



BOOK LIBRARY

Software Requirement Specification

– Hanoi, March 21 2023 –

RECORD OF CHANGES

Date	A* M, D	In charge	Change Description
31/Jan	A	TrangVT	Thêm mô tả chức năng Login (II.1)
01/Feb	A	HuyNQ	Thêm mô tả chức năng quản lý Profile (customer) (II.)
02/Feb	A	VuVT	Thêm mô tả chức năng Dashboard (II.)
05/Feb	A	VuVT	Thêm mô tả chức năng trang chủ (II.)
07/Feb	A	QuyenKTH	Thêm mô tả chức năng quản lý sản phẩm(II.)
10/Feb	A	ThanhDC	Thêm mô tả chức năng quản lý đơn hàng(II.)
10/Feb	A	VuVT	Thêm mô tả chức năng quản lý giỏ hàng(II.)
12/Feb	A	VuVT	Thêm mô tả chức năng đặt hàng(II.)
15/Feb	A	QuyenKTH	Thêm mô tả chức năng quản lý khách hàng(II.)
18/Feb	A	ThanhDC	Thêm mô tả chức năng quản lý nhân viên(II.)
25/Feb	M	VuVT	Sửa mô tả chức năng quản lý giỏ hàng(II.)
3/Mar	A	VuVT	Thêm mô tả chức năng đánh giá sản phẩm(II.)
4/Mar	M	VuVT	Sửa mô tả chức năng quản lý giỏ hàng(II.)
6/Mar	A	VuVT	Thêm mô tả chức năng tìm kiếm sản phẩm (II.)
6/Mar	A	HuyNQ	Thêm mô tả chức năng quản lý cửa hàng (II.)
7/Mar	A	HuyNQ	Thêm mô tả chức năng quản lý mã giảm giá(II.)
8/Mar	M	TrangVT	Sửa mô tả chức năng quản lý đơn hàng(II.)
8/Mar	M	ThanhDC	Sửa mô tả chức năng quản lý nhân viên(II.)
9/Mar	M	QuyenKTH	Sửa mô tả chức năng quản lý khách hàng(II.)
13/Mar	M	ThanhDC	Thêm mô tả chức năng
13/Mar	M	QuyenKTH	Sửa mô tả chức năng quản lý sản phẩm(II.)

*A - Added M - Modified D - Deleted

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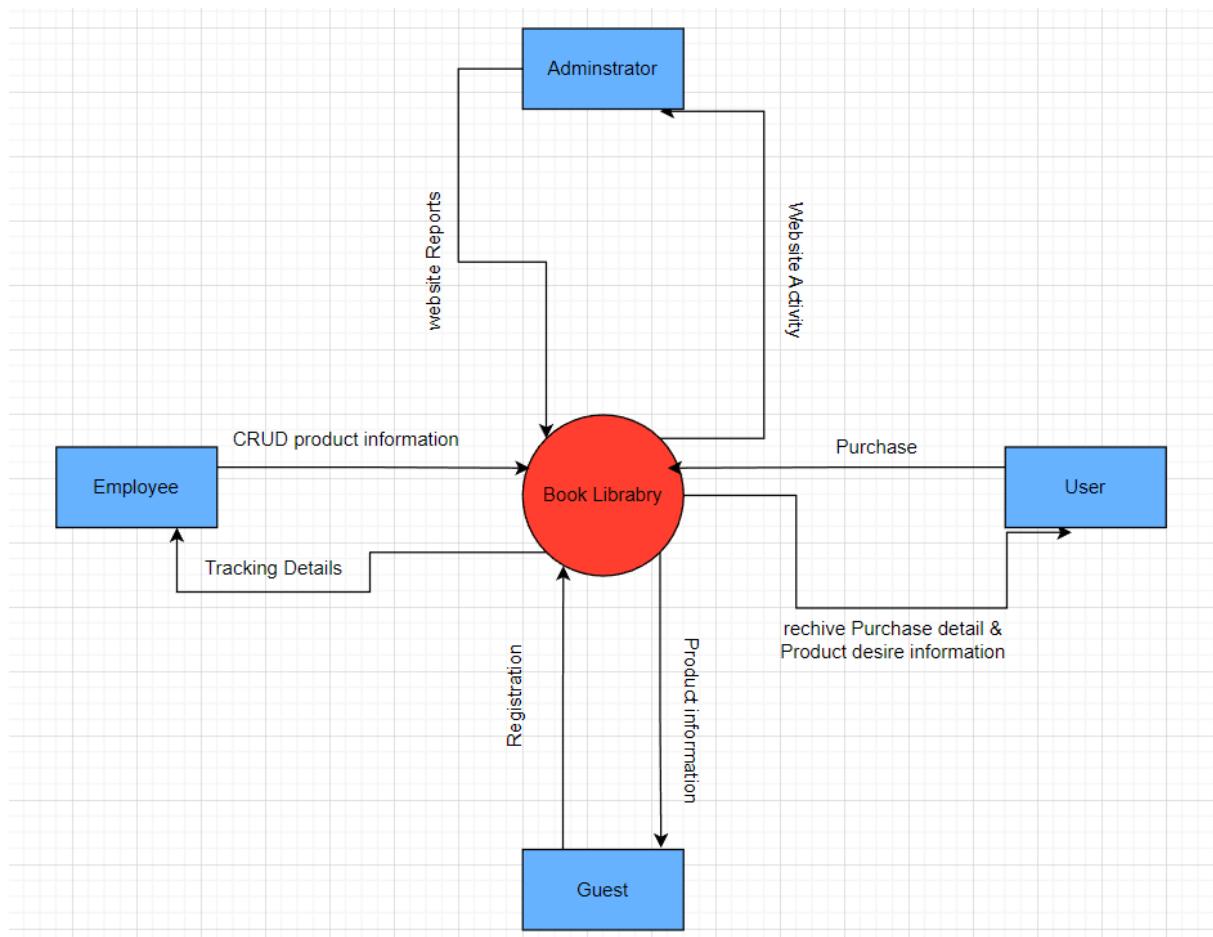
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30

I. Overview

1. Introduction

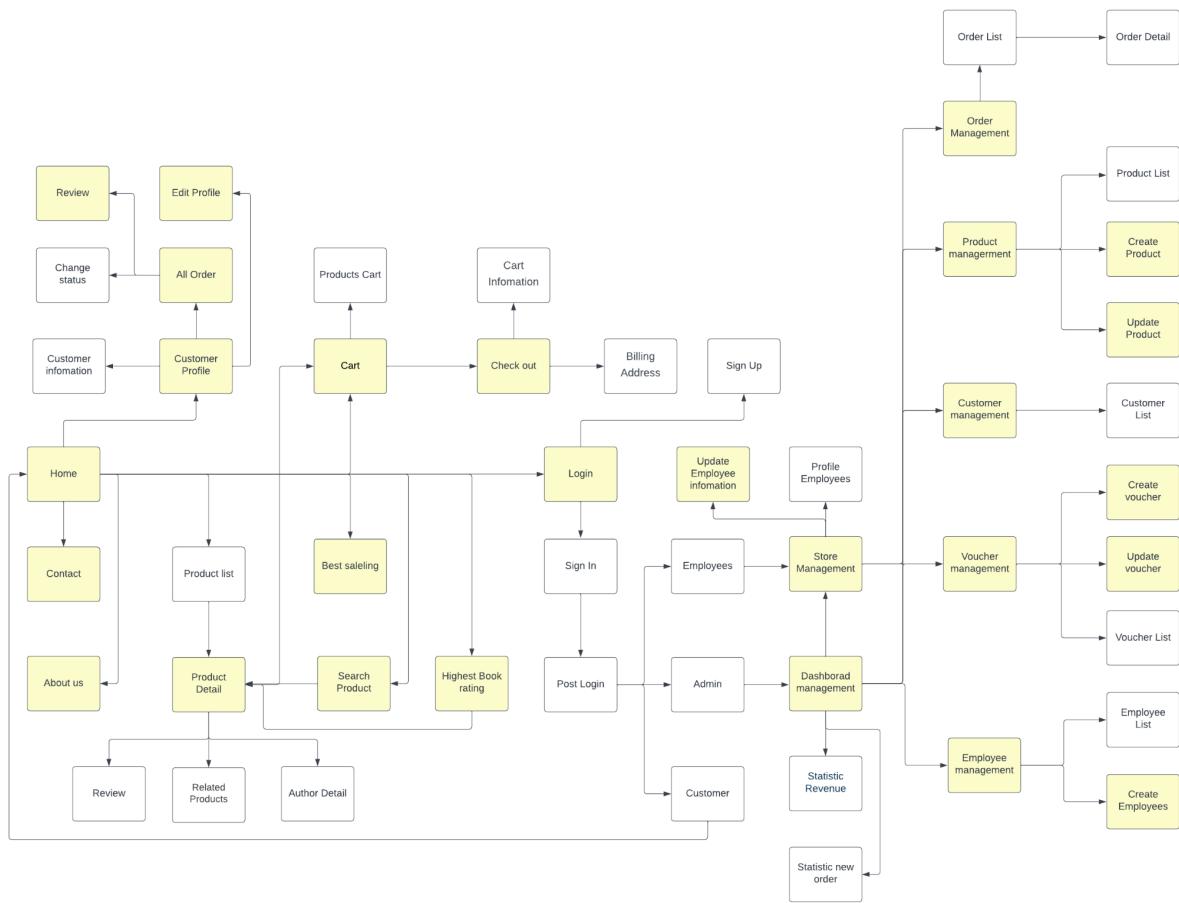
Book Library is a website that allows users to buy books through online libraries. Book Library helps save customers' shopping time, increasing the shopping experience with a variety of book genres. Book Library is developed with features such as high discount coupon codes, customer information protection, shopping recommendations, etc. Helping customers easily choose and increase authenticity. With quick updates, Book Library always puts the customer's experience first.



Book Library's System Context Diagram

2. System Functions

a. Screen Flow



b. Screen Details

#	Feature	Screen	Description
1	Common	Homepage	Main functionally page for use
2	Common	Login	Allow users, Admin, Employees to log in to use systems
3	Manage customer profile	Customer Profile	Display information user can check.
4	Manage customer profile	Customer information	Display user's information.
5	Manage customer profile	Edit Profile	Allow users to change personal information
6	Manage customer profile	All Order	Display user's order
7	Manage customer profile	Review	The form that allows users to evaluate the product purchased.

8	Manage customer profile	Change Status	Allow user to change order status
9	Order products	Cart	Allow users to view cart information
10	Order products	Checkout	Allow users to create orders
11	Order products	Products Cart	Allows users to view the products currently in the cart and the price of the order
12	Order products	Billing Address	Allows users to update shipping information and enter discount codes
13	Common	About Us	Display information about the shop
14	Common	Contact	Display shop contact information
15	Common	Product List	Display all products in the store
16	Common	Product Detail	Display details of a product
17	Common	View Review	Display a form for users to view and maybe enter product feedback
18	Common	Related Products	Display suggested related products to customers
19	Common	Author Detail	Display the author information of the product the customer is viewing
20	Common	Best Selling	Display for customers the best selling products in the store
21	Common	Search Product	Display customers the related products they are looking for
22	Common	Highest rating	Display customers a list of top rated products
23	Site management	Store Management	Display information for employees to manage and view work to be handled
24	Site management	Update Employee information	Allow employees to change personal information
25	Site management	Profile employees	Allow employees to update personal information instead
26	Admin	Dashboard Management	Display the main information related to the store to be managed
27	Admin	Statistic Revenue	Display the website's sales statistics revenue
28	Admin	Statistic New Order	Display statistics on the number of new orders
29	Admin	Employee management	Allow Admin can manage all employees information.
30	Admin	Create Employees	Allow Admin to create new employees.
31	Site management	Employee List	Displays a list search of employees and allows Admin CRUD.
32	Site management	Voucher management	Allow Admin or staff to manage all Vouchers information.

33	Site management	Voucher List	Display list allow Admin or Employee to CRUD list Vouchers.	
34	Site management	Update voucher	Allow Admin or staff to update information of a Voucher information.	
35	Site management	Create voucher	Allow Admin or Employee to create a new Voucher.	
36	Site management	Customer Management	Display list all customer Allows Admin or employees to manage all customer information	
37	Site management	Customer List	Display a list of customers and allow admin and staff to change customer status.	
38	Site management	Product Management	Display list all Product, allow Admin or Employee to manage all product information	
39	Site management	Update Product	Allows Admin and employees to change the information of a product.	
40	Site management	Create Product	Allow Admin and Employee to create a new product.	
41	Site management	Product List	Displays a list of search, filter products that allow Admin or employee to CRUD with the product.	
42	Site management	Order Management	Allows Admin or employees to manage all Order information.	
43	Site management	Order List	Displays a list of search, allows Admin or staff to change the status of the order.	
44	Site management	Order Detail	Display order details.	

c. User Authorization

Screen	Admin	Employee	Customer	Guest
Homepage			X	X
Login	X	X	X	
Customer Profile			X	
Customer information			X	
Edit Profile			X	
All Customer's Order			X	
Change Status			X	
Review			X	
Cart			X	X
Checkout			X	X
Products Cart			X	X
Billing Address			X	X
About Us			X	X
Contact			X	X
Product List			X	X
Product Detail			X	X
View Review			X	X
Related Products			X	X

Author Detail			X	X
Best Selling			X	X
Search Product			X	X
Highest rating			X	X
Store Management		X		
Update Employee information	X	X		
Profile employees	X	X		
Dashboard Management	X			
Statistic Revenue	X			
Statistic New Order	X			
Employee management	X			
Create Employees	X			
Employee List	X			
Voucher management	X	X		
Voucher List	X	X		
Update voucher	X	X		
Create voucher	X	X		
Customer Management	X	X		
Customer List	X	X		
Product Management	X	X		
Update Product	X	X		
Create Product	X	X		
Product List	X	X		
Order Management	X	X		
Order List	X	X		
Order Detail	X	X		

In which:

- **Admin:** (Administrator) a person who logged in the website by admin account
- **Employee:** a person who logged in the website by employee account
- **Customer:** A client who logged in the website by a normal account
- **Guest:** Someone access to website but still not login

d. Non-Screen Functions

[Provide the descriptions for the non-screen system functions, i.e batch/cron job, service, API, etc.]

#	Feature	System Function	Description
1	Common	User Logout	Close session for current user and redirect to homepage
2	Customer	Google authentication	Use Google Authentication API to verify user
3	Customer	Facebook authentication	Use Facebook Authentication API to verify user
4	Admin	Delete Product	Remove a product from system

5	System	Security	Just use session storage to save user's data

3. Entity Relationship Diagram

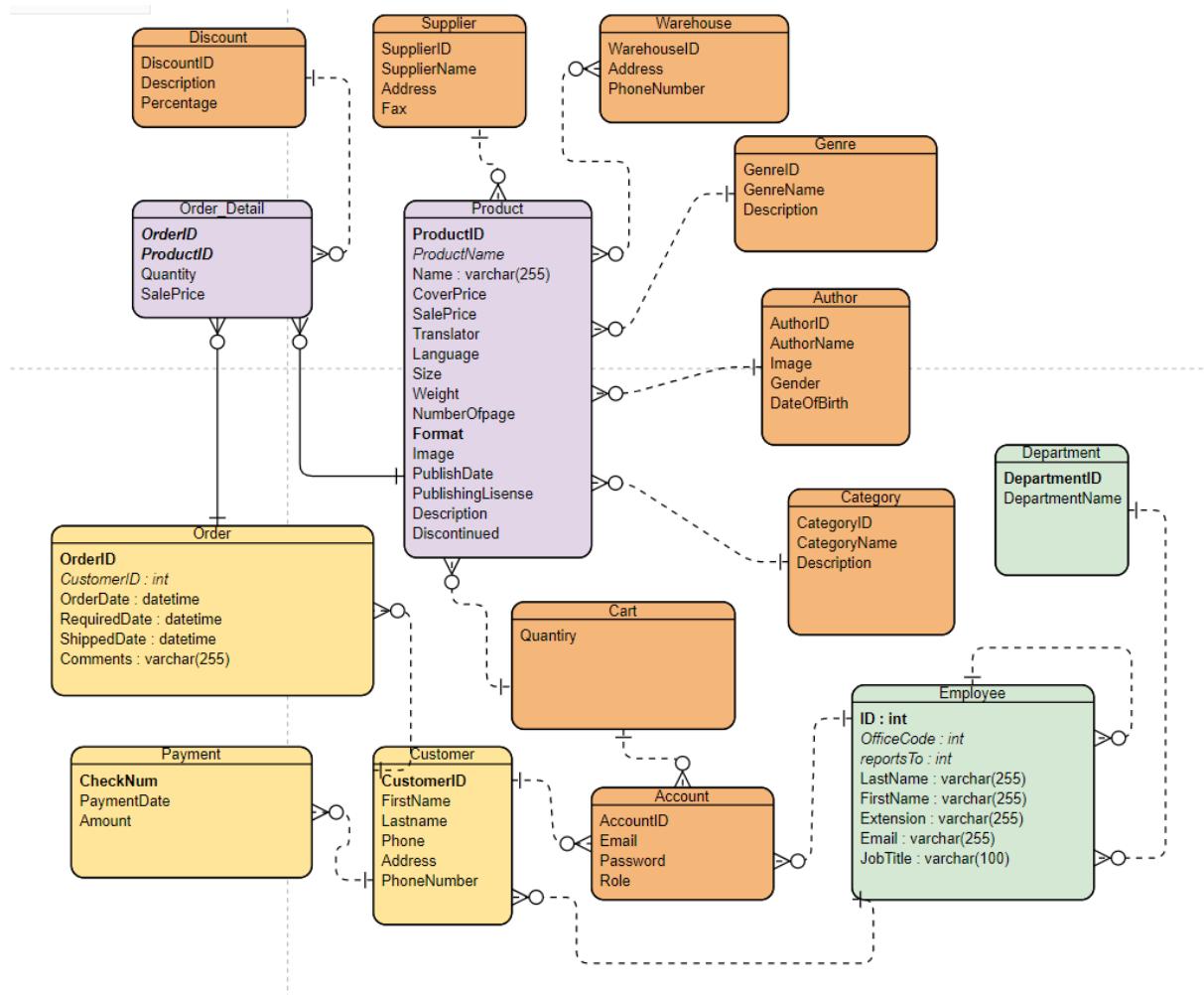


Figure 1: Entity Relation Diagram

Entities Description

#	Entity	Description
1	Product	Main object is book
2	Customer	Consumer, who want to buy book
3	Employee	Manager, saler perform business operation
4	Account	The registered user of the system
5	Order	Record information about an order
6	Order Detail	Record more detail in an order
7	Category	Classify book by categories
8	Genre	Classify book by Genres

9	Warehouse	Repository to store book, perform send book to customer
10	Supplier	Publisher will print book and supply them into the market
11	Discount	Store information about voucher
12	Cart	Store book which customer want to buy
13	Payment	payment method of customer
14	Department	Classify employee into department, admin/saler...etc

4. Use Case Diagram

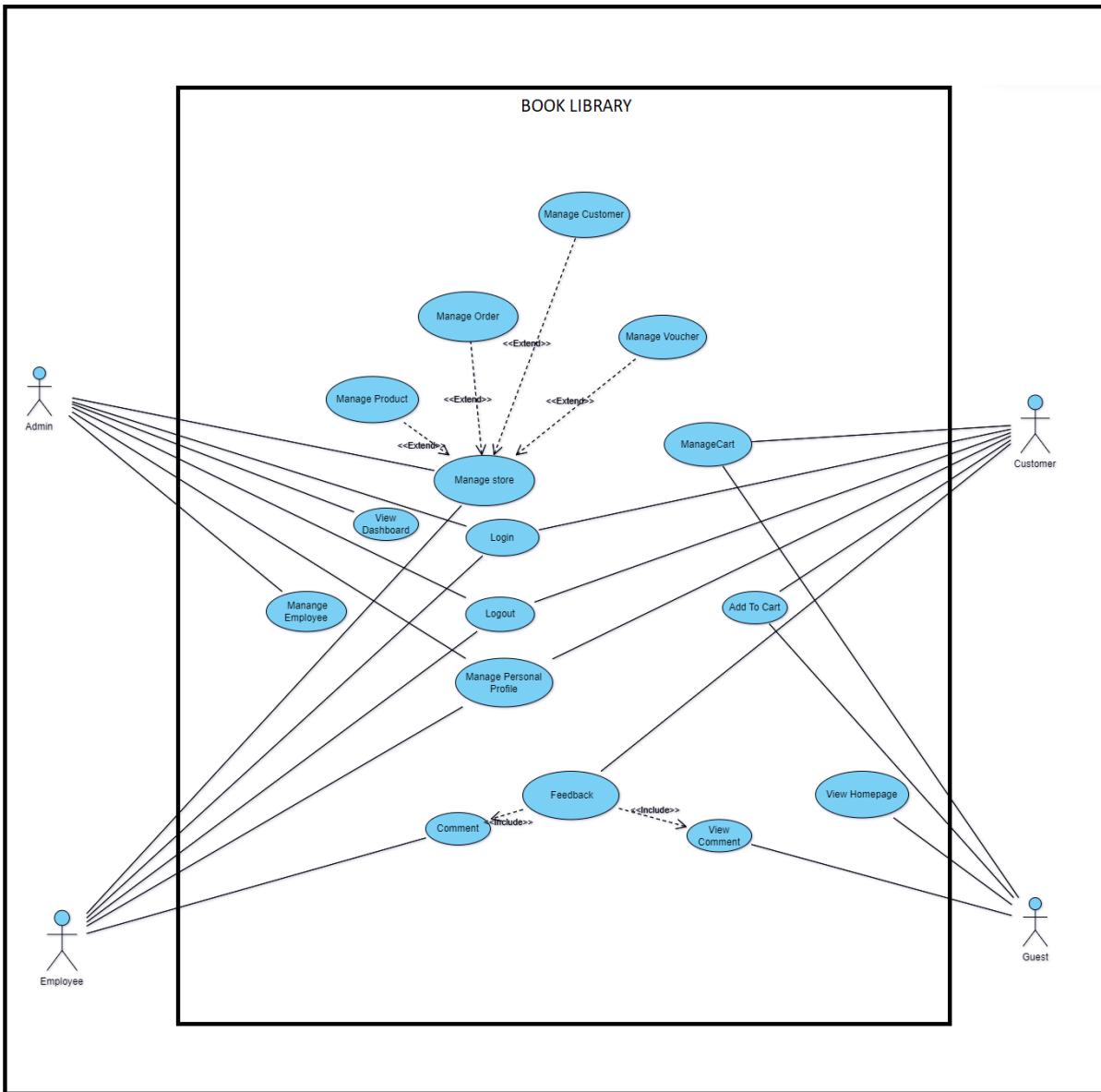


Figure 2: High Level Use case Diagram

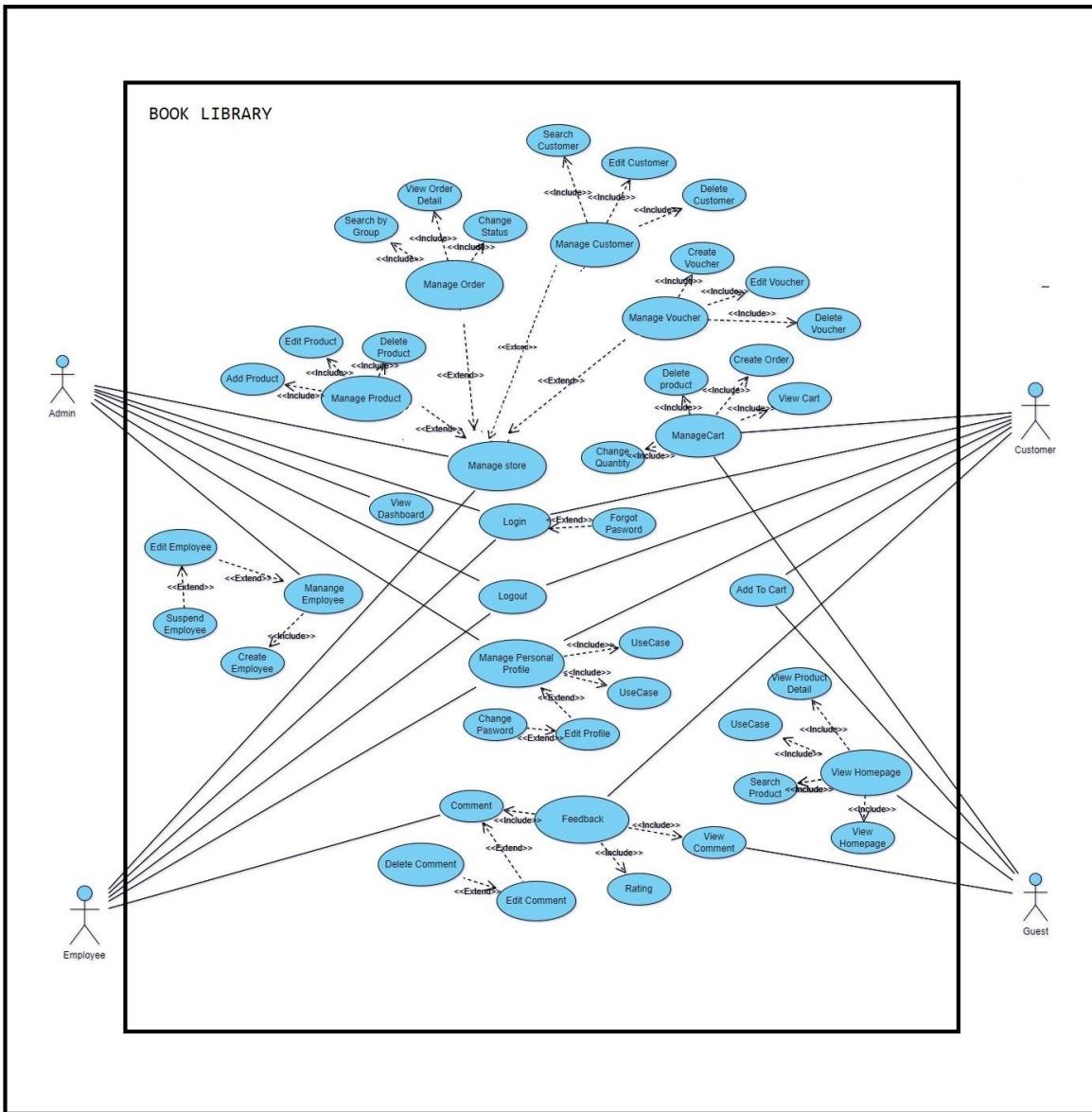


Figure 3: Use case Diagram

4.1 Use Case Descriptions

ID	UseCase	Actor	Use Case Description
01	Manage DashBoard	Admin	This function allows Admin to track the revenue of the web, track the level of revenue over the time period that the admin wants to see
02	Manage Employee	Admin	This function allows Admin to manage employees working in the store
03	Manage Products	Employee	This function allows Employee to manage the products in the store and keep track of the number of products
04	Manage Order	Employee	This function allows Employee to manage orders placed in the store, including order date, quantity
05	Manage Customer	Employee	This function allows Employee to manage customer information coming to the store
06	Register	Guest	This function allows buyers to register personal information to proceed with ordering and purchasing
07	Login-logout	Employee,User	This function allows Employee and User to log in and out of the store's system
08	Manage Profile	User	This function allows User to manage personal information, change personal information
09	View Old Order	User	This function allows User to manage their orders in the system, add orders and cancel orders in the system
10	Add Products	Admin	This function allows admin to add products to the system to bring to the store
11	Edit Products	Admin	This function allows the admin to edit existing products in the system and can edit information about products on the admin interface.
12	Delete Products	Admin	This function allows admin to delete existing products in the system and can delete products on admin interface

ID	UseCase	Actor	Use Case Description
01	Manage DashBoard	Admin	This function allows Admin to track the revenue of the web, track the level of revenue over the time period that the admin wants to see
02	Manage Employee	Admin	This function allows Admin to manage employees working in the store
03	Manage Products	Employee	This function allows Employee to manage the products in the store and keep track of the number of products
13	Change Order Status	Admin,Customer	This function allows admin, customer to change the status of the order
14	Filter Order	Admin	This function allows admin, customer filter order in the list of orders available in the store system
15	View Order Detail	Admin,Customer	This function allows the user to view the details of the order
16	Search Customer	Admin,Employee	This function allows employees and admins to search for customers in the list of customers who have come to the store
17	Edit Customer	Admin	This function allows admin to edit customer information
18	Delete Customer	Admin	This function allows admin to delete customers and ask the store's system
19	Manage Voucher	Admin	The function allows admin to manage the system's voucher to apply to the store
20	Delete voucher	Admin	the function allows admin to delete vouchers in the system
21	Create voucher	Admin	The function allows admin to create new vouchers in the system to put in the store
22	Create Employee	Admin	the function that allows admin to create new employees in the store's system on the admin interface

ID	UseCase	Actor	Use Case Description
01	Manage DashBoard	Admin	This function allows Admin to track the revenue of the web, track the level of revenue over the time period that the admin wants to see
02	Manage Employee	Admin	This function allows Admin to manage employees working in the store
03	Manage Products	Employee	This function allows Employee to manage the products in the store and keep track of the number of products
23	Edit Employee	Admin	the function that allows admin to edit employees in the store's system on the admin interface
24	Change Status Employee	Admin	The function allows admin to change the working status of employees in the store's system on the admin interface
25	Filter Employee	Admin	the function that allows admin to filter employees in the store's system on the admin interface
26	Search Employee	Admin	the function that allows admin to search for employees in the store's system on the admin interface
27	Edit Profile	Customer,Admin	the function allows admin, customer to edit personal information in the interface of edit profile
28	View Profile	Admin,Customer	The function allows admins and customers to view personal information in the interface of the edit profile
29	Change Password	Admin,Customer	the function that allows users to change the new password in the store's system
30	Change Quantity	Admin	This function allows the user to change the quantity in the system
31	View Cart	Customer,Employee	This function allows employees and customers to view the information in the customer's shopping cart
32	Rating, Comment	Guest,Customer	This function allows Guest, Customer to rate and comment in the comments and reviews of each product in the store.

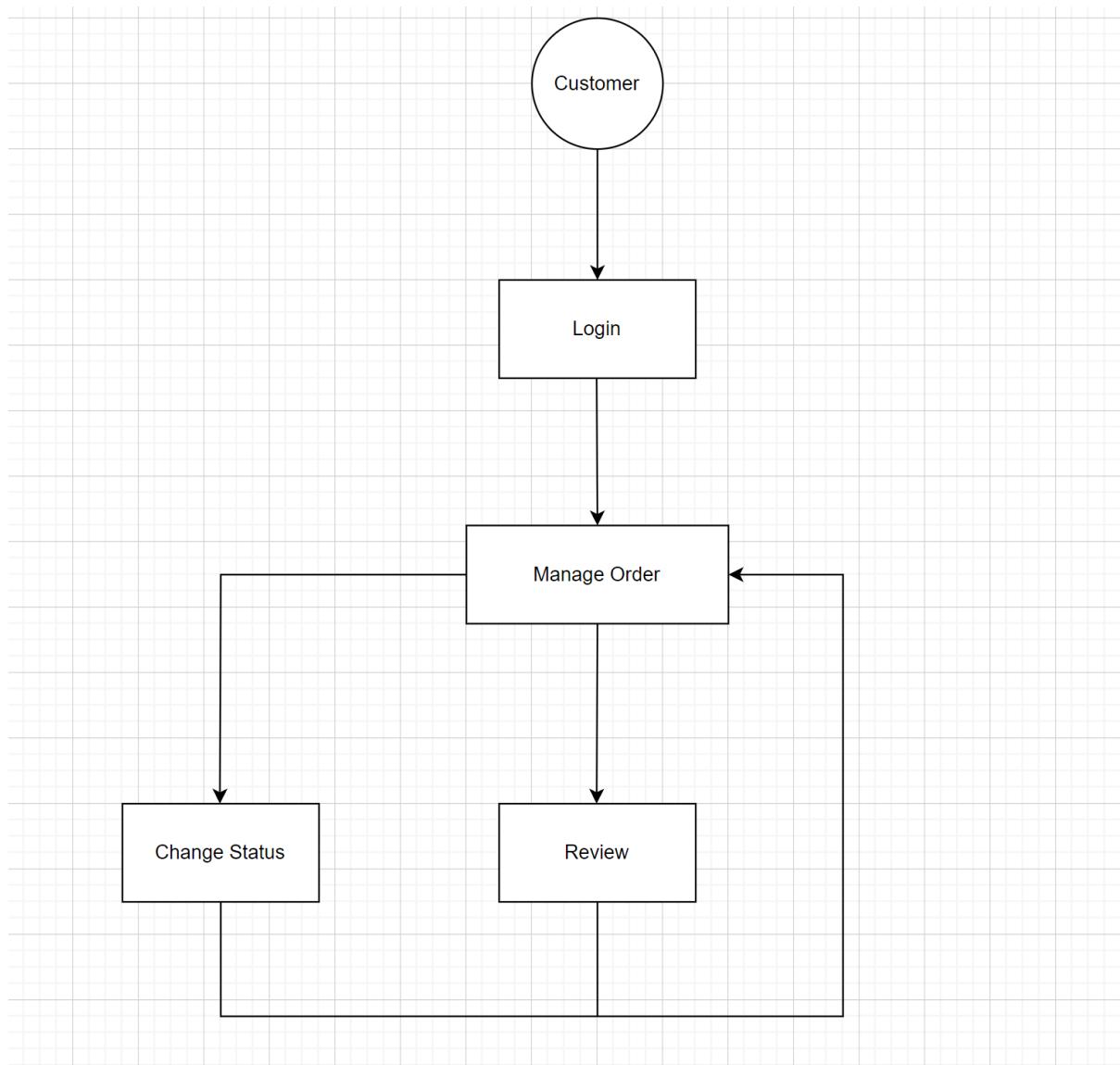
ID	UseCase	Actor	Use Case Description
01	Manage DashBoard	Admin	This function allows Admin to track the revenue of the web, track the level of revenue over the time period that the admin wants to see
02	Manage Employee	Admin	This function allows Admin to manage employees working in the store
03	Manage Products	Employee	This function allows Employee to manage the products in the store and keep track of the number of products
33	View Commnet	Guest,Customer	This function allows Guest,Customer to view comments commented in the product section
34	Edit Comment	Customer,Guest	This function allows Guest,Customer to edit comments that have been commented previously in the product
35	Delete Comment	Customer,Guest	This function allows Guest,Customer to delete comments that were previously commented in the product
36	View Product Detail	Customer,Admin	This function allows users to view information about products in the store system
37	View DashBoard	Admin	Allows admin to control tasks in the store system

II. Functional Requirements

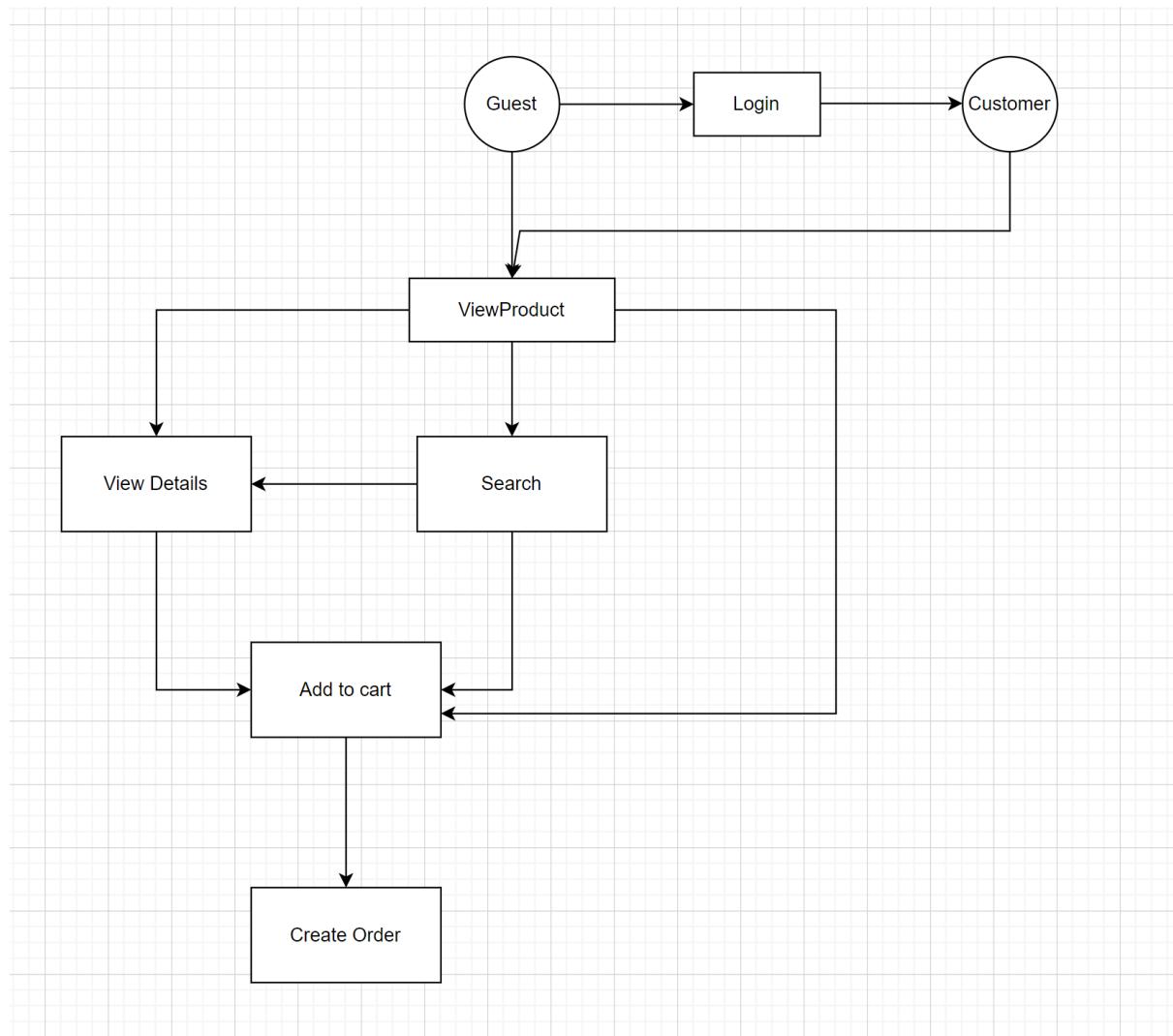
1. System Functional Overview

1.1 Screens Flow

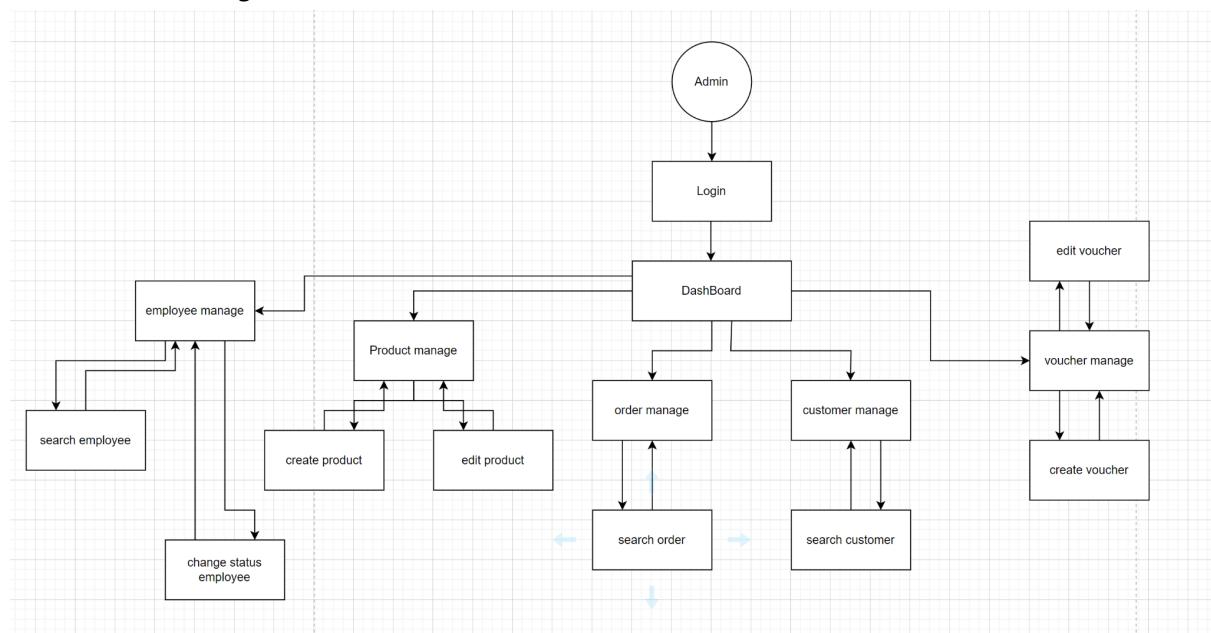
1.1.1. Customer Manage Profile



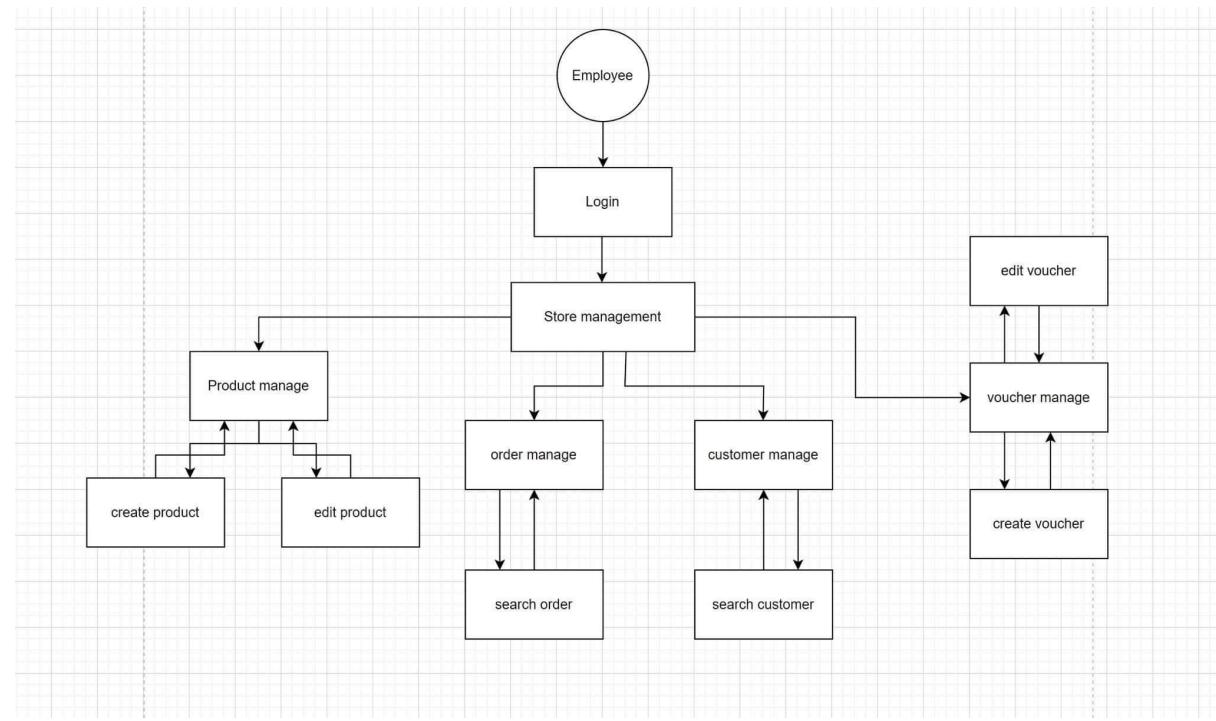
1.1.2. Customer Checkout



1.1.1. Admin Manage



1.1.1. Employee Manage



1.2 Screen Descriptions

ID	Feature	Screen	Description
01	Manage Store	Manage Store	Display list of Manage Store
02	Manage Store	Manage Product	Display list products and 3 function :Add product, Edit product,Delete product
03	Manage Product	Add Products	Allows adding new products to the store
04	Manage Product	Edit Products	Allows to edit products in the store
05	Manage Product	Delete Products	Delete products in the system
06	Manage Store	Manage Order	Display list orders and 3 function : Change Order Status,Filter Order,View Order Detail
07	Manage Order	Change Order Status	Allow admin change status order
08	Manage Order	Filter Order	Display order list after filter by date
09	Manage Order	View Order Detail	Display details of orders that Order ID placed

10	Manage Store	Manage Customer	Display list customer in system and 3 function: Search Customer,Edit Customer,Delete Customer
11	Manage Customer	Search Customer	Search customer in list by name
12	Manage Customer	Edit Customer	Allow admin edit information of customer
13	Manage Customer	Delete Customer	Allow admin delete customer of list
14	Manage Store	Manage Voucher	Display all voucher in system and 3 function:Create voucher,Edit voucher,Delete voucher
15	Manage Voucher	Create voucher	Allow admin create new voucher on system
16	Manage Voucher	Edit voucher	Allow admin edit voucher in list voucher
17	Manage Voucher	Delete voucher	Delete voucher from System
18	Manage Employee	Manage Employee	Display all employee in system
19	Manage Employee	Create Employee	Allow admin create a new employee in the system
20	Manage Employee	Edit Employee	Allow admin edit employee in list employee
21	Manage Employee	Change Status Employee	Allow admin can change working status of employee
22	Manage Employee	Filter Employee	Allow admin filter employee by department name
23	Manage Employee	Search Employee	Allow admin search employee by last name or first name of employee
24	Manage Personal Profile	Manage Personal Profile	Manage Profile in system
25	Manage Personal Profile	Edit Profile	Allow admin edit profile in system
26	Manage Personal Profile	View Profile	Allow admin view profile admin
27	View Profile	Change Password	Allow admin can change password when edit profile on system

28	Manage Cart	Manage Cart	Manager function in system
29	Manage Cart	Change Quantity	Allow customer change quantity in cart
30	Manage Cart	Delete Products	Allow customer delete products from cart
31	Manage Cart	View Cart	Customer can view all products in cart when click on View
32	Manage Cart	Create Order	Customer create new order with all product in cart or several products in the cart
33	Feedback	Feedback	feedback about products and evaluate products in the store system
34	Feedback	Rating	Rate by star in the comment section of every product in the store
35	Feedback	Comment	Product comments in each product displayed in the system
36	Feedback	View Commnet	View previous product reviews from other buyers
37	Feedback	Edit Comment	Allows users to correct their previous reviews in the comments of each product
38	Feedback	Delete Comment	Allows users to delete their previous comments in each product's comments
39	View HomePage	View HomePage	List all product in the system ,about information of products and list function
40	View HomePage	View Product Detail	Guest can view product information in the system without logging in
41	View HomePage	Search Product	Guests can search for product categories according to their preferences using the filters in the homepage
42	View HomePage	View Comment	Guest can see product comments from previous buyers
45	Common	View DashBoard	Admin login with authorised account and view dashboard details
46	Common	Login	Login to the system with a registered account
47	Login	Forgot Password	To Reset Password
48	Common	Logout	Log out of the system with the account already logged into the system
49	Common	Add To Cart	Allow customer and Guest to add products to cart

50	Common	Register	Register an account for a new user
51	Common	Homepage	Display all products and information products
52	Common	New Password	Allow users to change to a new password

1.3 Screen Authorization

Screen	Admin	Employee	Customer	Guest
Manage Store	X	X		
Manage Product	X	X		
Add Products	X	X		
Edit Products	X	X		
Delete Products	X	X		
Manage Order	X	X		
Change Order Status	X	X		
Filter Order	X	X		
View Order Detail	X	X		
Manage Customer	X	X		
Search Customer	X	X		
Edit Customer	X	X		
Delete Customer	X	X		
Manage Voucher	X	X		
Create voucher	X	X		
Edit voucher	X	X		
Delete voucher	X	X		

Manage Employee	X			
Create Employee	X			
Edit Employee	X			
Change Status Employee	X			
Filter Employee	X			
Search Employee	X			
Manage Personal Profile	X	X	X	
Edit Profile	X	X	X	
View Profile	X	X	X	
Change Password	X	X	X	
Manage Cart			X	
Change Quantity			X	
Delete Products			X	
View Cart			X	
Create Order			X	
Feedback			X	
Rating			X	
Comment			X	X
View Commnet			X	X
Edit Comment			X	X
Delete Comment			X	X
View HomePage			X	X
View Product Detail			X	X
Search Product			X	X
View Comment			X	X

View DashBoard	X			
Login	X	X	X	X
Forgot Password	X	X	X	X
Logout	X	X	X	X
Add To Cart			X	X
Register				X
Homepage	X	X	X	X
New Password	X	X	X	

2. Login

The image shows a split-screen login interface. The left half is white and contains a 'Sign In' button at the top, followed by social login options for Facebook and Google. Below these are fields for 'Email' and 'Password', and a 'Forgot your password?' link. At the bottom is a large 'SIGN IN' button. The right half is a dark blue background with a large 'Hello, Friend!' message, a call-to-action 'Enter your personal details and start a journey with us', a note 'P.s: Staff only 😊', and a 'SIGN UP' button.

Figure 1: Login form

ID and Name:	02_Login	Actor:	Customer
Description	This allows users to login into their account(s). Users can also login by Google account, reset password in case they forget and sign up if they don't have an account.		
Trigger:	Actor clicks the Login button and makes a login.		

ID and Name:	02_Login	Actor:	Customer		
Precondition:	None				
Post-conditions:	The system displays their information (name, picture profile,..) to the homepage.				
Normal flow:	Actor actions	System response			
	<ol style="list-style-type: none"> 1. The user(s) go(es) into the homepage and click on the login button. 2. The user(s) input their email and password of their registered account(s) or login by social media accounts. <p>The use case ends.</p>	<ol style="list-style-type: none"> 1. The system pop-up login form to login 2. The system checks for accounts and the user(s) will be redirected to the dashboard, otherwise the user has to correctly input their account(s). 			
Alternative Flows:	<p>2a. The session is out of date:</p> <ol style="list-style-type: none"> 1. The systems redirect to login page 2. Use case resumes at main flow step 1 <p>2b. The AccountID invalid: (AccountID of Staff or AccountID inactive):</p> <ol style="list-style-type: none"> 1. The systems redirect to login page 2. Use case resumes at main flow step 1 <p>2c. The email or password is wrong:</p> <ol style="list-style-type: none"> 1. Redirect login page with notifying message “Your email or password is wrong. Try again!” 2. Use case resumes at main flow step 1 <p>2d. User forgot password:</p> <ol style="list-style-type: none"> 1. The system will send an email of a new password to user email 2. Use case resumes at main flow step 1 <p>2e. User sign up:</p> <ol style="list-style-type: none"> 1. The system will redirect user to register page 2. User sign up new account and verify the email <p>Use case resumes at main flow step 1[1]</p>				
Exception Flows	N/A				

ID and Name:	02_Login	Actor:	Customer
Business Rules:	BR-01, BR-04, BR-06, BR-11		

3. Home page

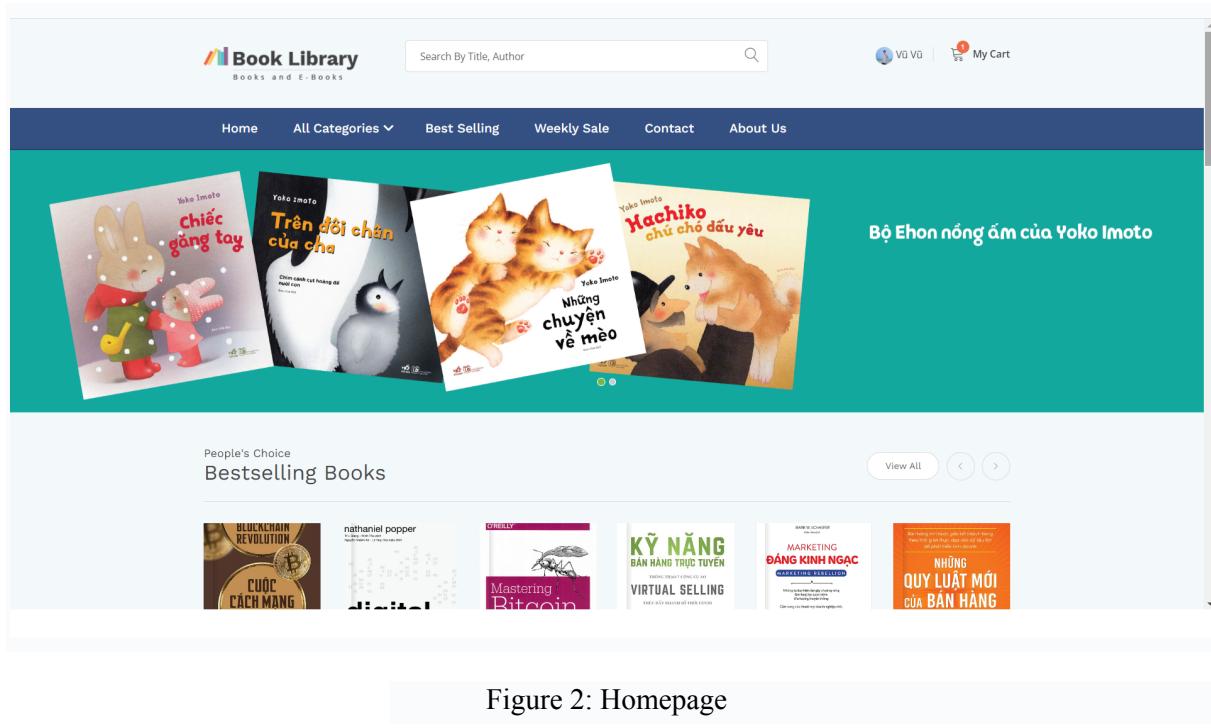


Figure 2: Homepage

ID and Name:	03_Homepage	Actor:	Customer		
Description	This allows users to quickly view product's information in the system such as name, price, author,... and view the website's services.				
Trigger:	Users access the path homepage or click on the "Home" button on the navigation bar				
Precondition:	None				
Post-conditions:	The system displays homepage and displays product catalog				
Normal flow:	Actor actions	System response			
	1. The user login successful or go to URL or click to the Dashboard button The use case ends	2. The system display dashboard page			
Alternative Flows:	N/A				
Exception Flows	N/A				

Business Rules:	BR-36
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4. Logout

ID and Name:	UC04_Logout Function	Actor:	Logged-in User
Description	The Logout function allows a logged-in user to end their current session and return to the login screen.		
Trigger:	The user selects the "Logout" option from the application menu.		
Precondition:	The User must be logged into the system		
Post-conditions:	The user's session is terminated , and they are returned to the login screen		
Normal flow:	<ol style="list-style-type: none"> 1. User selects the “Logout” option from the application menu 2. System prompts the user to confirm their decision to log out. 3. User confirm their decision 4. System logs out the user and ends their session 5. System displays the login screen 		
Alternative Flows:	None		
Exception Flows	None		
Business Rules:	None		

5. Profile Management

a. Customer information

The screenshot shows the Book Library website's user profile management interface. At the top, there is a navigation bar with links for Home, All Categories, Best Selling, Weekly Sale, Contact, and About Us. On the right side of the header, there is a search bar labeled "Search By Title, Author", a user profile icon for "Huy Nguyễn", a "Wishlist" icon with a notification count of 3, and a "My Cart" icon.

The main content area is titled "Personal Information". It contains the following data:

First Name : Huy	Last Name : Nguyễn
Address : Mông Sơn, Yên Bình, Yên Bái	Contact Title : Huy Nguyễn
Birthday :	Phone : 0932327373
Create Date : 2023-03-20	Gender : Male

At the bottom of the "Personal Information" section is a "Edit Profile" button.

On the left side of the page, there is a sidebar with the user's profile picture (a purple circle with a white letter H), name (Huy Nguyễn), and email (huy12042002yb@gmail.com). Below the profile picture, there are three menu items: "Profile" (selected), "All Order" (with a notification count of 9), and "Edit profile".

ID and Name:	UC05a – Manage personal profile	Actor:	Customer		
Description:	The system displays the user's information.				
Trigger:	the User wants to see the personal information stored in the system				
Precondition:	PRE_1: Actor has logged into the system.				
Post-conditions:	POST_1: The system displays account information.				
Normal flow:	Actor actions	System response			
	1. Click on the avatar icon in the navigation bar. 3. Click on the “Profile” hyperlink in the menu.	2. Display a drop-down menu. 4. Display user information page			
Alternative Flows:	N/A				
Exception Flows	4.1 The user is not logged in and the system asks for login				

Business Rules:	BR-01, BR-02,
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b. Update profile

The screenshot shows the 'Update Profile' page of a Book Library website. The top navigation bar includes links for Home, All Categories, Best Selling, Weekly Sale, Contact, and About Us. On the right, there are search, user profile (Huy Nguyễn), wishlist (3 items), and my cart links. The left sidebar shows the user's profile picture (purple circle with 'H'), name (Huy Nguyễn), email (huy12042002yb@gmail.com), and navigation links for Profile, All Order (9), and Edit profile. The main content area is titled 'Update Profile' and contains fields for First Name (Huy), Last Name (Nguyễn), Address (Mông Sơn, Yên Bình, Yên Bái), Contact Title (Huy Nguyễn), Birthday (Mm/Dd/YYYY), Phone (0932327373), Create Date (03/20/2023), and Gender (Male). A 'Save' button is at the bottom.

ID and Name:	UC05b – Update profile	Actor:	Customer
Description:	This function allows the actor to update personal profile.		
Trigger:	The user wants to change the information stored in the system		
Precondition:	PRE-1. Actors have been logged into the system. PRE-2. Actors access personal profile screen		
Post-conditions:	POST-1. The system displays the user's personal information.		
Normal flow:	Actor actions	System response	
	1. Select the field which the actor's information wants to change and update these information. 2. Click on the "Save" button	3. Display message: "Successful Update Information"	

Alternative Flows:	N/A
Exception Flows	3.1 The user enters incorrect information and the system returns a message instructing the user to re-enter it
Business Rules:	BR-01, BR-02,

c. Manage Customer's Order

The screenshot shows the Book Library website interface. At the top, there is a navigation bar with links for Home, All Categories, Best Selling, Weekly Sale, Authors, Contact, and About Us. On the right side of the header, there is a search bar, a user profile icon for Vu Vu, a Wishlist icon with a notification badge, and a shopping cart icon with a price of \$123.00.

The main content area is titled "My Orders". It shows two pending orders for the user "Camila Smith" (deydey@theEmail.com). The first order (OrderID: 10524) has an ID of 6, was placed on 2023-03-05, contains 12 items at a total price of \$1040, and is in Vietnamese. The second order (OrderID: 10523) has an ID of 4, was placed on 2023-03-05, contains 12 items at a total price of \$34.0, and is also in Vietnamese.

ID and Name:	UC05c – Manage Customer's Order	Actor:	Customer
Description:	For users, the system will allow the user to check their order so far.		
Trigger:	The user wants to check the list of orders, products that the user has ordered.		
Precondition:	PRE-1. Actors have been logged into the system. PRE-2. Actors access personal profile screen		
Post-conditions:	POST-1. The system displays the user's orders information.		
Normal flow:	Actor actions	System response	

Alternative Flows:	N/A	
Exception Flows	If Guest try to access this page without login, the system will sendirect to error 404 page and inform to them notification.	
Business Rules:	BR-01, BR-02	

6. Dashboard

a. Filter Revenue

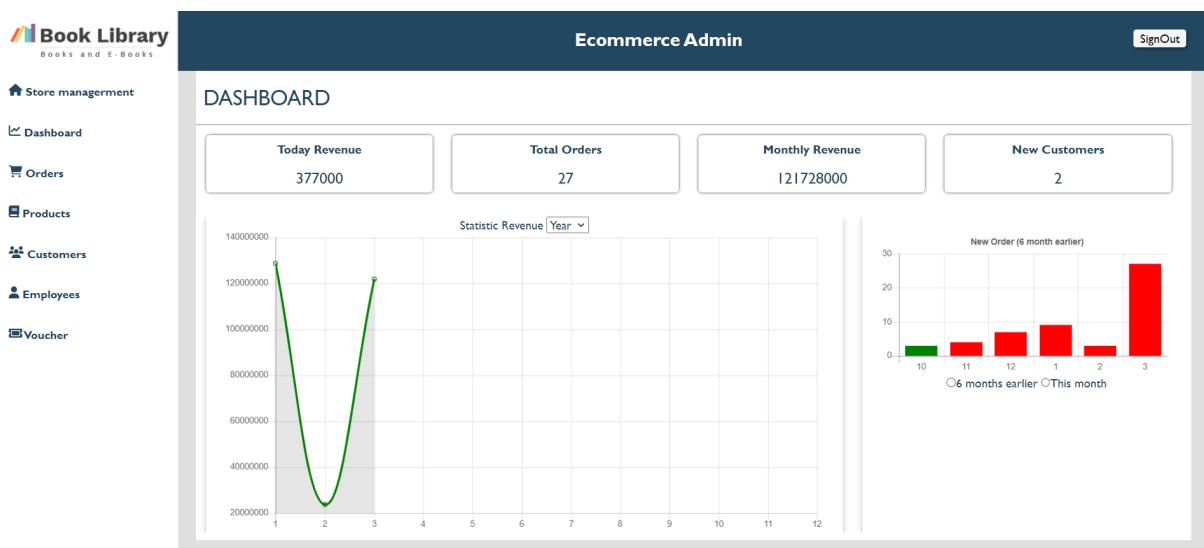


Figure 23: Filter revenue

ID and Name:	UC06a – Filter revenue	Actor:	Admin
Description:	This function allows the actor to view revenue of 12 month or 30 days of a month		
Trigger:	Actor select a date on the calendar to choose "From "date and "To" date and click on filter button		
Precondition:	PRE_1: Actor has logged in the system with an admin account. PRE_2: Actor accesses the account management page.		
Post-conditions:	POST_1: The system displays a statistic diagram with data of revenue of 12 month or 30 days of a month		
Normal flow:	Actor actions	System response	

	<p>1. Click on the “From” calendar 3. Click on the “To” calendar 4. Click on the “Filter” button</p>	<p>2. System pop-up calendar to pick a day/month/year 3. System pop-up calendar to pick a day/month/year 5. The system displays a c statistic diagram with data of revenue of 12 month or 30 days of a month</p>
Alternative Flows:	N/A	
Exception Flows	N/A	
Business Rules:	BR-01, BR-02,	

b. Filter Order

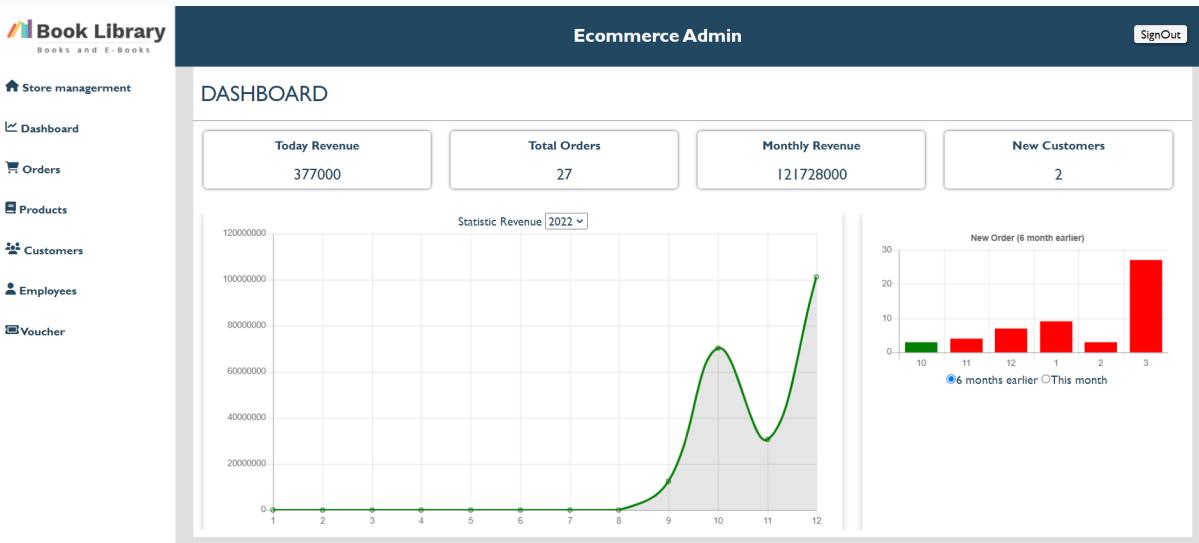


Figure 23: Filter Order

ID and Name:	UC06b – Filter Total Order	Actor:	Admin
Description:	This function allows the actor to view total order of nearest 6 months or 7 days of a week		
Trigger:	Actor select on the dropdown list and click on Filter button		
Precondition:	PRE_1: Actor has logged in the system with an admin account. PRE_2: Actor accesses the account management page.		
Post-conditions:	POST_1: The system displays a column diagram with data of nearest total orders in 6 months or 7 days of a week		

Normal flow:	Actor actions	System response
	1. Click on the select box 3. Choose week/month/year	2. System dropdown a list option 4. The system displays a column diagram with data of nearest 6 months or 7 days of a week
Alternative Flows:	N/A	
Exception Flows	N/A	
Business Rules:	BR-01, BR-02	

7. Products Management

a. View products

Product ID	Product Name	Category Name	Genre Name	Cover Price	Sale Price	Author Name
3	Bitcoin Thực Hành	Sách Blockchain		299000.0	255000.0	Andreas M. Antonop
4	Kỹ Năng Bán Hàng Trực Tuyến	Sách Kinh Tế	Marketing – Bán hàng	219000.0	186000.0	Jeb Blount
5	Marketing Đáng Kinh Ngạc	Sách Kinh Tế	Marketing – Bán hàng	143000.0	122000.0	Mark W Schaefer
6	Những Quy Luật Mới Của Bán Hàng Và Dịch Vụ	Sách Kinh Tế	Marketing – Bán hàng	180000.0	153000.0	David Meerman Sc
7	101 Tình Huống Nhân Sư Nan Giải	Sách Kinh Tế	Nhân sự & việc làm	149000.0	127000.0	Paul Falcone
8	Nghệ Thuật Thời Miền Nhà Tuyển Dụng	Sách Kinh Tế	Nhân sự & việc làm	109000.0	93000.0	Alpha Books biên s
9	Bí Quyết Tuyển Dụng & Đãi Ngõ Người Tài (Tái Bản)	Sách Kinh Tế	Nhân sự & việc làm	68000.0	58000.0	Brian Tracy
10	Tài Chính Dành Cho Nhà Quản Lý	Sách Kinh Tế	Tài chính & tiền tệ	149000.0	127000.0	Gene Sicilliano , Huc
12	Biển Lá Trè Con	Sách Văn học trong nước	Thơ ca	70000.0	56000.0	Huỳnh Mai Liên
13	Tuyển Tập Văn Té Đại Thi Hào Nguyễn Du	Sách Văn học trong nước	Thơ ca	145000.0	123000.0	Nhiều tác giả

ID and Name:	UC07a_View Product_admin	Actor:	Admin
Description:	This use case describes the process of viewing product details by the admin.		
	The admin wants to view the product details.		

Trigger:		
Precondition:	The admin must be logged in to the system.	
Post-conditions:	The admin can view the product details.	
Normal flow:	Actor actions	System response
	1.Click on the "View Product" button. 3.Choose the product to view.	2. The system displays the list of products. 4. The system displays the product details.
Alternative Flows:	ALT_1: - No products available - Actor actions System response 1.Click on the "View Product" button. 2. The system displays a message "No products available." ALT_2: - No product selected - Actor actions System response 1. Click on the "View Product" button. 2. The system displays the list of products. 3.Choose not to select any product. 4. The system displays a message "Please select a product to view."	
Exception Flows	EXC: - Product does not exist. - System response: The system displays an error message "Product does not exist."	
Business Rules:	BR-01, BR-02, BR-26, BR-34 ,BR-18	

b. Edit Product

The screenshot shows the 'CREATE A NEW PRODUCT' page in the Book Library Ecommerce Admin system. The left sidebar has navigation links for Store management, Dashboard, Orders, Products, Customers, Employees, and Voucher. The main form has fields for Product name (Cuộc Cách Mạng Blockchain), Category Name (*), Price, Author Name, and various details like Translator, Publisher, and Description.

ID and Name:	UC07b_Edit Product_admin	Actor:	Admin
Description:	This use case describes the process of editing a product by the admin.		
Trigger:	The admin wants to edit a product.		
Precondition:	The admin must be logged in to the system.		
Post-conditions:	The product details are updated in the system.		
Normal flow:	Actor actions	System response	
	<ol style="list-style-type: none"> Click on the "Edit Product" button. Choose the product to edit. Modify the product details. 	<ol style="list-style-type: none"> The system displays the list of products. The system displays the product details. Click on the "Save" button. The system updates the product details. 	
Alternative Flows:	ALT_1: - No products available - Actor actions System response 1. Click on the "Edit Product" button. 2. The system displays a message "No products available." ALT_2: - No product selected - Actor actions System response 1. Click on the "Edit Product" button.		

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ID and Name:	UC07b_Edit Product_admin	Actor:	Admin
Description:	This use case describes the process of editing a product by the admin.		
Trigger:	The admin wants to edit a product.		
Precondition:	The admin must be logged in to the system.		
Post-conditions:	The product details are updated in the system.		
Normal flow:	Actor actions	System response	
	<ol style="list-style-type: none"> Click on the "Edit Product" button. Choose the product to edit. Modify the product details. 	<ol style="list-style-type: none"> The system displays the list of products. The system displays the product details. Click on the "Save" button. The system updates the product details. 	
Alternative Flows:	ALT_1: - No products available - Actor actions System response 1. Click on the "Edit Product" button. 2. The system displays a message "No products available." ALT_2: - No product selected - Actor actions System response 1. Click on the "Edit Product" button.		

	<p>2. The system displays the list of products.</p> <p>3. Choose not to select any product.</p> <p>4. The system displays a message "Please select a product to edit."</p>
Exception Flows	<p>EXC:</p> <ul style="list-style-type: none"> - Product does not exist. - System response: The system displays an error message "Product does not exist."
Business Rules:	BR-01, BR-02, BR-34 , BR-36

c. Delete Product

ID and Name:	UC07c_Delete Product_admin	Actor:	Admin
Description:	This use case describes the process of deleting a product by the admin.		
Trigger:	The admin wants to delete a product.		
Precondition:	The admin must be logged in to the system.		
Post-conditions:	The product is deleted from the system.		
Normal flow:	Actor actions	System response	
	1.Click on the "Delete Product" button. 2.Choose the product to delete. 3.Confirm the deletion of the product.	1.The system displays the list of products. 2.The system displays a confirmation message. 3. The system deletes the product from the system.	
Alternative Flows:	ALT_1: No products available Actor actions System response 1. Click on the "Delete Product" button. 2. The system displays a message "No products available." ALT_2: No product selected Actor actions System response 1. Click on the "Delete Product" button. 2. The system displays the list of products. 3. Choose not to select any product. 4. The system displays a message "Please select a product to delete."		

Exception Flows	EXC_1: Product does not exist. System response: The system displays an error message "Product does not exist."
Business Rules:	BR-37

d. Create Product

The screenshot shows the 'CREATE A NEW PRODUCT' page within the Book Library Ecommerce Admin system. The interface has a dark blue header with the title 'Ecommerce Admin'. On the left, there's a sidebar with navigation links: 'Store management' (selected), 'Dashboard', 'Orders', 'Products' (selected), 'Customers', 'Employees', and 'Voucher'. The main area is titled 'CREATE A NEW PRODUCT'. It contains several input fields and dropdown menus. The 'Product name' field is empty. The 'Category Name' dropdown is set to 'Sách Blockchain'. The 'Genre Name' dropdown is set to 'Marketing – Bán hàng'. The 'Price' field is empty. The 'Sale Price' field is empty. The 'Author Name' dropdown is set to 'Nathaniel Popper'. Other fields include 'Translator', 'Number Of Page', 'Publisher Name', 'Supplier Name', 'Language', 'Book Size', 'Book Weight', 'Format', 'Image' (with a 'Choose File' button), 'Publish Date' (set to mm/dd/yyyy), 'Publish License', and 'Description'. At the bottom right is an 'Add' button.

ID and Name:	UC-7d_Create Product_admin	Actor:	Admin
Description:	This use case describes the process of creating a product by the admin.		
Trigger:	The admin wants a product.		
Precondition:	The admin must be logged in to the system.		
Post-conditions:	The product details are created in the system.		
Normal flow:	Actor actions	System response	

	<ol style="list-style-type: none"> 1. Click on the "create Product" button. 2. Choose the product to create. 3. Modify the product details. 	<ol style="list-style-type: none"> 1. The system displays the list of products. 2. The system displays the product details. 3. Click on the "Save" button. 4. The system creates the product details.
Alternative Flows:	<p>ALT:</p> <ul style="list-style-type: none"> - Product has been created - Actor actions System response <ol style="list-style-type: none"> 1. Click on the "edit Product" button. 2. The system displays the list of products. 3. Updates quantity of products 	
Exception Flows	<ul style="list-style-type: none"> - Information of products does not valid - Display messages: Information of products does not valid, re-enter information. 	
Business Rules:	<ul style="list-style-type: none"> - BR-01, BR-02, BR-34 , BR-36 	

8. Cart management

The screenshot displays a product catalog page with four items:

- Cuộc Cách Mạng Blockchain** (Sách Blockchain): By Alex Tapscott, Don Tapscott. Price: 255000.0 ₫. Rating: ★★★★★.
- digital gold** (Sách Blockchain): By Nathaniel Popper. Price: 255000.0 ₫. Rating: ★★★★★.
- Mastering Bitcoin** (Sách Blockchain): By Andreas M. Antonopoulos. Price: 255000.0 ₫. Rating: ★★★★★.
- Kỹ Năng Bán Hàng Trực Tuyến** (Sách Kinh Tế, Marketing – Bán hàng): By Jeb Blount. Price: 186000.0 ₫. Rating: ★★★★★.

Each item has an "Add To Cart" button below it.

ID and Name:	UC08a _ Add to Cart	Actor:	Customer / Guest
Description	This function allows customer to add some book into cart which they want to purchase.		
Trigger:	Actor clicks the “Add to cart” button under each item in homepage or product catalogue .		
Precondition:	PRE_1: Product is in stock and still in business. PRE_2: Users who have logged into the system or not will still be accepted.		
Post-conditions:	POST_1: The item will be insert into cart if these product still in stock.		
Normal flow:	Actor actions	System response	
	1. User click “Add to cart” button in homepage or product catalogue .	2. If the product has exist in the cart, cart will update with quantity increase 1 pcs. 3. If the product has not exist in the cart, it just inserted as normal with quantity equals to 1.	
Alternative Flows:	N/A		

ID and Name:	UC08a _ Add to Cart	Actor:	Customer / Guest
Exception Flows	If the product which user want to add to cart out of stock or stopped in business (updated status recently) , The system will reject add to cart and send a message to customer to select another item.		
Business Rules:	N/A		

The screenshot shows the Book Library website's cart page. At the top, there is a navigation bar with links for Home, All Categories, Best Selling, Weekly Sale, Contact, and About Us. The main content area is titled "My Cart". It lists two items:

- Marketing Đáng Kinh Ngạc**: Price 122000.0đ, Quantity 1, Language: Tiếng Việt, Format: Bìa mềm.
- Bitcoin Thực Hành**: Price 255000.0đ, Quantity 1, Language: Tiếng Việt, Format: Bìa mềm.

The "Summary" section provides a breakdown of the total cost:

Subtotal	122000.0đ
Discount	\$0đ
Shipping	0đ
Total	122000.0đ

A "Check Out" button is located at the bottom right of the summary section.

ID and Name:	UC08b_ View cart	Actor:	Customer, Guest
Description:	This function allows customers to view any products in their cart before making a payment.		
Trigger:	The customer clicks the cart icon or accesses the path of the cart page.		
Precondition:	None		
Post-conditions:	The system will redirect to Cart page to view their product information in cart: product name, quantity, price,etc. Moreover, calculate total amount of order to prepare checkout.		
Normal flow:	Actor actions	System response	

	Click on cart icon on the header website	System will display cart page's view
Alternative Flows:	If user do not add something to cart yet, this page will showing an empty cart notification	
Exception Flows	N/A	
Business Rules:	N/A	

ID and Name:	UC08c. Change quantity	Actor:	Customer, Guest		
Description:	This function allows Customers, Guest to change quantity number of Item in cart				
Trigger:	The customer clicks on [-], [+], [x] button				
Precondition:	User must add product into cart before				
Post-conditions:	The system will change quantity of product in cart or delete product out of cart				
Normal flow:	Actor actions	System response			
	1. The user clicks on [-], [+], [x] button	2. The system change quantity or delete product 3. The system auto change total of invoice			
Alternative Flows:	AL1: When user press [+] increase quantity reach available quantity, they cannot increase any more. AL2: When user press [-] decrease quantity reach 11, they cannot decrease any more.				
Exception Flows	If the product has recently deleted or prevented the business from the system, customers can only delete the product.				
Business Rules:					

9. Voucher management

- a. View Voucher List.

ID and Name:	UC09a_View Voucher List	Actor:	Admin, Employee		
Description:	This function allows administrators and employees to view and manage voucher lists.				
Trigger:	An administrator or employee accesses the account management page and selects the voucher option.				
Precondition:	PRE_1: Admin or employees access to the system. PRE_2: Administrator or employee logged into the system with their administrator account. PRE_3: Admin, employees has navigated to voucher management page.				
Post-conditions:	POST_1: The system displays a list of Vouchers.				
Normal flow:	Actor actions	System response			
	1. Admin, Employee login to the system. 3.Admin, Employees click on the Voucher button.	2.The system validates credentials and grants access. 4.System navigates to Vouchers and displays a list of Vouchers			
Alternative Flows:	N/A				
Exception Flows	1. If the administrator is not logged in with an administrator account, the system will redirect to an error page and must log in again.				
Business Rules:	BR-01, BR-24, BR-31, BR-32, BR-33, BR-34,BR-35.				

b.Create Voucher.

ID and Name:	UC09b_Create Voucher	Actor:	Admin, Employee		
Description:	This function allows administrators and employees to create a new voucher.				
Trigger:	An administrator or employee wants to create a new product.				
Precondition:	PRE_1: Admin or employees access to the system. PRE_2: Administrator or employee logged into the system with their administrator account. PRE_3: Admin, employees has navigated to voucher management page.				
Post-conditions:	POST_1: The system displays a list of Vouchers.				
Normal flow:	Actor actions	System response			
	1. Admin, Employee login to the system. 3.Admin, Employee click on the Voucher button. 5.Admin, Employee click on "Create new Voucher" 7.Admin, Employee updates new order information and clicks "Add" button.	2. The system validates credentials and grants access. 4.Systems navigates to Vouchers and displays a list of Vouchers 6.System displays a form that allows the user to enter the information of the new voucher.			
Alternative Flows:	N/A				
Exception Flows	1.If the administrator, employee is not logged in with an administrator account, the system will redirect to an error page and must log in again. 2.If the user enters the voucher information not in accordance with the business rule, the system will report an error and ask the user to re-enter that field.				
Business Rules:	BR-01, BR-24, BR-31, BR-32, BR-33, BR-34,BR-35.				

c. Edit Voucher.

ID and Name:	UC09c_Create Voucher				
Description:	This function allows administrators and employees to create a new voucher.				
Trigger:	An administrator or employee wants to create a new product.				
Precondition:	PRE_1: Admin or employees access to the system. PRE_2: Administrator or employee logged into the system with their administrator account. PRE_3: Admin, employees has navigated to voucher management page.				
Post-conditions:	POST_1: The system displays a list of Vouchers.				
Normal flow:	Actor actions	System response			
	1. Admin, Employee login to the system. 3. Admin, Employee click on the Voucher button. 5. Admin, Staff click "Edit" at the row of voucher the user wants to edit. 7. Admin, Employee updates new order information and clicks "Add" button.	2. The system validates credentials and grants access. 4. Systems navigates to Vouchers and displays a list of Vouchers 6. The system displays the form and data of that voucher allowing the user to enter the information of the new voucher.			
Alternative Flows:	N/A				
Exception Flows	1. If the administrator, employee is not logged in with an administrator account, the system will redirect to an error page and must log in again. 2. If the user enters the voucher information not in accordance with the business rule, the system will report an error and ask the user to re-enter that field.				
Business Rules:	BR-01, BR-02				

b. Search Voucher List.

ID and Name:	Search Voucher List.	Actor:	Admin, Employee		
Description:	This function allows administrators and employees to search for Vouchers by voucher ID.				
Trigger:	Admin or staff who want to search for voucher.				
Precondition:	PRE_1: Admin or employees access to the system. PRE_2: Administrator or employee logged into the system with their administrator account. PRE_3: Admin, employees has navigated to voucher management page.				
Post-conditions:	POST_1: The system displays a list of Vouchers.				
Normal flow:	Actor actions	System response			
	1. Administrators and employees log into the system. 3. Administrator, Employee click the Voucher button. 5. Admin, employee enter voucher id in search bar.	2. The system authenticates the login information and grants access rights. 4. The system navigates to Voucher and displays a list of Voucher. 6. The system displays a list containing the searched ID.			
Alternative Flows:	N/A				
Exception Flows	1. If the administrator, employee is not logged in with an administrator account, the system will redirect to an error page and must log in again. 2. if ID was search does not being at system will not return to list.				
Business Rules:	BR-01				

10. Orders Management

Order ID	Customer	Employee	Order Date	Required Date	Shipped Date	Ship Address	Ship City	Status
10537	Huy		2023-03-21	2023-03-28		số 12/12 Thạch Hòa-Huyện Giá Rai-Bạc Liêu	Bạc Liêu	Pending <button>Approve</button> <button>Cancel</button>
10536		Truong Vu	2023-03-20	2023-03-27		--Bạc Liêu	Bạc Liêu	Pending <button>Approve</button> <button>Cancel</button>
10535		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10534		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10533		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10532		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10531		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10530		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10529		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>
10528		Truong Vu	2023-03-20	2023-03-27		--		Pending <button>Approve</button> <button>Cancel</button>

ID and Name:	UC10-OrderManager_admin	Actor:	Admin
Description:	This function allows admin to monitor the progress of the order, the status of orders		
Trigger:	The admin accesses the account management page and selects the order management option.		
Precondition:	PRE_1: Actor has logged in the system with an admin account. PRE_2: Actor accesses the account management page.		
Post-conditions:	POST_1: The system displays a list of order statuses, including completed orders, pending orders, and orders that can be cancelled. POST_2: If the admin selects the cancel option, the system cancels the selected order and updates the order status accordingly.		
Normal flow:	Actor actions	System response	
	1. Admin logs in to the system. System verifies login information and grants access. 3. Admin selects an order to cancel. System prompts the admin to confirm the cancellation.	2. Admin navigates to the order System displays a list of order statuses, including completed orders, management page. pending orders, and orders that can be cancelled. 4. Admin confirms the cancellation. System cancels the order and updates the order status.	
Alternative Flows:	N/A		

ID and Name:	UC10-OrderManager_admin	Actor:	Admin		
Description:	This function allows admin to monitor the progress of the order, the status of orders				
Trigger:	The admin accesses the account management page and selects the order management option.				
Precondition:	PRE_1: Actor has logged in the system with an admin account. PRE_2: Actor accesses the account management page.				
Post-conditions:	POST_1: The system displays a list of order statuses, including completed orders, pending orders, and orders that can be cancelled. POST_2: If the admin selects the cancel option, the system cancels the selected order and updates the order status accordingly.				
Normal flow:	Actor actions	System response			
	1. Admin logs in to the system. System verifies login information and grants access. 3. Admin selects an order to cancel. System prompts the admin to confirm the cancellation.	2. Admin navigates to the order System displays a list of order statuses, including completed orders, management page. pending orders, and orders that can be cancelled. 4. Admin confirms the cancellation. System cancels the order and updates the order status.			
Exception Flows	1. If the admin is not logged in with an admin account, the system displays an error message and does not allow access to the order management page. 2. If there are no orders to display, the system displays a message indicating that there are no orders to show. 3. If the admin selects an order that cannot be cancelled (e.g., an order that has already been completed), the system displays an error message indicating that the order cannot be cancelled. 4. If the admin cancels an order and there is an error in the cancellation process (e.g., due to a system error), the system displays an error message and the order status remains unchanged. 5. If the admin cancels an order and there is an error in updating the order status (e.g., due to a database error), the system displays an error message and the cancellation is not processed				
Business Rules:	BR-01,BR-18,BR-24,BR-26,BR-18				

ORDERS LIST

Filter by Order Date:
From: 09/09/1996 To: 03/30/2023 Filter New Order Old Order

Order ID	Customer Name	Employee Name	Order Date	Required Date	Shipped Date	Ship Address	Ship City	Status
10524	Truong Vu	Hai Son	2023-03-05	2023-05-19	Rua Orós, 92	Sao Paulo	Brazil	Delivered
10523	Truong Vu	Ha Phuong	2023-03-05	2023-05-05	Carrera 22 con Ave. Carlos Soublette #8-35	San Cristóbal	Venezuela	Delivered
10522	Truong Vu	Ha Phuong	2023-03-05	2023-04-28	Jardim das rosas n. 32	Lisboa	Portugal	Delivered
10521	Truong Vu	Hai Son	2023-03-05	2023-04-28	Carrera 22 con Ave. Carlos Soublette #8-35	San Cristóbal	Venezuela	Canceled
10520	Truong Vu	Ha Phuong	2023-03-05	2023-04-24	Berliner Platz 43	München	Germany	Canceled
10512	Nghiên	Hai Son	2023-03-05	2023-05-19	Rua Orós, 92	Sao Paulo	Brazil	Delivered
10498	Thành	Ha Phuong	2023-03-05	2023-05-05	Carrera 22 con Ave. Carlos Soublette #8-35	San Cristóbal	Venezuela	Delivered

ID and Name:	10.a Filter Order	Actor:	Admin		
Description:	This function allows admin to filter orders for selected time period				
Trigger:	The admin accesses the account management page and selects the order management option.				
Precondition:	PRE_1: The admin has logged into the system with their admin account. PRE_2: The admin has navigated to the order management page.				
Post-conditions:	POST_1: The system displays a list of order statuses, including completed orders, pending orders, and orders that can be cancelled. POST_2: If the admin selects the filter option, the system filters the order list based on the selected time period and updates the list accordingly.				
Normal flow:	Actor actions	System response			
	1. Admin logs in to the system. System verifies login information and grants access.	2. Admin navigates to the order System displays a list of order statuses, including completed orders, management page. pending orders, and orders that can be cancelled.			
	3. Admin selects a "From" date and a System prompts the admin to select a "To" date. "To" date for the time period.	4. Admin clicks the "Filter" button. System filters the order list based on the selected time period and updates the list accordingly.			
Alternative Flows:	N/A				
Exception Flows	2. If the admin is not logged in with an admin account, the system displays an error message and does not allow access to the order management page.				

ID and Name:	10.a Filter Order	Actor:	Admin		
Description:	This function allows admin to filter orders for selected time period				
Trigger:	The admin accesses the account management page and selects the order management option.				
Precondition:	PRE_1: The admin has logged into the system with their admin account. PRE_2: The admin has navigated to the order management page.				
Post-conditions:	POST_1: The system displays a list of order statuses, including completed orders, pending orders, and orders that can be cancelled. POST_2: If the admin selects the filter option, the system filters the order list based on the selected time period and updates the list accordingly.				
Normal flow:	Actor actions	System response			
	1. Admin logs in to the system. System verifies login information and grants access. 3. Admin selects a "From" date and a System prompts the admin to select a "To" date. "To" date for the time period.	2. Admin navigates to the order System displays a list of order statuses, including completed orders, management page. pending orders, and orders that can be cancelled. 4. Admin clicks the "Filter" button. System filters the order list based on the selected time period and updates the list accordingly.			
	3. If there are no orders to display, the system displays a message indicating that there are no orders to show. 4. If the admin selects a time period that does not contain any orders, the system displays a message indicating that there are no orders to show for the selected time period. 5. If the admin enters an invalid date (e.g., a date that is in the future), the system displays an error message and does not allow filtering. 6. If there is an error in the filtering process (e.g., due to a system error), the system displays an error message and the order list remains unchanged.				
Business Rules:	BR-01,BR-18,BR-24,BR-26,BR-28,BR-25				

	Order ID	Customer Name	Employee Name	Order Date	Required Date	Shipped Date	Ship Address	Ship City	Status
Products	10422	Franchi S.p.A.	Quang Huy	2023-01-22		Via Monte Bianco 34	Torino	Italy	Canceled
Customers	10415	Tuấn	Thu Trang	2023-01-15	2023-02-12	City Center Plaza 516 Main St.	Elgin	USA	Delivered
Employees	10414	Nghiên	Quang Huy	2023-01-14	2023-02-11	Rua Orós, 92	Sao Paulo	Brazil	Delivered
Voucher	10408	Folies gourmandes	Ha Phuong	2023-01-08	2023-02-05	184, chaussée de Tournai	Lille	France	Delivered
	10403	Truong Vu	Cong Thanh	2023-01-03	2023-01-31	Kirchgasse 6	Graz	Austria	Delivered
	10402	Truong Vu	Ha Phuong	2023-01-02		Kirchgasse 6	Graz	Austria	Canceled
	10396	Frankenversand	Truong Vu	2022-12-27	2023-01-10	Berliner Platz 43	München	Germany	Delivered
	10395	Thành		2022-12-26		Carrera 22 con Ave. Carlos Soublette #8-35	San Cristóbal	Venezuela	Canceled
	10394	Tuấn	Truong Vu	2022-12-25	2023-01-22	City Center Plaza 516 Main St.	Elgin	USA	Delivered
	10390	Truong Vu		2022-12-23	2023-01-20	Kirchgasse 6	Graz	Austria	Delivered

ID and Name:	10.b Change order status	Actor:	Admin
Description:	This function allows admin to cancel orders in the list		
Trigger:	The admin accesses the account management page and selects the order management option.		
Precondition:	PRE_1: The admin has logged into the system with their admin account. PRE_2: The admin has navigated to the order management page.		
Post-conditions:	POST_1: The system displays a list of order statuses, including completed orders, pending orders, and orders that can be cancelled. POST_2: If the admin selects the cancel option for an order, the system displays a confirmation message asking if the admin wants to cancel the order. POST_3: If the admin confirms the cancellation, the system removes the order from the order list.		
Normal flow:	Actor actions	System response	
	1. Admin logs in to the system. System verifies login information and grants access. 3. Admin selects an order to cancel. System displays a confirmation message asking if the admin wants to cancel the order.	2. Admin navigates to the order System displays a list of order statuses, including completed orders, management page. pending orders, and orders that can be cancelled. 4. Admin clicks "OK" to confirm System removes the order from the order list and displays a message confirming	
Alternative Flows:	N/A		

ID and Name:	10.b Change order status	Actor:	Admin		
Description:	This function allows admin to cancel orders in the list				
Trigger:	The admin accesses the account management page and selects the order management option.				
Precondition:	PRE_1: The admin has logged into the system with their admin account. PRE_2: The admin has navigated to the order management page.				
Post-conditions:	POST_1: The system displays a list of order statuses, including completed orders, pending orders, and orders that can be cancelled. POST_2: If the admin selects the cancel option for an order, the system displays a confirmation message asking if the admin wants to cancel the order. POST_3: If the admin confirms the cancellation, the system removes the order from the order list.				
Normal flow:	Actor actions	System response			
	1. Admin logs in to the system. System verifies login information and grants access. 3. Admin selects an order to cancel. System displays a confirmation message asking if the admin wants to cancel the order.	2. Admin navigates to the order System displays a list of order statuses, including completed orders, management page. pending orders, and orders that can be cancelled. 4. Admin clicks "OK" to confirm System removes the order from the order list and displays a message confirming			
Exception Flows	<ol style="list-style-type: none"> If the admin is not logged in with an admin account, the system displays an error message and does not allow access to the order management page. If there are no orders to display, the system displays a message indicating that there are no orders to show. If the admin cancels the order cancellation process, the system displays a message indicating that the order was not cancelled. If there is an error in the cancellation process (e.g., due to a system error), the system displays an error message and the order remains in the order list. 				
Business Rules:	BR-01,BR-18,BR-24,BR-26,BR-28,BR-25,BR-18				

11.Store Management.

- a. Store management.

ID and Name:	UC11_Store management.	Actor:	Admin, Employee		
Description:	This function allows administrators and employees to access the "Store management" page				
Trigger:	Administrators and employees want to see management information at the Store management page.				
Precondition:	PRE_1: Admin or employees access to the system. PRE_2: Administrator or employee logged into the system with their administrator account. PRE_3: Admin, employees has navigated to Store management page.				
Post-conditions:	POST_1: The system displays account information and tasks to be processed.				
Normal flow:	Actor actions	System response			
	1. Administrators and employees log into the system. 3. Administrator clicks the "Store management" button. (if you are an employee, the system will automatically navigate to the page after logging in)	2. The system authenticates the login information and grants access rights. 4. The system navigates to Store management displays account information and tasks to be processed.			
Alternative Flows:	N/A				
Exception Flows	3. If the administrator, employee is not logged in with an administrator account, the system will redirect to an error page and must log in again.				
Business Rules:	BR-01				

b. Edit Admin, employee information.

ID and Name:	Edit Infomation.	Actor:	Admin, Employee		
Description:	This function allows administrators and employees to change personal information.				
Trigger:	An administrator or employee who wants to change personal information.				
Precondition:	<p>PRE_1: Admin or employees access to the system.</p> <p>PRE_2: Administrator or employee logged into the system with their administrator account.</p> <p>PRE_3: Admin, employees has navigated to Store management page.</p>				
Post-conditions:	POST_1: The system displays account information and tasks to be processed.				
Normal flow:	Actor actions	System response			
	<p>1. Administrators and employees log into the system.</p> <p>3. Administrator clicks the "Store management" button. (if you are an employee, the system will automatically navigate to the page after logging in)</p> <p>5. Admin, employee click "Edit Profile".</p> <p>7. Admin, Employee enter the fields to be changed then click "save"</p>	<p>2. The system authenticates the login information and grants access rights.</p> <p>4. The system navigates to Store management displays account information and tasks to be processed.</p> <p>6. The system displays the form and their information.</p> <p>8. The system returns to the page and displays information</p>			
Alternative Flows:	N/A				
Exception Flows	<p>1. If the administrator, employee is not logged in with an administrator account, the system will redirect to an error page and must log in again.</p> <p>2. If the user enters the voucher information not in accordance with the business rule, the system will report an error and ask the user to re-enter that field.</p>				
Business Rules:	BR-01, BR-30, BR31, BR32, BR16				

12. Feedback

The screenshot shows the Book Library website's user interface. At the top, there is a navigation bar with links for Home, All Categories, Best Selling, Weekly Sale, Contact, and About Us. On the left, a sidebar for the user 'Vu Vu' (vuvu15202@gmail.com) shows a profile picture, the name 'Vu Vu', and links for Profile, All Order (9), and Edit profile. The main content area is titled 'My Orders'. It lists two orders:

- OrderID: 10430** (Order date: 2023-01-30, Canceled)
 - ID: 17, Vietnamese, Qty: 45, Price: 312000.0. Rating: ★★★★☆. Review button.
 - ID: 21, Vietnamese, Qty: 50, Price: 80000.0. Rating: ★★★★☆. Review button.

Total Paid: \$1040

ID and Name:	UC12 - Feedback	Actor:	Customer
Description	This function allows customer to give their feeling about the products which they have bought		
Trigger:	Actor clicks the "Review" button after they confirm to change order status to state "Delivered" and makes a login.		
Precondition:	PRE_1: Customer has logged in the system with an admin account. PRE_2: Customer accesses the account management page. PRE_3: Customer having ordered and confirmed the completion of the order		
Post-conditions:	POST_1: A new feedback stored in to the system and announce to the customer notification		
Normal flow:	Actor actions	System response	
	2. Customer filled in the form their comment, rating, upload image file and press review button.	1. The system displays feedback form allows customer fill in the blank (comment, rating, profile,...) to the homepage. 3. The system process these data and check validation. If there are no error occurs, your data will store into the database and display successful message	

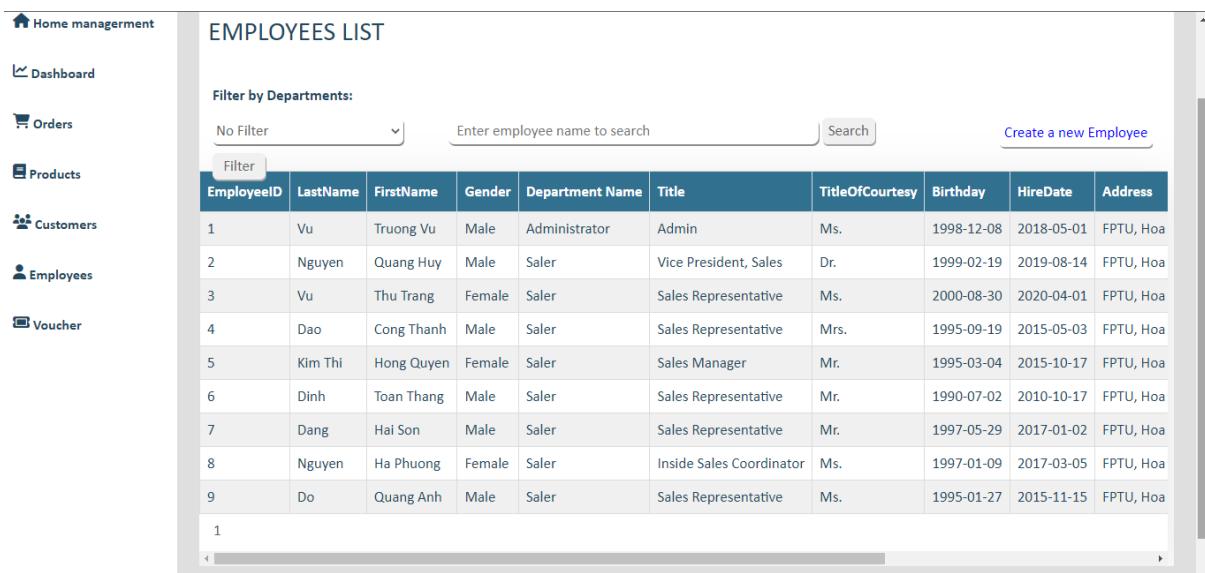
Alternative Flows:	If customer do not fill in the blank and press review, a new review still created with rating equals to 1 star and their comment and image will be null
Exception Flows	If the customer upload a file incorrect (not be JPG, JPEG, PNG), the system not allows this file and require customer upload again
Business Rules:	BR-15

13. Products Catalogue

ID and Name:	UC13 - Filter	Actor:	Customer
Description	Allow users to search products according to their preferences, use the criteria of product classification to filter the product list which they want to buy		
Trigger:	User clicks the to the book's properties such as category, supplier to find the book they want		

Precondition:	PRE_1: Customer accesses to the products catalogue. PRE_2: Product list not be empty	
Post-conditions:	POST_1: A new product list that fit to the customer's need display	
Normal flow:	Actor actions	System response
	1. User click to book's properties such as category, supplier, range of price 4. If customer find out a product that they wanted, they can click add to cart button and checkout out if they want.	2. The system use filter of the customer to select a new list that fit to the customer's need 3. If customer click more button on sort by button, te system will sort the list product according to increase price, decrease price, new product, etc.
Alternative Flows:		
Exception Flows		
Business Rules:		

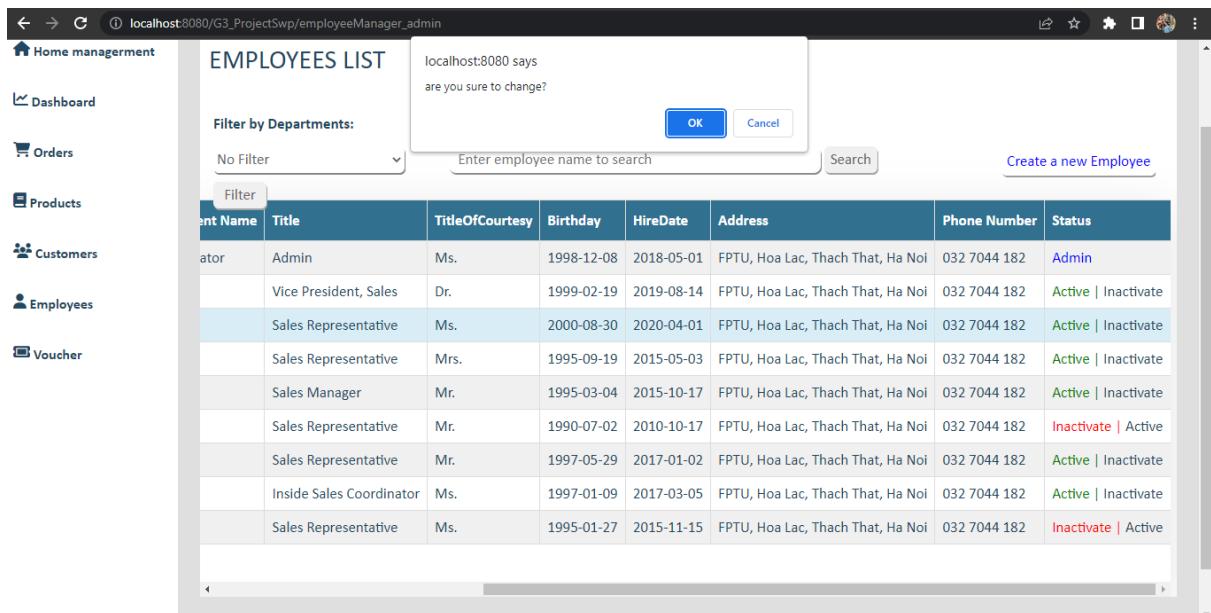
14. Employees Management



The screenshot shows a web-based application for managing employees. On the left, there is a sidebar with navigation links: Home management, Dashboard, Orders, Products, Customers, Employees (which is currently selected), and Voucher. The main content area has a title "EMPLOYEES LIST". Below the title, there is a "Filter by Departments:" dropdown set to "No Filter", a search bar with placeholder "Enter employee name to search", a "Search" button, and a link "Create a new Employee". A "Filter" button is also present. The main part of the screen is a table displaying employee data. The columns are: EmployeeID, LastName, FirstName, Gender, Department Name, Title, TitleOfCourtesy, Birthday, HireDate, and Address. The data in the table is as follows:

EmployeeID	LastName	FirstName	Gender	Department Name	Title	TitleOfCourtesy	Birthday	HireDate	Address
1	Vu	Truong Vu	Male	Administrator	Admin	Ms.	1998-12-08	2018-05-01	FPTU, Hoa
2	Nguyen	Quang Huy	Male	Saler	Vice President, Sales	Dr.	1999-02-19	2019-08-14	FPTU, Hoa
3	Vu	Thu Trang	Female	Saler	Sales Representative	Ms.	2000-08-30	2020-04-01	FPTU, Hoa
4	Dao	Cong Thanh	Male	Saler	Sales Representative	Mrs.	1995-09-19	2015-05-03	FPTU, Hoa
5	Kim Thi	Hong Quyен	Female	Saler	Sales Manager	Mr.	1995-03-04	2015-10-17	FPTU, Hoa
6	Dinh	Toan Thang	Male	Saler	Sales Representative	Mr.	1990-07-02	2010-10-17	FPTU, Hoa
7	Dang	Hai Son	Male	Saler	Sales Representative	Mr.	1997-05-29	2017-01-02	FPTU, Hoa
8	Nguyen	Ha Phuong	Female	Saler	Inside Sales Coordinator	Ms.	1997-01-09	2017-03-05	FPTU, Hoa
9	Do	Quang Anh	Male	Saler	Sales Representative	Ms.	1995-01-27	2015-11-15	FPTU, Hoa
10									

ID and Name:	UC13-EmployeeManager_admin	Actor:	Admin		
Description:	This function allows Admin to view and manage employees working in the system				
Trigger:	Admin click on the Employee section.				
Precondition:	Login with Admin or employee's account				
Post-conditions:	There are no post-conditions for this use case, as it simply involves viewing and managing employee information within the system.				
Normal flow:	Actor actions	System response			
	<ol style="list-style-type: none"> 1. The Admin logs in to their account. 2. The Admin navigates to the Employee section on the website. 	<ol style="list-style-type: none"> 3. The system displays a list of employees currently working in the system. 4. The Admin can perform various actions on the employee list, such as adding a new employee, editing an existing employee's information, or removing an employee from the system. 			
Alternative Flows:	N/A				
Exception Flows	<ol style="list-style-type: none"> 1. If the Admin is not logged in, they will not be able to access the Employee section and will be prompted to log in first. 2. If there are no employees currently working in the system, the system will display a message stating that there are no employees to display. 3. If the Admin attempts to perform an action on an employee but does not have the appropriate permissions, the system will display an error message and prevent the action from being completed. 4. If there is an error with the system, such as a database connection error, the system will display an error message and prevent the Admin from accessing the Employee section. 				
Business Rules:	BR-01,BR-18,BR-22				



ID and Name:	13.a-Change status	Actor:	Admin
Description:	This function allows administrators to change status employees in the list of employees		
Trigger:	Admin can change status employees from the list of employees by clicking buttons status in the status column		
Precondition:	PRE_1: Actor has logged in the system with an admin account. PRE_2: Actor accesses the account management page.		
Post-conditions:	POST_1: The system displays a list of employees working at the store. POST_2: The system displays a confirmation message asking if the Admin wants to change the selected employee POST_3: The employee has changed status from the system and is no longer displayed on the employee list.		
Normal flow:	Actor actions	System response	
	1. The Admin signs in to the system with their admin account. 2. The Admin navigates to the employee management page. 3. The Admin chooses to button an employee by clicking the "option status" button in the status column of the employee list.	4. The system displays a confirmation message asking if the Admin wants to delete the selected employee. 5. The Admin confirms the deletion. 6. The system removes the employee from the employee list and displays the updated list.	
Alternative Flows:	1. The Admin is allowed to delete multiple employees at once, rather than just one employee at a time. 2. The system provides an "Undo" option after an employee has been deleted, allowing the Admin to undo the deletion if they change their mind.		

ID and Name:	13.a-Change status	Actor:	Admin		
Description:	This function allows administrators to change status employees in the list of employees				
Trigger:	Admin can change status employees from the list of employees by clicking buttons status in the status column				
Precondition:	PRE_1: Actor has logged in the system with an admin account. PRE_2: Actor accesses the account management page.				
Post-conditions:	POST_1: The system displays a list of employees working at the store. POST_2: The system displays a confirmation message asking if the Admin wants to change the selected employee POST_3: The employee has changed status from the system and is no longer displayed on the employee list.				
Normal flow:	Actor actions	System response			
	1. The Admin signs in to the system with their admin account. 2. The Admin navigates to the employee management page. 3. The Admin chooses to button an employee by clicking the "option status" button in the status column of the employee list.	4. The system displays a confirmation message asking if the Admin wants to delete the selected employee. 5. The Admin confirms the deletion. 6. The system removes the employee from the employee list and displays the updated list.			
	3. The system sends a notification to the employee who has been deleted, letting them know that their account has been deleted from the system.				
Exception Flows	1. If the Admin is not logged in, they will not be able to access the employee management page and will be prompted to log in first. 2. If the Admin does not have the appropriate permissions to delete employees, the system will display an error message and prevent the deletion from occurring. 3. If there are no employees currently working in the system, the system will display a message stating that there are no employees to delete. 4. If there is an error with the system, such as a database connection error, the system will display an error message and prevent the deletion from occurring.				
Business Rules:	BR-01,BR-18,BR-22				

Book Library
Books and E-Books

Ecommerce Admin

SignOut

CREATE A NEW EMPLOYEES

Last Name (*):

TitleOfCourtesy:

Birth Date: mm/dd/yyyy

First Name:

Address:

Phone number:

Title:

Department (*):

Status:

Gender: Male

Save

Mai là anh em

ID and Name:	13.c-CreateEmployees	Actor:	Admin
Description:	This function allows administrators to add employees to the list of employees		
Trigger:	Admin can add new employees by clicking "create new employees" on the order management page		
Precondition:	PRE_1: The Admin has logged in to the system with an admin account. PRE_2: The Admin has accessed the account management page.		
Post-conditions:	POST_1: The system displays a form for the Admin to fill in the new employee's information. POST_2: When the Admin clicks "Save", the system saves the new employee and displays them in the list of employees.		
Normal flow:	Actor actions	System response	
	1. Logs into the system with an admin account. 2. Clicks on the "Create new employees" button. 3. Fills in the new employee's information. 4. Displays a confirmation message and adds the new employee to the list of employees	5. Displays the account management page. 6. Displays a form for the Admin to fill in the new employee's information. 7. Validates the information and saves the new employee.	
Alternative Flows:	1. The system provides a way for the Admin to upload a CSV file with multiple employees' information at once, rather than filling out the form for each employee individually. 2. The system automatically generates a unique employee ID for each new employee, rather than requiring the Admin to enter it manually.		

ID and Name:	13.c-CreateEmployees	Actor:	Admin		
Description:	This function allows administrators to add employees to the list of employees				
Trigger:	Admin can add new employees by clicking "create new employees" on the order management page				
Precondition:	PRE_1: The Admin has logged in to the system with an admin account. PRE_2: The Admin has accessed the account management page.				
Post-conditions:	POST_1: The system displays a form for the Admin to fill in the new employee's information. POST_2: When the Admin clicks "Save", the system saves the new employee and displays them in the list of employees.				
Normal flow:	Actor actions	System response			
	1. Logs into the system with an admin account. 2. Clicks on the "Create new employees" button. 3. Fills in the new employee's information. 4. Displays a confirmation message and adds the new employee to the list of employees	5. Displays the account management page. 6. Displays a form for the Admin to fill in the new employee's information. 7. Validates the information and saves the new employee.			
	3. The system provides a way for the Admin to assign roles or permissions to new employees as they are created.				
Exception Flows	1. If the Admin is not logged in, they will not be able to access the account management page and will be prompted to log in first. 2. If the Admin does not have the appropriate permissions to create new employees, the system will display an error message and prevent the creation from occurring. 3. If there is an error with the system, such as a database connection error, the system will display an error message and prevent the creation from occurring.				
Business Rules:	BR-01, BR-03, BR-09, BR-13, BR-16, BR-17, BR-19, BR-22, BR-23				

ID and Name:	13.d-Filter employee	Actor:	admin		
Description:	This function allows administrators to filter employees on the list of employees				
Trigger:	Admin clicks on the "Filter" button on the Employee Management page.				
Precondition:	Admin is logged in to the system. There are multiple employees in the database				
Post-conditions:	Admin can view a filtered list of employees based on selected departments.				
Normal flow:	Actor actions 1.Admin clicks on the "Filter" button on the Employee Management page. 2.Admin selects one or more departments to filter by. 3.Admin clicks the "Apply" button.	3.The system displays a list of departments to filter by. 5.The system displays a list of employees that belong to the selected departments.			
Alternative Flows:	N/A				
Exception Flows	-If there are no employees in the database, the system displays a message indicating that there are no employees to display. -If there are no employees that belong to the selected departments, the system displays a message indicating that there are no employees to display.				
Business Rules:	BR-01,BR-18,BR-03,BR-04				

ID and Name:	13.e-Search employees	Actor	admin		
Description:	This function allows administrators to search for employees by name.				
Trigger:	Admin types a search query in the search bar on the Employee Management page and clicks on the "Search" button				
Precondition:	Admin is logged in to the system. There are multiple employees in the database				
Post-conditions:	Admin can view a list of employees matching the search query.				
Normal flow:	Actor actions				
	1 Admin types a search query in the search bar on the Employee Management page. 2. Admin clicks on the "Search" button.	3. The system searches the database for employees whose names contain the search query. 4. The system displays a list of employees matching the search query.			
Alternative Flows:	If the search query does not match any employees in the database, the system displays a message indicating that there are no employees to display.				
Exception Flows	If there are no employees in the database, the system displays a message indicating that there are no employees to display.				
Business Rules:	BR-01, BR-04, BR-08, BR-18				

14. Customer Management

ID and Name:	Delete Customer_admin	Actor	Admin, Employee		
Description:	This use case describes the process of deleting a product by the admin.				
Trigger:	The admin wants to delete a customer .				
Precondition:	The admin must be logged in to the system.				
Post-conditions:	The product is deleted from the system.				
Normal flow:	Actor actions				
	1.Click on the "Delete Customer" button. 2.Choose the customer to delete. 3.Confirm the deletion of the Customer.	1. Click on the "Delete Customer" button. 2. The system displays the list of Customer. 3. Choose not to select any product. 4. The system displays a message "Please select a Customer to delete."			
Alternative Flows:	ALT_1: No products available Actor actions System response 1. Click on the "Delete Customer" button. 2. The system displays a message "No Customer available." ALT_2: No Customer selected Actor actions System response				
Exception Flows	EXC_1: Customer does not exist. System response: The system displays an error message "Customer does not exist."				
Business Rules:	BR-01, BR-02, BR-03, BR-04				

15. Checkout

Checkout

Billing Address

Full Name

Phone Number

Email

Address

Country City District

Payment

Cash on Delivery (COD)

Credit card

Confirm To Order

Your Cart

Voucher Code
No voucher is applied
Shipping: 30000
Total (USD): 30000.0

Voucher Code

Redeem

ID and Name:	UC15_Checkout	Actor: Customer, Guest	
Description:	This function allows Guests and customers to create orders to buy books, these products have been added by customers to the previous basket.		
Trigger:	Customer or Guest want to buy some books in website		
Precondition:	The customer logged in the website or not The customer must have selected the product(s) they wish to purchase and added them to their cart.		
Post-conditions:	POST-1. Order completed is stored in [Order] table POST-2. Details of order is stored in [Order Details] table POST-3. The customer receives a confirmation email with the details of the order. POST-4. The selected items are reserved for the customer. (available quantity is decreased)		

	POST-5. The payment is processed and recorded in the online store's database.
Normal flow:	<p>1. The customer visits the online store and logs into their account.</p> <p>2. The customer browses through the product catalog and selects the product(s) they wish to purchase.</p> <p>3. The customer adds the product(s) to their cart and proceeds to the checkout page.</p> <p>4. The customer views their shopping cart to review the selected items, modify the quantity or remove items as necessary.</p> <p>5. The customer selects their preferred payment method (e.g. credit card, COD) and enters the required payment information.</p> <p>6. The customer confirms the order and submits it for processing.</p> <p>7. The store's employee processes the order and sends a confirmation email to the customer with the order details and estimated delivery date.</p> <p>8. The store's employee prepares the product(s) for shipping and arranges for delivery to the customer's specified address.</p> <p>9. The customer confirms the receipt(when they receives the product(s))</p> <p>10. The store's employee updates the order status to "delivered".</p>

<p>Alternative Flows:</p>	<p>A1. Invalid Payment Information:</p> <ol style="list-style-type: none"> 1. The online store detects invalid payment information. 2. The online store prompts the customer to update their payment information. 3. The customer updates their payment information and submits the order again. <p>A2. Product out of Stock:</p> <ol style="list-style-type: none"> 1. The store's employee detects that one or more of the selected items are out of stock. 2. The store's employee informs the customer and prompts them to remove the out-of-stock item(s) or select a different product. 3. The customer updates their shopping cart and proceeds to checkout. <p>A3. Voucher Code:</p> <ol style="list-style-type: none"> 1. The customer enters the discount code(voucher) incorrect during checkout. 2. The system prompts the customer to enter voucher again 3. The online store validates the discount code(voucher) and applies any applicable discounts to the order total. <p>A1. Customer Doesn't Log In:</p> <ol style="list-style-type: none"> 1. The customer browses the online store without logging in. 2. The customer adds items to their cart and proceeds to checkout. 3. The online store prompts the customer to either log in or continue as a guest. 4. If the customer chooses to continue as a guest, they will need to enter their shipping and billing information manually.
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	<p>4a. The online store validates the shipping and billing information.</p> <p>4b. If the shipping and billing information is valid, the online store confirms the order and sends a confirmation email to the customer.</p> <p>4c. If the shipping and billing information is invalid, the online store prompts the customer to update the information or contact customer service for assistance.</p> <p>5. If the customer chooses to log in, they will need to provide their login information and the online store will retrieve their saved shipping and billing information.</p> <p>6. If the shipping and billing information is valid, the online store confirms the order and sends a confirmation email to the customer.</p> <p>7. If the shipping and billing information is invalid, the online store prompts the customer to update the information or contact customer service for assistance.</p>
Exception Flows	<p>1. System Error:</p> <p>The online store experiences a system error during the checkout process.</p> <p>The customer is prompted to try again later or contact customer service for assistance.</p> <p>4. Payment Error:</p> <p>The customer's credit card is declined due to insufficient funds or an invalid card number.</p> <p>The online store prompts the customer to update their payment information or use a different payment method.</p>
Business Rules:	BR-06, BR-08, BR-16, BR-23

IV. Requirement Appendix

1. Business Rules:

ID	Rule Definition
BR-01	Only verified users can log in successfully and access the system.
BR-02	Users only can access information that belongs to their own, except admin
BR-03	Employee only login with an account that is provided by admin.
BR-04	Each user has exactly one role.
BR-05	Each email is only registered for one user.
BR-06	Email must be right format: "09abc123@example.com".
BR-07	The username must be unique
BR-08	The username does not contain space and special characters.
BR-09	The length of the username must be 4-20 characters.
BR-10	Passwords must be encrypted.
BR-11	The length of the password must be 8-20 characters and does not contain space.
BR-12	When registering or changing a password, the user must enter the password twice.

BR-13	Full name must be 1-50 characters and does not contain special characters
BR-14	Gif must be in the right format (extension name: .gif).
BR-15	Image must be in the right format (extension name: .png.jpeg.jpg)
BR-16	The phone must contain only 10 digits and start with 0,84.
BR-17	The date of birth must be before the current time.
BR-18	All management lists must be displayed with the pagination.
BR-19	Fields marked with an asterisk (*) cannot be blank ²¹
BR-20	When admin update account, do not edit admin account role.
BR-21	User must login to view and update profiles
BR-22	Gender must be male or female
BR-23	Phone must be 10 number characters and must start by '0'
BR-24	Day in 'to' calendar must be after day in 'from' calendar
BR-25	Only admins, employee with the appropriate permissions can access the OrderManager function.

BR-26	The admin employee can only cancel orders that are not already completed.
BR-27	The admin cannot modify the status of orders, only view and cancel them.
BR-28	The order list may be filtered or sorted based on certain criteria such as order date or customer name.
BR-29	Only logged-in users can access the "My Orders" page.
BR-30	Name fields not null and do not allow special characters and are between 2 and 30 characters in length
BR-31	Address-related fields only allow entering special characters related to the address description and are 20 to 100 characters long.
BR-32	The date of birth of the employee or administrator must not be less than 18 years ago
BR-33	Description fields can be null but if you enter more than 10 characters and less than 300 characters
BR-34	The decimal or real number fields must be in the correct format.
BR-35	ID fields do not allow entering spaces and special characters
BR-36	Sale Price cannot be more than Cover Price.
BR-37	The admin can only delete the product that exists in the system.

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2. Common Requirement:

- The pop-up form is used for functions such as viewing, adding, editing, and deleting.
- Account in the database is not deleted when using the delete function; instead, it is changed from enabled to disabled.
- The system must display the result of performing a data-related function at the end of the function.
- Security: The application should be secure, and the user's personal information should be kept confidential. This includes using encryption to protect sensitive data, preventing SQL injection attacks, and implementing access control measures.
- Error handling: The application should be able to handle errors gracefully, displaying meaningful error messages to the user and logging errors for troubleshooting.
- Performance: The application should be designed to perform well, with optimised code and efficient database queries. It should also be able to handle large amounts of data without slowing down or crashing.
- User interface design: The user interface should be easy to use and intuitive, with clear navigation and well-organized information. It should also be responsive and accessible, with support for different devices and screen sizes.

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