total	Text	Display the order total price

Database Access

Table	CRUD	Description
Staff	R	View the Order Detail

SQL Commands:

1/ Create a new news

```
"select * from [order] o join order_detail od on o.id = od.order_id where o.id= ?"
```

4.1.4 Manage Discount

Related use cases: [4.1.5 UC17 Manage Discounts](#)

UI Design

ID	Product Name	Quantity	Value	Start Date	Expiration Date	Created By	Actions
20	Laptop Dell G3 15	1	99%	2024-05-30	2024-10-15	minh	<input checked="" type="checkbox"/> Delete
19	Laptop Dell Chromebook 3100	3	85%	2024-05-30	2024-09-20	hoang	<input checked="" type="checkbox"/> Delete
18	Laptop Dell Precision 5550	2	93%	2024-05-30	2024-07-05	hieu	<input checked="" type="checkbox"/> Delete
17	Laptop Dell Vostro 14	5	77%	2024-05-30	2024-07-15	minh	<input checked="" type="checkbox"/> Delete
16	Laptop Dell Alienware m15	4	88%	2024-05-30	2024-08-30	hoang	<input checked="" type="checkbox"/> Delete
15	Laptop Dell Latitude 7420	3	95%	2024-05-30	2024-09-25	hieu	<input checked="" type="checkbox"/> Delete
14	Laptop Dell G5 15	2	50%	2024-05-30	2024-08-10	minh	<input checked="" type="checkbox"/> Delete
13	Laptop Dell Inspiron 15	5	80%	2024-05-30	2024-10-05	hoang	<input checked="" type="checkbox"/> Delete
12	Laptop Dell XPS 13	5	65%	2024-05-30	2024-09-15	hieu	<input checked="" type="checkbox"/> Delete
11	Laptop Dell XPS 13	1	55%	2024-05-30	2024-06-25	minh	<input checked="" type="checkbox"/> Delete

Field Name	Field Type	Description
Title*	Text Box	This is for Admin to input valid title for the news
Category*	Form select	This is for Admin to choose the news category
Short description	Text Box	This is for Admin to input valid short description
News Detail	tox tox-tinymce	This is for Admin to input valid news detail
Status*	Radio	This is for Admin set the status of the news
Add Discount	Button	Clicks to create a new news

Database Access

Table	CRUD	Description
Admin	C	Create a new news

SQL Commands:

1/ Create a new news

```
"INSERT INTO [dbo].[news]\n"
+ "    ([title]\n"
+ "    ,[short_description]\n"
+ "    ,[create_date]\n"
+ "    ,[news_detail]\n"
```

```

+ "      ,[author]\n"
+ "      ,[news_category_id]\n"
+ "      ,[status])"
+ "  VALUES\n"
+ "  (?,?,?,?,?,?)"

```

4.1.5 Manage News

Related use cases: [4.1.3 UC15 _ Manage News](#)

UI Design

#	Category	Title	Author	Short Description	Status	Action
53	About	Policy	Vu Vinh	Policy		
52	About	Term	Vu Vinh	Term		
51	About	About us	Vu Vinh	About us		
50	New Product	News number 50	Hoang To	Little flash		
49	Hot	News number 49	Hieu San	Short update		
48	Hot	News number 48	Linh ...	Quick note		
47	SalesOff	News number 47	Minh Mai	Tiny piece		
46	SalesOff	News number 46	Hoang To	Brief news		
45	New Product	News number 45	Hieu San	Little update		
44	New Product	News number 44	Linh ...	Quick info		

Field Name	Field Type	Description
Title*	Text Box	This is for Admin to input valid title for the news
Category*	Form select	This is for Admin to choose the news category
Short description	Text Box	This is for Admin to input valid short description
News Detail	tox tox-tinymce	This is for Admin to input valid news detail
Status*	Radio	This is for Admin set the status of the news
Add Discount	Button	Clicks to create a new news

Database Access

Table	CRUD	Description
Admin	C	Create a new news

SQL Commands:

1/ Create a new news

```
"INSERT INTO [dbo].[news]\n"
+ "      ([title])\n"
+ "      ,[short_description])\n"
+ "      ,[create_date])\n"
+ "      ,[news_detail])\n"
+ "      ,[author])\n"
+ "      ,[news_category_id])\n"
+ "      ,[status])"
+ "    VALUES\n"
+ "      (?,?,?,?,?,?)"
```

4.1.6 Manage News Category

Related use cases: [4.1.4 UC16 Manage News Categories](#)

UI Design

The screenshot shows a web-based administration interface for managing news categories. At the top, there's a header bar with a user profile for 'Vu Vinh Admin' and a navigation menu on the left. The main content area is titled 'News Category'. It features a search bar and a button to 'Add News Category'. Below this is a table listing four news categories:

#	Category	Action
1	SalesOff	
2	Hot	
3	New Product	
4	About	

At the bottom of the page, there are links for 'Previous', '1', '»', and 'End'. The footer contains copyright information and credits: '© Your Site Name, All Right Reserved.', 'Designed By [HTML Codex](#)', and 'Distributed By [ThemeWagon](#)'.

Field Name	Field Type	Description
Title*	Text Box	This is for Admin to input valid title for the news
Category*	Form select	This is for Admin to choose the news category
Short description	Text Box	This is for Admin to input valid short description
News Detail	tox tox-tinymce	This is for Admin to input valid news detail
Status*	Radio	This is for Admin set the status of the news
Add Discount	Button	Clicks to create a new news

Database Access

Table	CRUD	Description
Admin	C	Create a new news

SQL Commands:

1/ Create a new news

```
"INSERT INTO [dbo].[news]\n"
+ "    ([title]\n"
+ "    ,[short_description]\n"
+ "    ,[create_date]\n"
+ "    ,[news_detail]\n"
+ "    ,[author]\n"
```

```
+ "      ,[news_category_id]\n" + "      ,[status])" + " VALUES\n" + "      (?,?,?,?,?,?)"
```

4.1.7 Manage Products

Related use cases: [4.1.1 UC13 Manage Product](#)

4.1.7.1, Manage Products Page

UI Design

The screenshot shows a user interface for managing products. At the top, there's a header bar with a user profile for 'Hoang To' and a 'DASHBOARD' button. Below the header is a sidebar with links for 'Website', 'Create New', and 'Manage'. The main area is titled 'Manage Products' and contains a search bar, a category dropdown, and a blue 'Add Product' button. A table lists four products:

Name	Represent Image	Created By	Created On	Modified By	Modified On	Actions
Laptop Asus ROG Strix		3	2024-05-16	0		
Laptop Asus ZenBook 14		3	2024-05-16	0		
Laptop Asus TUF Gaming A15		3	2024-05-16	0		
Laptop Asus VivoBook S15		3	2024-05-16	0		

Field Name	Field Type	Description
Hidden/Display	Button	Click to change status (Hidden/Display)
Add Product	Button	Click to open Add New Product form
Edit Product	Button	Click to open Edit Product form
Search Box	Input text	User can search in input to search Product by name

4.1.7.2, Add New Product Form

Add Product

Name (*)

Represent Image (*)
Add Image

Detail Images (*)
Chọn tệp | Không có tệp nào được chọn

CPU (*)

GPU(*)

RAM (*)

ROM (*)

Monitor (*)

OS (*)

Price (*)
Enter Price > 0

Quantity (*)
Enter Quantity > 0

Description (*)

Brand (*)
Asus

Category (*)
Gaming Laptop

Add Product

Field Name	Field Type	Description
Name	text	Input name of Product
Represent Image	file	Upload Image represent for product
Detail Images	file	Upload Images detail for product
CPU	text	Input configuration of CPU
GPU	text	Input configuration of GPU
RAM	text	Input configuration of RAM
ROM	text	Input configuration of ROM
Monitor	text	Input configuration of Monitor
OS	text	Input configuration of GPU
Price	text	Input sale price
Quantity	text	Input number of product
Description	text	Short description about product
Brand	select	Brand of Product
Category	select	Product Category
Add Product	button	Submit form to add new product

4.1.7.3, Edit Product Form

Edit Product

Name (*)	Laptop Asus ROG Strix
Represent Image (*)	 <input type="button" value="Chọn tệp"/> <input type="button" value="Không có tệp nào được chọn"/>
List Image (*)	  <input type="button" value="Chọn tệp"/> <input type="button" value="Không có tệp nào được chọn"/>
CPU (*)	Intel Core i7-10750H
GPU (*)	Nvidia RTX 2060
RAM (*)	16GB DDR4
ROM (*)	1TB SSD
Monitor (*)	15.6-inch FHD 144Hz
Monitor (*)	15.6-inch FHD 144Hz
OS (*)	Windows 10
Price (*)	35250000
Quantity (*)	5
Description (*)	High-performance gaming laptop.
Brand (*)	Laptop Asus ROG Strix
Category (*)	Gaming Laptop
<input type="button" value="Save changes"/>	

Field Name	Field Type	Description
Name	text	Input name of Product want to change
Represent Image	file	Upload Image represent for product want to change
Detail Images	file	Upload Images detail for product want to change
CPU	text	Input configuration of CPU want to change
GPU	text	Input configuration of GPU want to change
RAM	text	Input configuration of RAM want to change
ROM	text	Input configuration of ROM want to change
Monitor	text	Input configuration of Monitor want to change

OS	text	Input configuration of OS want to change
Price	text	Input sale price want to change
Quantity	text	Input number of product want to change
Description	text	Short description about product want to change
Brand	select	Brand of Product want to change
Category	select	Product Category want to change
Save Change	button	Click to submit form to edit product information

Database Access

Table	CRUD	Description
1. Admin 2. Manager 3. Staff	CRUD	View, Add, Edit, Delete, Hidden, Display Product

SQL Commands

1/ Create a new Product

```
"INSERT INTO [dbo].[product]\n"
+ "    ([name])\n"
+ "    ,[CPU]\n"
+ "    ,[GPU]\n"
+ "    ,[RAM]\n"
+ "    ,[ROM]\n"
+ "    ,[monitor]\n"
+ "    ,[OS]\n"
+ "    ,[price]\n"
+ "    ,[quantity]\n"
+ "    ,[representImage]\n"
+ "    ,[description]\n"
+ "    ,[brand_id]\n"
+ "    ,[category_id]\n"
+ "    ,[created_by]\n"
+ "    ,[created_on])\n"
+ "    VALUES (?,?,?,?,?,?,?,?,?,?,?,?,?,?)"
```

2/ Edit Product

```
"UPDATE [dbo].[product]\n"
+ " SET [name] = ?\n"
+ " ,[CPU] = ?\n"
+ " ,[GPU] = ?\n"
+ " ,[RAM] = ?\n"
+ " ,[ROM] = ?\n"
```

```
+ " ,[monitor] = ?\n"
+ " ,[OS] = ?\n"
+ " ,[price] = ?\n"
+ " ,[description] = ?\n"
+ " ,[brand_id] = ?\n"
+ " ,[category_id] = ?\n"
+ " ,[quantity]= ?\n"
+ " ,[representImage]= ?\n"
+ " ,[modified_by] = ?\n"
+ " ,[modified_on] = ?\n"
+ " WHERE [id] = ?"
```

5/ Display Product

```
"UPDATE [dbo].[product] SET [status] = 1 WHERE [id] = (SELECT p.id \n" +
" FROM product p \n" +
" JOIN brand b ON b.id=p.brand_id\n" +
" Join category c on c.id=p.category_id\n" +
" WHERE b.status = 1 and c.status=1 and p.id=?)"
```

6/ Hidden Product

```
"UPDATE [dbo].[product]\n"
+ " SET [status] = 0\n"
+ " WHERE [id] = ?"
```

7/Filter by Category

```
"SELECT * FROM product WHERE category_id = ? ORDER BY id OFFSET ? ROWS FETCH NEXT ?
ROWS ONLY"
```

4.1.8 Manage Serial Numbers

Related use case: [4.1.1 UC13 Manage Product](#), [4.1.8 UC23 Add Serial Numbers](#)

UI Design

The screenshot displays a user interface for managing serial numbers. On the left, a sidebar menu includes options like 'Website', 'Dashboard', 'Account', 'Create New', and 'Manage'. The main content area is titled 'Manage Serial Numbers' and features a product card for a 'Laptop Asus ROG Strix'. The product card includes a thumbnail image, a title, and detailed specifications such as Name, CPU, GPU, RAM, ROM, Monitor, Operating System, and Description. To the right of the product card is a table titled 'Serial Numbers' showing five entries. Below the table is a form with a text input field labeled 'Enter quantity to add' and a 'Submit' button.

Field Name	Field Type	Description
Title	Title	Display the name of the product
Represent Image	file	Display the product image
Name	text	Display the name of the product
CPU	text	Display the CPU of the product
GPU	text	Display the GPU of the product
RAM	text	Display the RAM of the product
ROM	text	Display the ROM of the product
Monitor	text	Display the Monitor of the product
Operating System	text	Display the Operating System of the product
Serial number	text	Display the serial number
Status	text	Display the status of the product
Text box	text box	Input the number of the product you want to restock
Submit	button	Confirm the number of the product you want to restock

Database Access

1. Get All Serial Number By Product Id

“select * from serial_number where product_id = ?”

2. Add Serial Number

.....

```
INSERT INTO [dbo].[serial_number]
([sn]
```

```
,[product_id]
,[sn_status])
VALUES
(?, ?, ?)""""
```

4.1.9 Manage Brands

Related use case: [4.1.6 UC18 Manage Brand](#)

4.1.9.1, Manage Brands Page

The screenshot shows a user interface for managing brands. On the left, there's a sidebar with a user profile for 'Hoang To' (Staff), navigation links for 'Website', 'Create New', and 'Manage', and a search bar. The main area is titled 'Manage Brand' and contains a table with the following data:

ID	Name	Logo	Link	Created By	Created On	Modified By	Modified On	Actions
1	Asus		https://www.asus.com	3	2024-05-16	0		
2	Dell		https://www.dell.com	3	2024-05-16	0		
3	HP		https://www.hp.com	4	2024-05-16	0		
4	MSI		https://www.msi.com	4	2024-05-16	0		
5	Apple		https://www.apple.com	4	2024-05-16	0		

A blue 'Add Brand' button is located at the top right of the table area.

Field Name	Field Type	Description
Hidden/Display	Button	Click to change status (Hidden/Display)
Add Brand	Button	Click to open Add New Brand form
Edit Brand	Button	Click to open Edit Brand form
Search Box	Input text	User can search in input to search Brand by name

4.1.9.2, Add New Brand Form

The screenshot shows a modal window titled "Create New Brand". Inside the modal, there are three input fields: "Name (*)" with a placeholder "Chọn tên", "Logo (*)" with a placeholder "Chọn tệp" and a note "Không có tệp nào được chọn", and "Link (*)" with a placeholder "Nhập link". Below these fields is a blue "Add" button.

Field Name	Field Type	Description
Name	text	Brand name
Logo	file	Upload image for logo brand
Link	text	The link to brand website authentic
Add	button	Submit to create new Brand

4.1.9.3, Edit Brand Form

The screenshot shows a modal window titled "Edit Brand". Inside the modal, there are three input fields: "Name (*)" with a placeholder "MSI", "Logo (*)" with a placeholder "Chọn tệp" and a preview of the MSI logo, and "Link (*)" with a placeholder "https://www.msi.com". Below these fields is a blue "Save changes" button.

Field Name	Field Type	Description
Name	text	Brand name want to change

Logo	file	Upload image for logo brand want to change
Link	text	The link to brand website authentic want to change
Add	button	

Database Access

Table	CRUD	Description
1. Admin 2. Manager 3. Staff	CRUD	View, Add, Edit, Hidden, Display Brands

SQL Commands

1/ Create a new Brand

```
"INSERT INTO [dbo].[brand] "
+ "([name], [logo], [link], [created_by], [created_on]) "
+ "VALUES (?, ?, ?, ?, ?)"
```

2/ Edit Brand

```
"UPDATE [dbo].[brand]\n"
+ " SET [name] = ?\n"
+ " , [logo] = ?\n"
+ " , [link] = ?\n"
+ " , [modified_by] = ?\n"
+ " , [modified_on] = ?\n"
+ " WHERE [id] = ?"
```

3/ Display Brand

```
"UPDATE [dbo].[brand]\n"
+ " SET [status] = 1\n"
+ " WHERE [id] = ?"
```

"""" UPDATE product

```
SET status = 1
WHERE id IN (
SELECT p.id
FROM product p
JOIN category c ON c.id = p.category_id
WHERE c.status = 1
) and [brand_id] = ?"""
```

4/ Hidden Brand

```
"UPDATE [dbo].[brand]\n"
+ " SET [status] = 0\n"
+ " WHERE [id] = ?"
```

```
"UPDATE [dbo].[product]\n"
```

```
+ " SET [status] = 0\n"
+ " WHERE [brand_id] = ?"
```

4.1.10 Manage Product Categories

Related use case: [4.1.2 UC14 Manage Product Categories](#)

4.1.10.1, Manage Categories Page

The screenshot shows a user interface for managing brands. On the left, there's a sidebar with a dashboard icon, the user name 'Hoang To Staff', and navigation options for 'Website', 'Create New', and 'Manage'. The main area is titled 'Manage Brand' and features a search bar with placeholder text 'Search name brand...' and a magnifying glass icon. A blue button labeled 'Add Brand' is located at the top right of the search bar. Below the search bar is a table with the following columns: ID, Name, Logo, Link, Created By, Created On, Modified By, Modified On, and Actions. The table contains five rows of data:

ID	Name	Logo	Link	Created By	Created On	Modified By	Modified On	Actions
1	Asus		https://www.asus.com	3	2024-05-16	0		
2	Dell		https://www.dell.com	3	2024-05-16	0		
3	HP		https://www.hp.com	4	2024-05-16	0		
4	MSI		https://www.msi.com	4	2024-05-16	0		
5	Apple		https://www.apple.com	4	2024-05-16	0		

Field Name	Field Type	Description
Hidden/Display	Button	Click to change status (Hidden/Display)
Add Category	Button	Click to open Add New Category form
Edit Category	Button	Click to open Edit Category form
Delete Category	Button	Click to eliminate all relate to that Category
Search Box	Input text	User can search in input to search Category by name

4.1.10.2, Add New Category Form

The screenshot shows a 'Manage Category' page with a sidebar on the left containing links like 'Website', 'Dashboard', 'Account', 'Create New', and 'Manage'. A modal window titled 'Create New Category' is open, prompting for a 'Name Category' which is currently 'Gaming Laptop'. There is also a 'Search category...' input field and a 'Add Category' button.

ID	Name Category	Modified On	Actions
1	Gaming Laptop	0	[Edit, Delete]
2	Office Laptop	0	[Edit, Delete]
3	Business Laptop	0	[Edit, Delete]
4	Study Laptop	2024-05-16	[Edit, Delete]
5	Multimedia Laptop	2024-05-16	[Edit, Delete]
6	Graphics Laptop	2024-05-16	[Edit, Delete]
7	High-end Laptop	2024-05-16	[Edit, Delete]

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Field Name	Field Type	Description
Name	text	Input a name of new Category
Add Category	Button	Click to add new Category

4.1.9.3, Edit Category Form

The screenshot shows a 'Manage Category' page with a sidebar on the left containing links like 'Website', 'Dashboard', 'Account', 'Create New', and 'Manage'. A modal window titled 'Edit Category' is open, prompting for a 'Name' which is currently 'Gaming Laptop'. There is also a 'Search category...' input field and a 'Save changes' button.

ID	Name Category	Modified On	Actions
1	Gaming Laptop	0	[Edit, Delete]
2	Office Laptop	0	[Edit, Delete]
3	Business Laptop	0	[Edit, Delete]
4	Study Laptop	0	[Edit, Delete]
5	Multimedia Laptop	2024-05-16	[Edit, Delete]
6	Graphics Laptop	2024-05-16	[Edit, Delete]
7	High-end Laptop	2024-05-16	[Edit, Delete]

Field Name	Field Type	Description
Name	text	Input box for changing Category name want to change
Edit Category	Button	Click to save change

Database Access

Table	CRUD	Description
1. Admin		
2. Manager		
3. Staff	CRUD	View, Add, Edit, Delete, Hidden, Display Product Categories

SQL Commands

1/ Create a new Category

```
"INSERT INTO [dbo].[category] "
+ "([name], [created_by], [created_on]) "
+ "VALUES (?, ?, ?)"
```

2/ Edit Category

```
UPDATE [dbo].[category]\n"
+ " SET [name] = ?\n"
+ " ,[modified_by] = ?\n"
+ " ,[modified_on] = ?\n"
+ " WHERE [id] = ?
```

3/ Search Category

```
"SELECT COUNT(*) from [brand] where [name] like ?"
```

4/ Display Category

```
"UPDATE [dbo].[category]\n"
+ " SET [status] = 1\n"
+ " WHERE [id] = ?"
```

**** UPDATE product

```
SET status = 1
WHERE id IN (
    SELECT p.id
    FROM product p
    JOIN brand b ON b.id=p.brand_id
    WHERE b.status = 1
) and [category_id] = ?""""
```

5/ Hidden Category

```
"UPDATE [dbo].[category]\n"
+ " SET [status] = 0\n"
+ " WHERE [id] = ?"
```

```
"UPDATE [dbo].[product]\n"
+ " SET [status] = 0\n"
```

```
+ " WHERE [category_id] = ?"
```

4.2 Manager

4.2.1 Manage Feedback

Related use case: [4.2.2 UC22 – Manage Customer Feedback](#)

UI Design

ID	Product	Start rate	User Name	Feedback	Action
50	Mac Pro	★★★★☆ 2	Tony Stark	Chất lượng không tốt, không hài lòng.	
49	MacBook Pro 15	★★★★★ 5	Ronaldo Messi	Sản phẩm tốt, rất hài lòng.	
48	iMac 27	★★★★☆ 4	Tony Stark	Giao hàng nhanh, sản phẩm tốt.	
47	MacBook Pro 14	★★★★☆ 3	Tony Stark	Sản phẩm trung bình, giá hợp lý.	
46	Mac Mini	★★★★★ 5	Tony Stark	Tuyệt vời, sản phẩm đáng mua.	
45	iMac 24	★★★★☆ 2	Jack Ma	Hàng bị lỗi, rất không hài lòng.	
44	MacBook Pro 16	★★★★☆ 4	Tony Stark	Sản phẩm chất lượng, giá hợp lý.	
43	MacBook Air	★★★★★ 5	Ronaldo Messi	Rất tốt, giao hàng nhanh.	
42	MacBook Pro 13	★★★★☆ 3	Bill Gate	Sản phẩm ổn, giá cao.	
41	Laptop MSI GL65 Leopard	★★★★☆ 4	Tony Stark	Đóng gói kỹ, chất lượng tốt.	

Field Name	Field Type	Description
Search bar	Text Box	This is for Admin search for product name, customer name or feedback
Product	href link	Display the name of the product and the link to the correspond product detail page
Star rate	integer	Display the rate value made by customer
User Name	Text	Display the name of the customer
Feedback	Text	Display the feedback of the product
Action	Delete Button	Clicks to delete the feedback

Database Access

Table	CRUD	Description
Admin	R	View the feedback from customer
Admin	D	Delete the feedback

SQL Commands:

1/ View the feedback from customer

```
"select r.id,c.* from rate r join order_detail od\n"
  + "on r.order_detail_id=od.id join [order] o\n"
  + "on od.order_id = o.id join customer c\n"
  + "on o.customer_id=c.id"
```

2/ Delete the feedback

```
"DELETE FROM rate WHERE id = ?"
```

4.2.2 Add Employee

Related use case: [4.2.1 UC21 _ Add New Staff](#)

UI Design

The screenshot shows a web application interface titled 'Add New Account'. On the left is a sidebar with a user profile for 'Vu Vinh Admin', navigation links for 'Website', 'Dashboard', 'Account', 'Create New', and 'Manage', and a bell icon. The main area has fields for 'Username', 'Email address', 'Phone Number', 'Address', and 'Date of Birth' (with a date picker). A 'Submit' button is at the bottom right. The footer includes copyright information and credits for 'HTML Codex' and 'ThemeWagon'.

Field Name	Field Type	Description
Username*	Text Box	This is for Admin to input valid username for logging in
Email Address*	Text Box	This is for Admin to input valid email address for logging in
Phone number*	Text Box	This is for Admin to input valid Phone number
Address*	Text Box	This is for Admin to input valid Address
Date of birth*	Date picker	This is for Admin to pick the valid date of birth
Submit	Button	Clicks to create a new employee account

Database Access

Table	CRUD	Description
Admin	C	Create a new Employee account

SQL Commands:

1/ Create a new Employee account

```
"INSERT INTO [dbo].[employee]\n"
    + "      ([username]\n"
    + "      ,[password]\n"
    + "      ,[email]\n"
    + "      ,[phone]\n"
```

```
+ "      ,[address]\n"
+ "      ,[firstname]\n"
+ "      ,[lastname]\n"
+ "      ,[reg_date]\n"
+ "      ,[role_id])\n"
+ " VALUES\n"
+ "     (?,?,?,?,?,?,?,?,?,?)";
```

4.3 Admin

4.3.1 Manage Account

Related use case: [4.3.2 UC24 Manage Account](#)

UI Design

Manage Account

The screenshot shows a user interface for managing accounts. At the top, there is a search bar labeled "Search by Name or Email" with a magnifying glass icon, a dropdown menu for "All Role", and a button labeled "Add Employees". Below this is a table with the following columns: ID, Username, Email, Phone Number, Role, Status, and Action. The table contains five rows of data:

ID	Username	Email	Phone Number	Role	Status	Action
1	vinh	staff1@example.com	123456789	Admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	hieu	staff2@example.com	987654321	Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	hoang	staff3@example.com	555666777	Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	minh	staff4@example.com	333222111	Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	linh	staff5@example.com	444777888	Staff	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

At the bottom right of the table, there are navigation buttons for "Previous", "1", and "Next".

Field Name	Field Type	Description
Search by Name or Email	Text box	Allow admin to search for an account
Select role	Drop box	Allow admin to quickly filter the role of the account
ID	text	Display the account ID
Username	text	Display the account Name
Email	text	Display the account Email
Phone Number	text	Display the account Phone Number
Role	Drop box	Change the role of the account
Status	text	Display the account Status
Action	button	Display the account detail

Database Access

Table	CRUD	Description
Admin	U	Update the role of the account

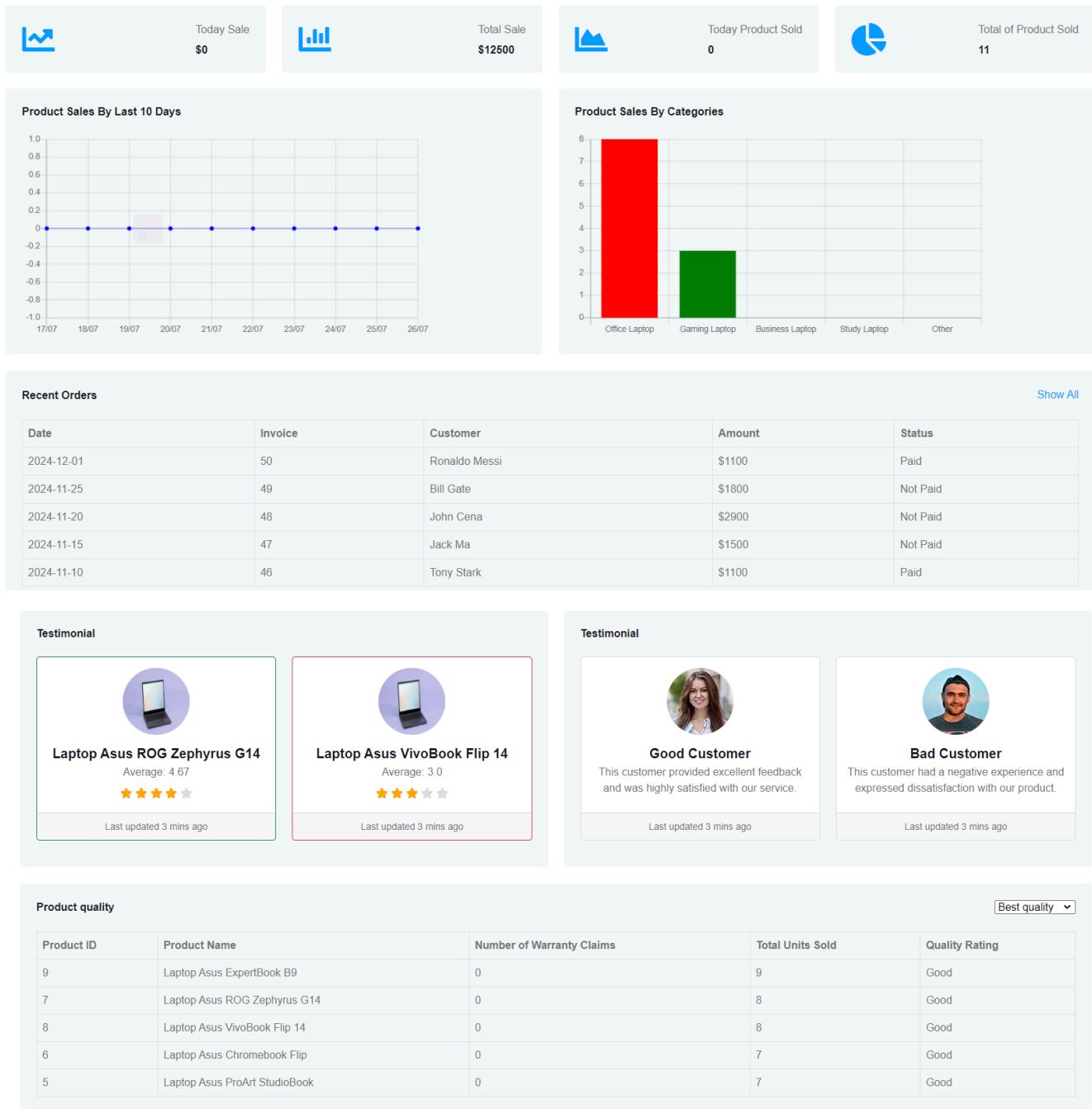
SQL Commands:

1/UPDATE employee SET role_id = ? WHERE id = ?
2/UPDATE employee SET [status] = ? WHERE id = ?

4.3.2 View statistic

Related use case: [4.3.1 UC23 View Statistic](#)

UI Design



Database Access

Table	CRUD	Description
Admin	C	Create a new Employee account

IV. Business Rules

ID	Business Rule	Business Rule Description
BR-01	Password Encoding	User's password must be encoded with MD5 hashing
BR-02	Validate Password	Passwords must contain at least 8 characters including one uppercase letter, one special character. Cannot contain space!
BR-03	Validate Name	Name must be 2-20 characters long and contain only text.
BR-04	Validate Phone number	Phone number does not start with 09, 03, 07, or 08 and must be 10-11 digits long.
BR-05	Product Not Available	If the selected product is not available, the system displays an appropriate message and may suggest alternative products.
BR-06	User Cancels Add/Edit/Delete (in management)	If the user decides to cancel the add, edit, or delete action, the system redirects them back to the brand list without making any changes.
BR-07	Database Connection Error	If the system cannot find details for the selected items, it displays an error message and suggests the user select a different item.
BR-08	No Details Found	If the system cannot find details for the selected items, it displays an error message and suggests the user select a different item.
BR-09	Account Locking	If user inputs wrong logging-in details 6 times continuously, his/her account would be locked for 30 minutes
BR-10	Accurate Product Details	Product details and availability must be accurate and up-to-date.
BR-11	Session Management	The system should maintain the user's session state to determine login status