



Online Book Shop Management System

Arranged By :

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SYSTEM VISION DOCUMENT

-Problem Of Current System:

The Online Library Management System is a comprehensive software solution designed to revolutionize the management and accessibility of library resources. It aims to provide a seamless and user-friendly digital platform for librarians, staff, and patrons to efficiently manage and access a wide range of resources, including books, journals, e-books, multimedia content, and more. The system will transform the traditional library experience by offering advanced features, personalized services, and convenient online access.

-System Capabilities:

the system should be capable of:

- User Registration and Authentication: Users can create accounts and securely log in to access library resources and services.
- Search and Order: Users can search for resources by title, through different categories and genres and order the chosen book.
- Users can view detailed information about a resource, including availability status, author, subject.
- Online Reservations: Users can reserve resources in advance .
- Performance: The system should be designed to handle a large volume of transactions efficiently and provide fast response times

-System Benefits:

- Provide a centralized digital platform for library management that is accessible to both library staff and users.
- Simplify and automate routine library tasks, such as Ordering, cataloging, circulation, and inventory management.
- Enable library users to easily search and order .
- Facilitate online access to digital resources, including e-books, e-journals, and multimedia content.
- Ensure data security and privacy of library users, staff, and resources.

-Functional Requirements:

- **User Management:** The system should provide functionalities to manage user accounts, including registration. It should allow user to create account.
- **Catalog Management:** The system should support the management of the library's collection, including functionalities to add, update, and delete books or other library items. It should facilitate the organization and classification of items using appropriate metadata such as title, author, subject, ISBN, etc.
- **Search and Discovery:** The system should enable users to search for library items based on various criteria, such as title, author, subject, keyword, or ISBN. It should provide search functionalities with advanced filters and sorting options to help users discover relevant items.

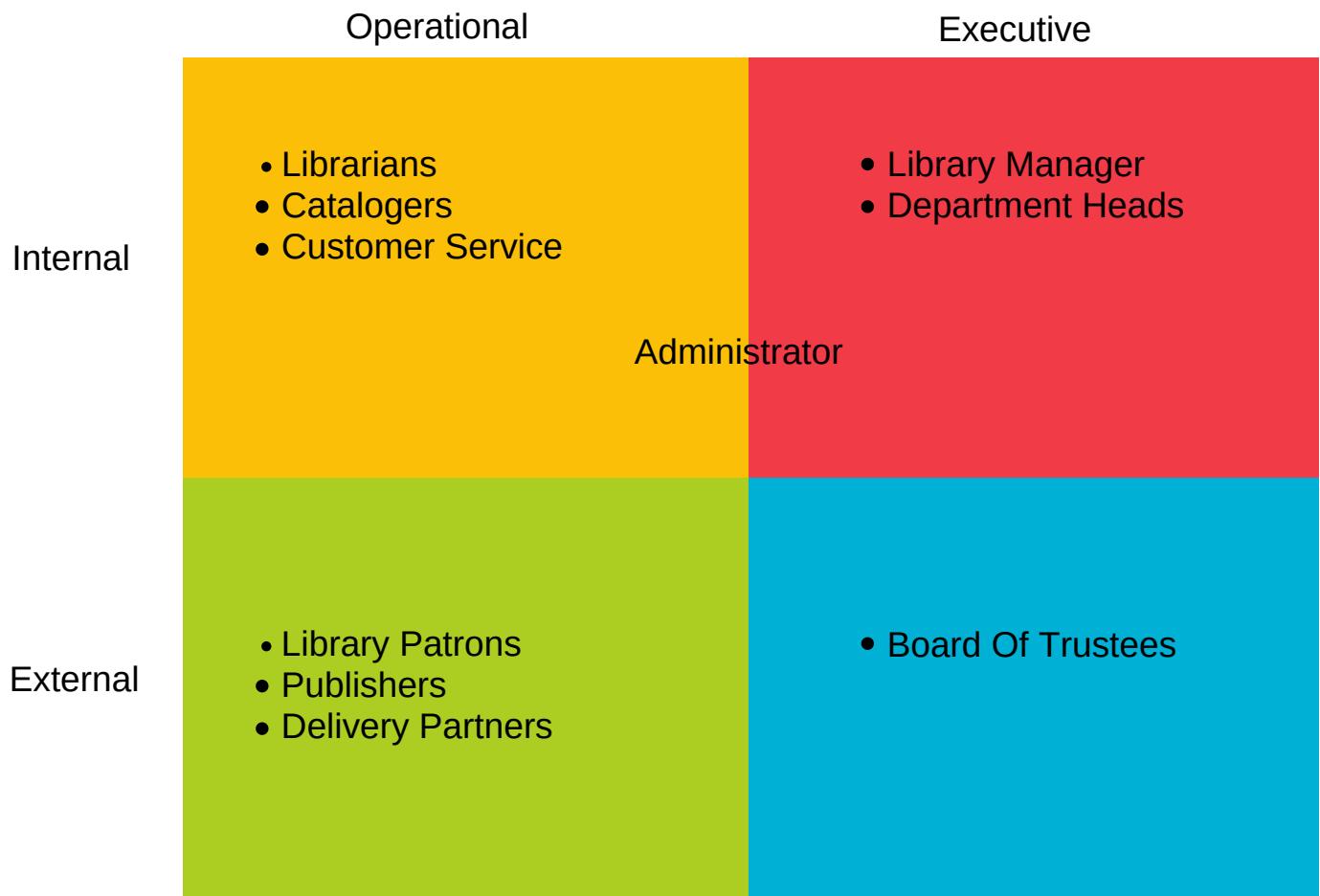
- **Circulation Management:** The system should handle the circulation of library items, including functionalities for issuing and returning items, managing due dates, and tracking item availability. It should generate notifications and reminders for overdue items and manage fines or penalties.
- **Reporting and Analytics:** The system should provide features to generate reports and analytics on various aspects of the library's operations, such as circulation statistics, item usage, overdue items, popular items, etc. It should support customizable reporting capabilities to meet specific reporting requirements.
- **Administrative Functions:** The system should provide administrative functionalities for librarians and staff, including user management, access control, system configuration, backup and restore capabilities, and system maintenance.

-Non-Functional Requirements :

- **Usability:** The system should be intuitive and easy to use, considering the diverse user base of librarians, staff, and patrons. It should have a user-friendly interface with clear navigation, consistent design, and appropriate feedback messages. Usability considerations should account for factors such as accessibility, readability, error prevention, and efficient workflows.
- **Performance:** The system should be designed to handle a large volume of transactions efficiently and provide fast response times. It should be able to handle concurrent user requests without significant performance degradation. Response times for operations such as searching, issuing, returning, and generating reports should meet predefined performance targets.

- **Scalability:** The system should be scalable to accommodate future growth in terms of the number of users, library items, and transactions. It should be able to handle an increasing load while maintaining performance levels. This may involve measures such as load balancing, horizontal or vertical scaling, and efficient resource utilization.
- **Maintainability:** The system should be designed for ease of maintenance and future enhancements. It should have well-structured code, modular design, and proper documentation. Considerations such as code reusability, version control, and the use of standard development practices can contribute to maintainability.
- **Compatibility:** The system should be compatible with the hardware, software, and network infrastructure available in the library environment. It should support multiple platforms (e.g., desktop, web, mobile) and operating systems commonly used by library staff and patrons.

Stakeholders Matrix



Interview

Date : 20/ 10 /2023

Time : 5 pm

Place : Student work space

Interviewee: Library Administrator

Participants:

- 1- Rawan Mohamed Fathy
- 2- Nermene Ahmed Fouad
- 3-Toqa Sameh Salah

- Interview Discussion :

1. What are the primary motivations for your library to adopt an online library management system?
2. In your opinion, what are the essential features and functionalities that an online library management system should possess?
3. What benefits do you anticipate from the implementation of the online library management system?
4. What measures will you implement to ensure the security and privacy of data within the online library management system?
5. Do you have any final thoughts or advice for other libraries considering the implementation of an online library management system?

-Follow Up:

Important Discussions / Answer Of Questions

1-it will significantly improve accessibility for our patrons, allowing them to search for and reserve materials from any location at any time. Secondly, automating repetitive tasks such as cataloging, circulation, and inventory management will save time and streamline our operations.

2-An ideal online library management system should offer robust search and browsing capabilities, enabling users to locate resources efficiently. It should support online reservations . Personalized recommendations based on user preferences and reading history are highly desirable.

3-The implementation of an online library management system will yield several significant benefits. It will enhance the overall user experience by providing convenient access to resources and enabling self-service functionalities. Automating routine tasks will free up staff time for more valuable activities.

4-Data security and privacy are of utmost importance in an online library management system. We will work closely with the system developers to implement robust security measures such as encryption, secure user authentication, and access control.

5- My advice would be to thoroughly evaluate the features, customization options, and scalability of the online library management system to ensure it aligns with the unique needs of your library. Engaging with library staff and users throughout the process, providing adequate training and support, and actively seeking feedback will contribute to a successful implementation.

Date And Time Of Next Meeting:

-November 1, 2023 , at 5:00 PM .
-Student Work Space

SURVEY 2023

Full Name _____ Age _____ Contact Phone _____

Doctor Student

1-How satisfied are you with the current library management system?

Very Satisfied Neutral Dissatisfied

2-How often do you use the library management system?

Last week Every day Once a month Rarely

3-How would you rate the complexity of the online library management system?

Very Simple Simple complex Very Complex

4-How secure do you feel when using an online library management system?

Very secure Neutral Not very secure Not at all secure

5-Does an online library management system cater to all your library needs efficiently?

Yes No

6-Do you think an online library management system makes library organization much easier?

Yes

7-Are all the features of an online library management system clearly explained?

Yes No

8-Do you have any suggestions for what to avoid in our management system? (Open-ended response)

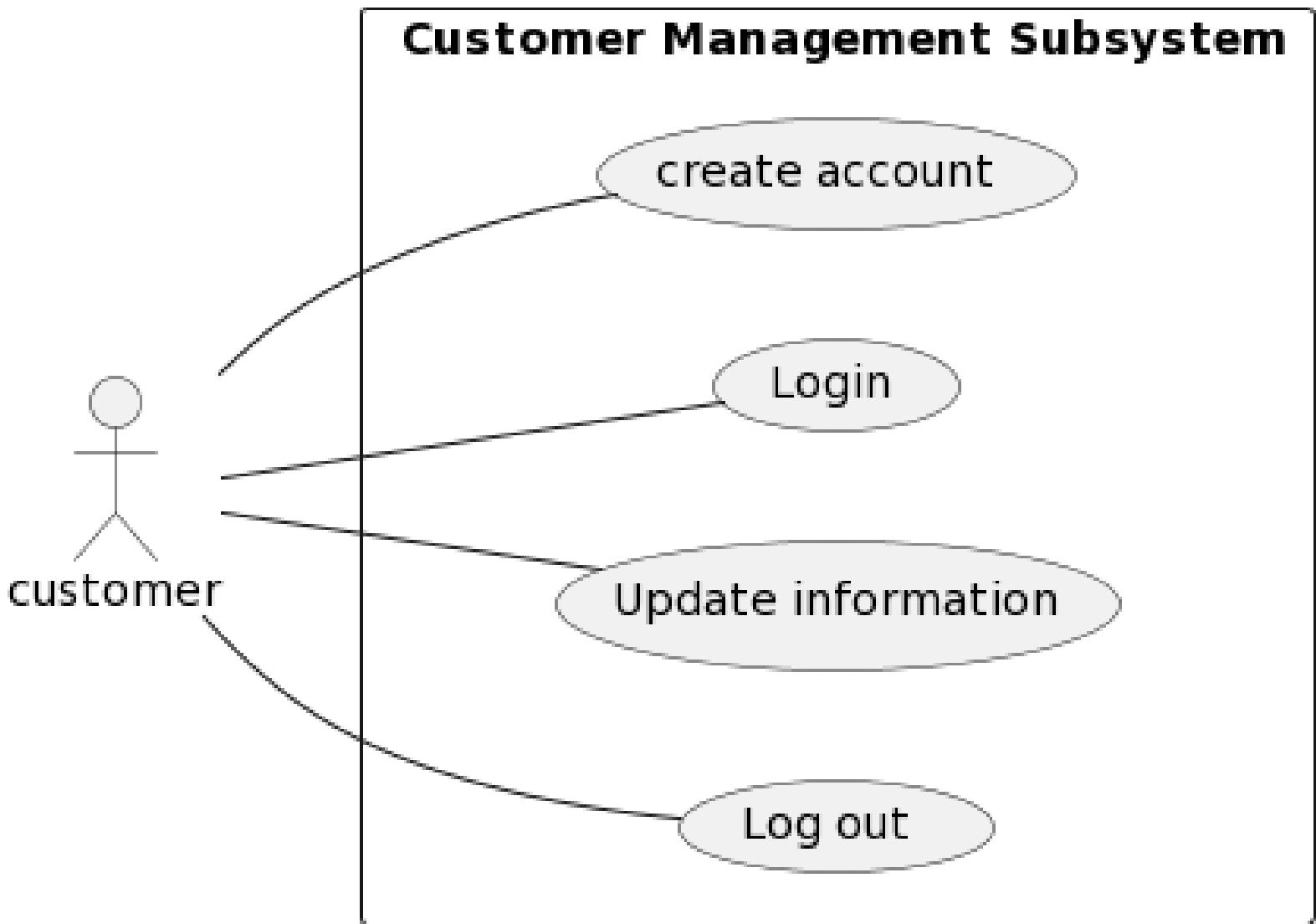
Thank you for taking the time to complete our system management survey.

Your feedback will help us improve our system.

Customer Management Subsystem

Event	Trigger	Source	Use Case	Response	Destination
Customer created account	Customer Creating a new account	Customer	Create New Customer Account	New user account created successfully	Customer
Customer Login	User enters email address and password and clicks on "Login" button	Customer	Login customer	customer logged in successfully	Customer
Customer Update	Customer update his/her profile information	Customer	Update customer information	information updated successfully	Customer
Customer Logout	Customer clicks on "Logout" button	Customer	Logout	Confirmation message	Customer

-Use Case Diagram:



- Use Case Description Of Customer Create New Account :

Use case name:	Create New Customer Account	
Triggering Event:	customer creates a new account in an online platform or service.	
Brief Description:	customer creates a new account in an online platform or service.	
Actors:	Customer	
Preconditions:	<ul style="list-style-type: none">• The online platform is accessible.• The customer has access.	
Postconditions:	<ul style="list-style-type: none">• A new customer account is created.• customer can login using the new account.	
Flow Of Activities:	Actor	System
	1.customer accesses the registration page of the online platform or service. 2.Customer enters his/her name. 3.Customer enters one or more address. 4.Customer enters credit card information.	1.1 System presents a registration form. 1.2 System prompts for customer name. 2.1 System prompts for customer address. 3.1 system creates address. 3.2 system prompts for credit. 4.1 System verifies authorization for credit card. 4.2 System associates customer, address, and account. 4.3 System returns valid customer account details. 4.4 System creates account.
Exception Conditions:	1.1 Customer data are incomplete. Error message for incomplete data. 2.1 The address isn't valid. Error message for invalid address. 3.2 Credit information isn't valid. Error message for wrong credit card.	

- Use Case Description Of Customer login :

Use case name:	Customer Login To The System .	
Triggering Event:	Customer wants to login to the system .	
Brief Description:	This use case describes the interactions between a customer and a system ,enabling the customer to access their personalized account or profile .	
Actors:	Customer	
Preconditions:	<ul style="list-style-type: none">• The customer must have a valid account or profile registered with the system .	
Postconditions:	<ul style="list-style-type: none">• customer gains access to their account or profile .	
Flow Of Activities:	Actor	System
	<ol style="list-style-type: none">1.The customer initiates the login process .2.The customer enters their informations into the provided fields .3. The customer submits the login form .	<p>1.1 The system presents the login form include a username or email and a password .</p> <p>3.1 The system verifies the entered informations by validating the username/email and password .</p> <p>3.2 the system access to the customer's account .</p>
Exception Conditions:	<p>3.1 If the informations are invalid, the system displays an error message indicating that the login failed , The customer retry the login process again .</p>	

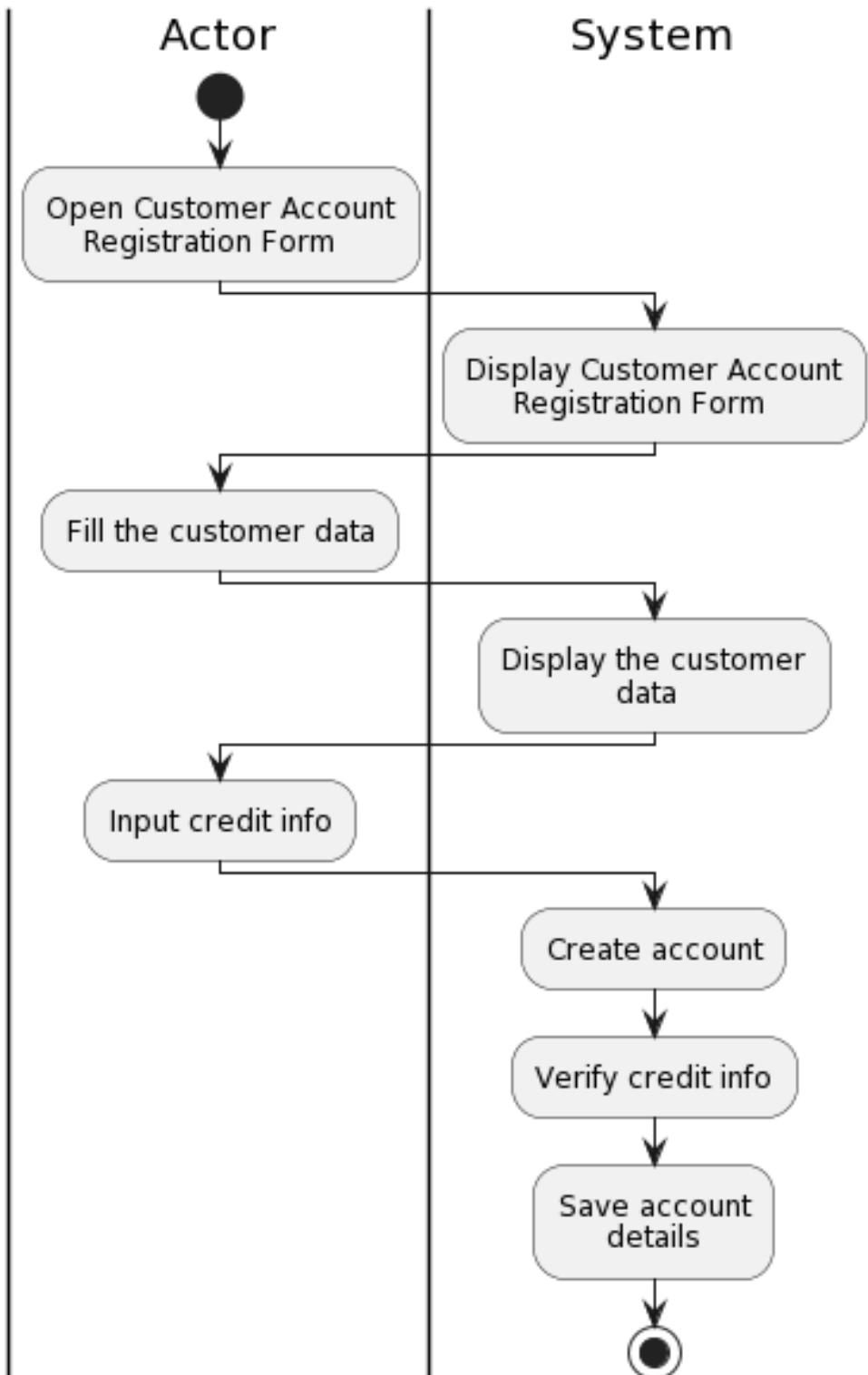
- Use Case Description Of Customer Updates :

Use case name:	Customer Updates His Profile					
Triggering Event:	Customer wants to updates his profile .					
Brief Description:	use case describes the interactions between a customer and a system, allowing the customer to modify and update their personal information .					
Actors:	Customer					
Preconditions:	<ul style="list-style-type: none">• The customer must have a valid account or profile registered with the system .					
Postconditions:	<ul style="list-style-type: none">• the customer gains access to their account or profile, enabling them to perform various actions or view personalized information .					
Flow Of Activities:	<table border="1"><thead><tr><th>Actor</th><th>System</th></tr></thead><tbody><tr><td>1.The customer initiates the login process . 2.The customer enters their informations into the provided fields . 3. The customer submits the login form 4.The customer modifies the desired fields, such as name, contact information, address, or any other relevant details. 5.The customer submits the updated information to the system .</td><td>1.1 The system presents the login form include a username or email and a password . 3.1 The system verifies the entered informations by validating the username/email and password . 3.2 the system access to the customer's account . 5.1 The system confirms the successful update .</td></tr></tbody></table>	Actor	System	1.The customer initiates the login process . 2.The customer enters their informations into the provided fields . 3. The customer submits the login form 4.The customer modifies the desired fields, such as name, contact information, address, or any other relevant details. 5.The customer submits the updated information to the system .	1.1 The system presents the login form include a username or email and a password . 3.1 The system verifies the entered informations by validating the username/email and password . 3.2 the system access to the customer's account . 5.1 The system confirms the successful update .	
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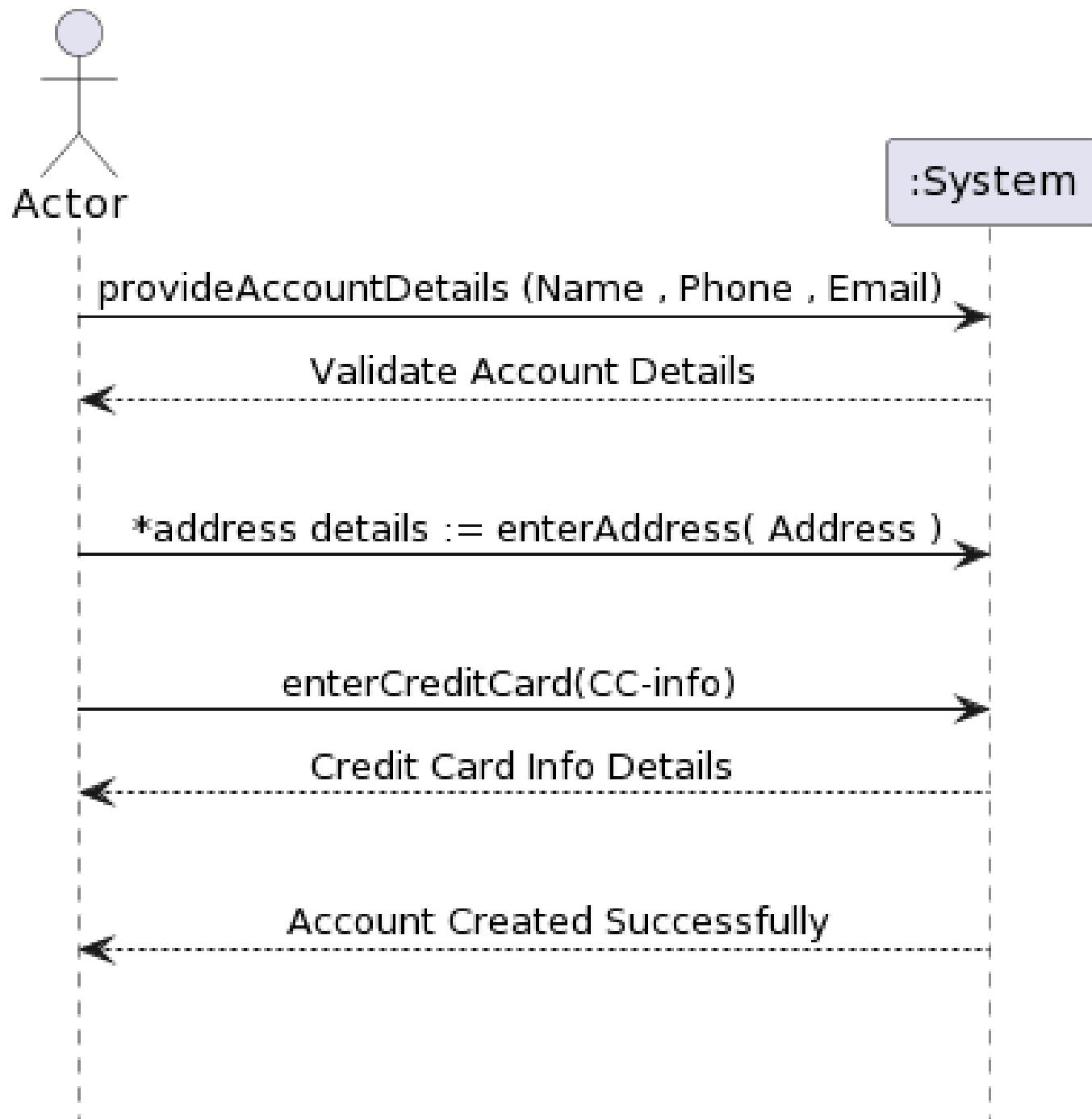
- Use Case Description Of Customer Logout :

Use case name:	Customer Logout From The System					
Triggering Event:	Customer wants to logout .					
Brief Description:	use case describes the interactions between a customer and a system, enabling the customer to end their session and log out of their account or profile .					
Actors:	Customer					
Preconditions:	<ul style="list-style-type: none">• The customer must be logged into their account or profile.					
Postconditions:	<ul style="list-style-type: none">• The customer's session is terminated, and they are logged out of their account or profile.					
Flow Of Activities:	<table border="1"><thead><tr><th>Actor</th><th>System</th></tr></thead><tbody><tr><td>1.The customer initiates the logout process . 2.The customer confirms their decision to log out.</td><td>1.1 The system confirms the customer's intent to log out, displaying a prompt or confirmation message. 2.1 The system terminates the customer's session . 2.2 The system redirects the customer to a designated logout page or a landing page indicating a successful logout.</td></tr></tbody></table>	Actor	System	1.The customer initiates the logout process . 2.The customer confirms their decision to log out.	1.1 The system confirms the customer's intent to log out, displaying a prompt or confirmation message. 2.1 The system terminates the customer's session . 2.2 The system redirects the customer to a designated logout page or a landing page indicating a successful logout.	
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Exception Conditions:	2.2 If the system experiences technical difficulties during the logout process, the customer may not be able to log out, the system displays an error message. the customer retry to log out again.					

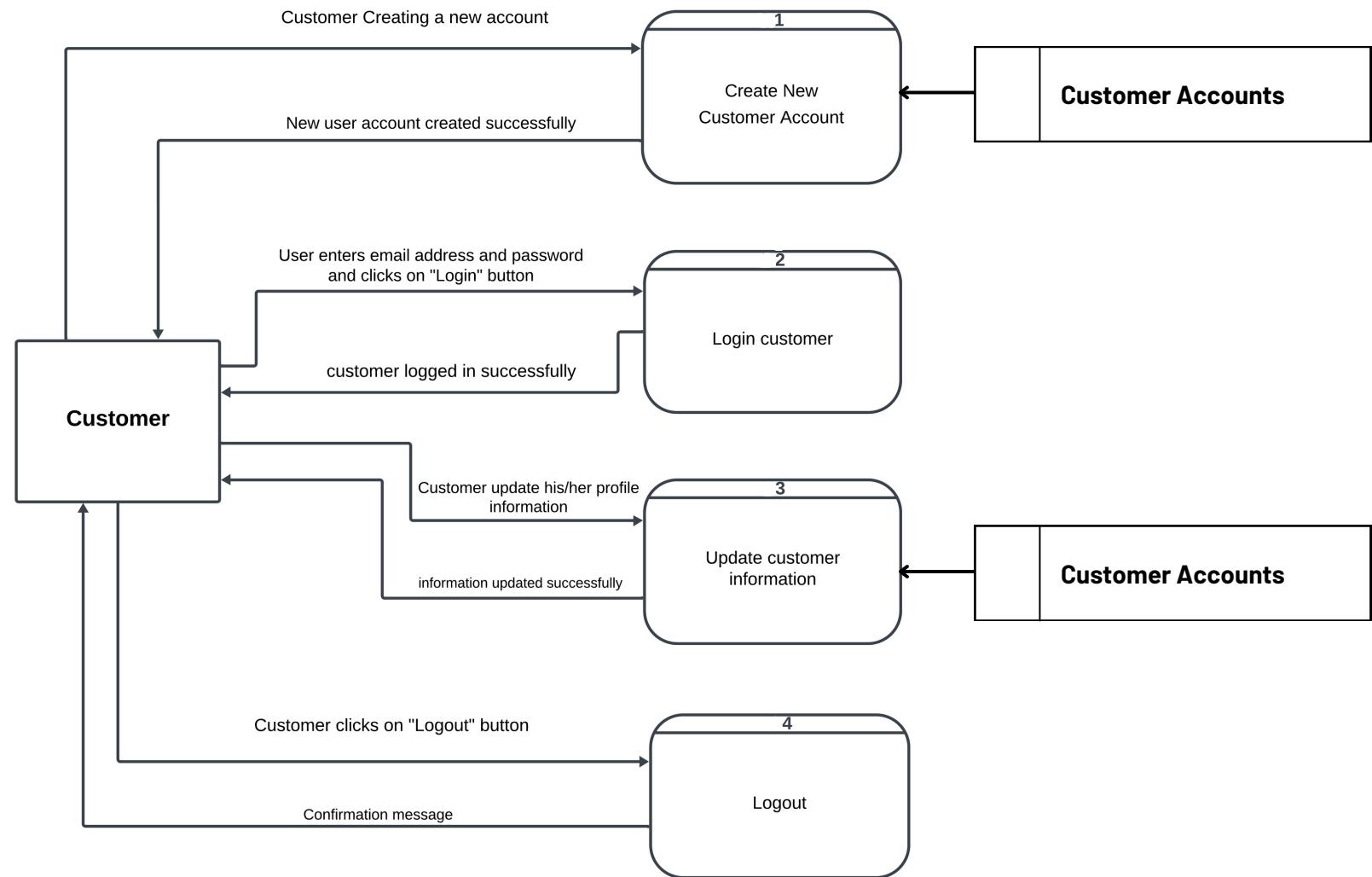
-Activity Diagram For Create new customer Account :



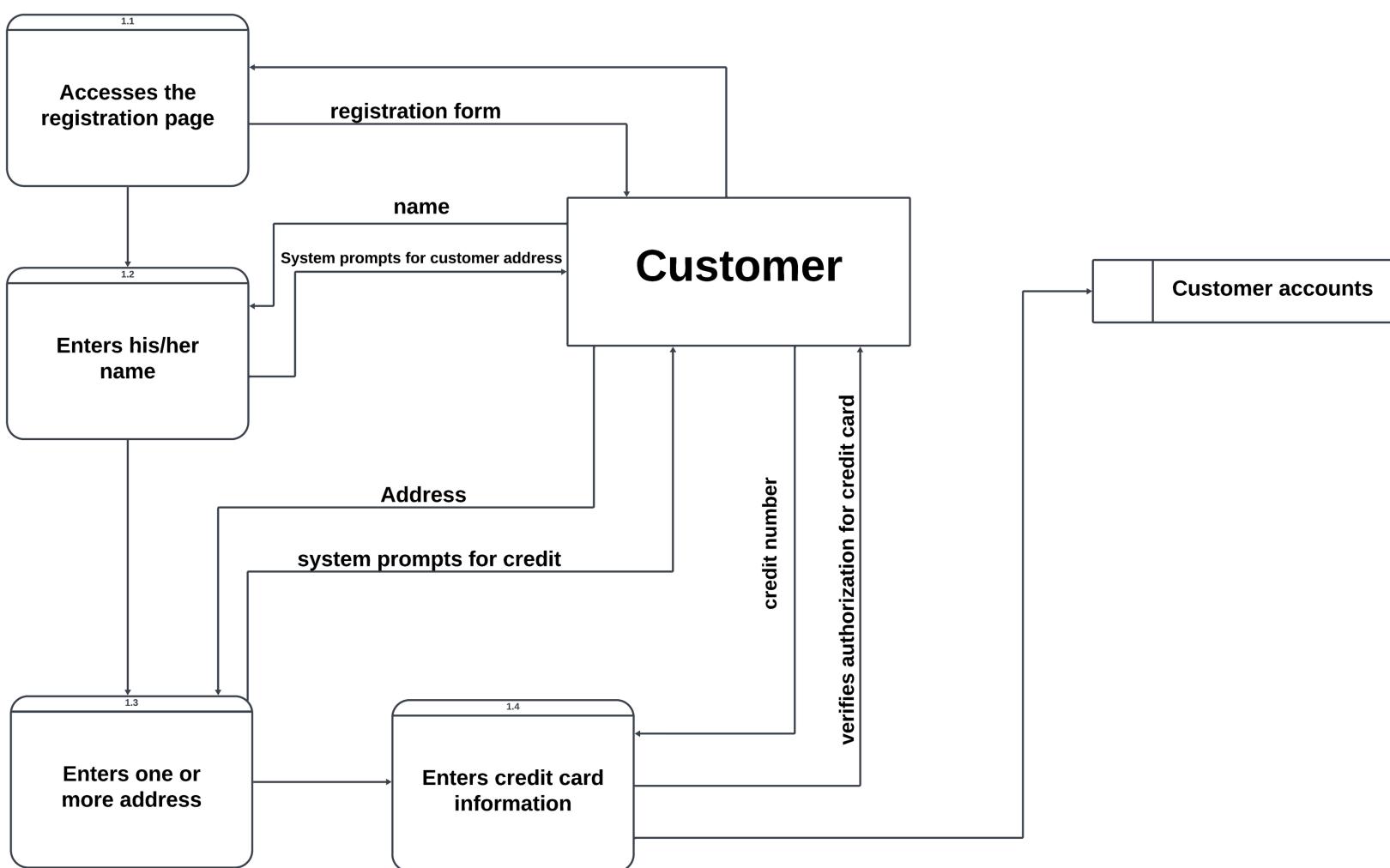
-System Sequence Diagram For Create new customer Account :



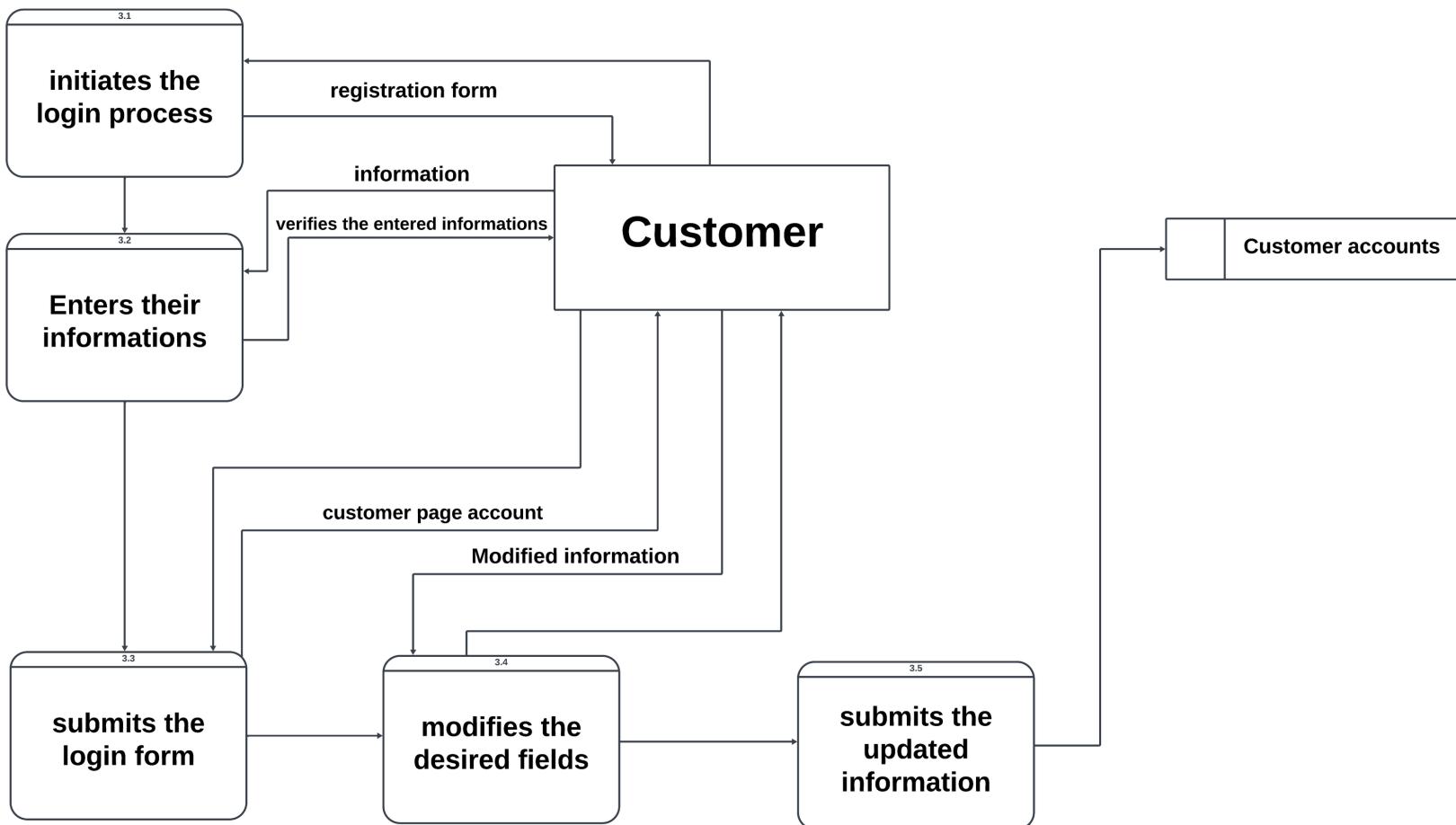
Customer Management Subsystem (DFD Level 0)



Create New Customer Account (detailed DFD)



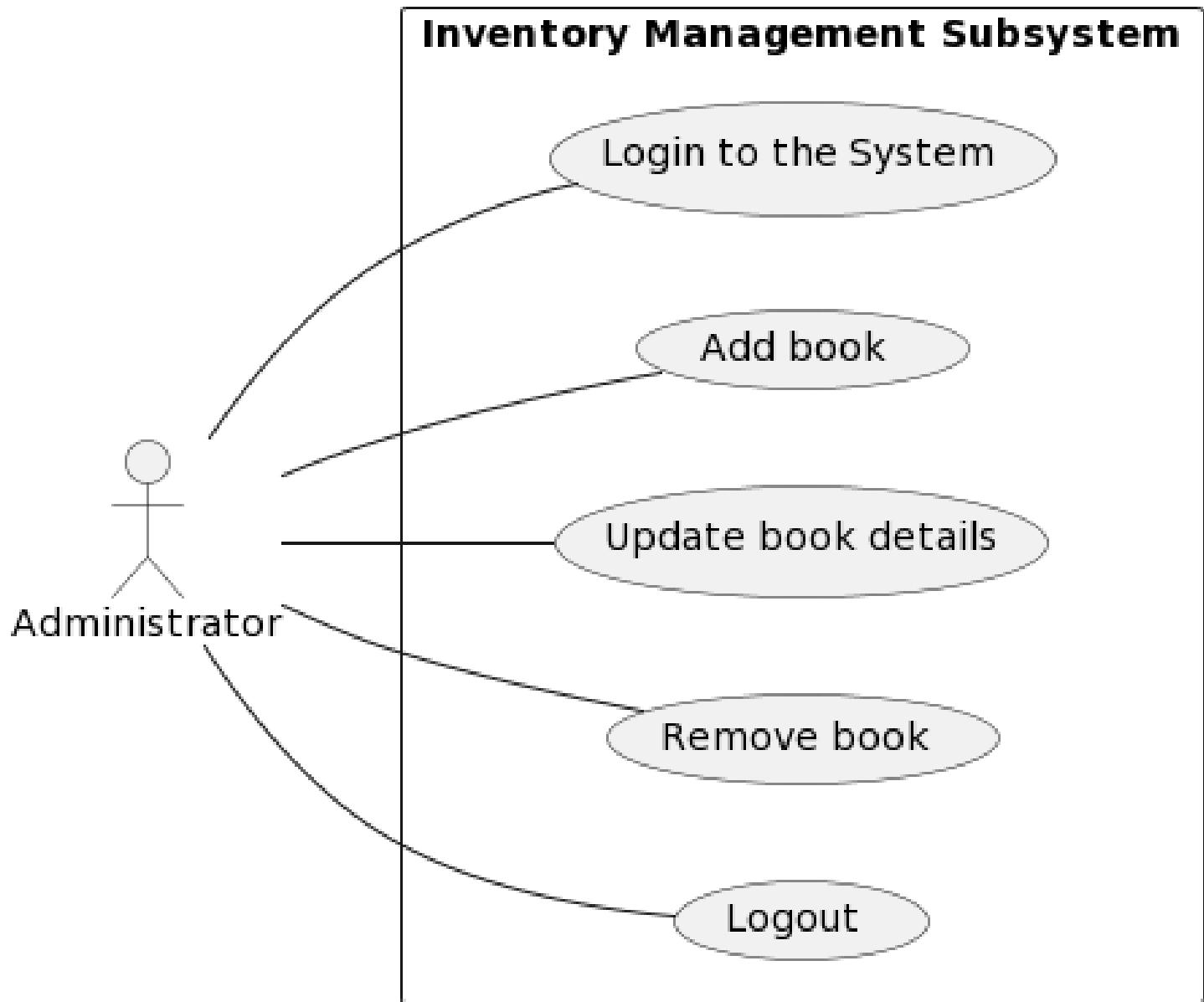
Update Customer Account (detailed DFD)



Inventory Management Subsystem

Event	Trigger	Source	Use Case	Response	Destination
Administrator wants to login to the system	Login	Administrator	Login to the System	Main page opens	Administrator
Administrator wants to add new book	Administrator adds a new book	Administrator	Add book	System opens	Administrator
Administrator wants to Update Book	Administrator updates book information	Administrator	Update book details	Success or error message	Administrator
Administrator wants to Remove Book	Administrator removes a book from inventory	Administrator	Remove book from inventory	Success or error message	Administrator
Administrator Logout	Administrator clicks on "Logout" button	Administrator	Logout	Confirmation message	Administrator

-Use Case Diagram:



- Use Case Description Of Add New Book:

Use case name:	Administrator Adds a New Book .	
Triggering Event:	Administrator wants to add new book .	
Brief Description:	This use case focuses on the specific task of adding a new book .	
Actors:	Administrator	
Preconditions:	<ul style="list-style-type: none">• Administrator must login to system• book is available	
Postconditions:	<ul style="list-style-type: none">• The new book is successfully added to inventory system .	
	Actor	System
Flow Of Activities:	<ol style="list-style-type: none">1.The administrator initiates the process of adding a new book .2.The administrator enters the relevant details into the form .3.administrator submits the form or triggers the "Add Book" action .	<p>1.1 The system presents a form or a set of fields that need to be filled out to provide information about the new book</p> <p>3.1 The system confirms the successful addition of the book and display a success message to the administrato .</p>
Exception Conditions:	<p>3.If the administrator encounters technical issues while adding the book, such as a system error or connection problem, the administrator prompted to retry the operation</p>	

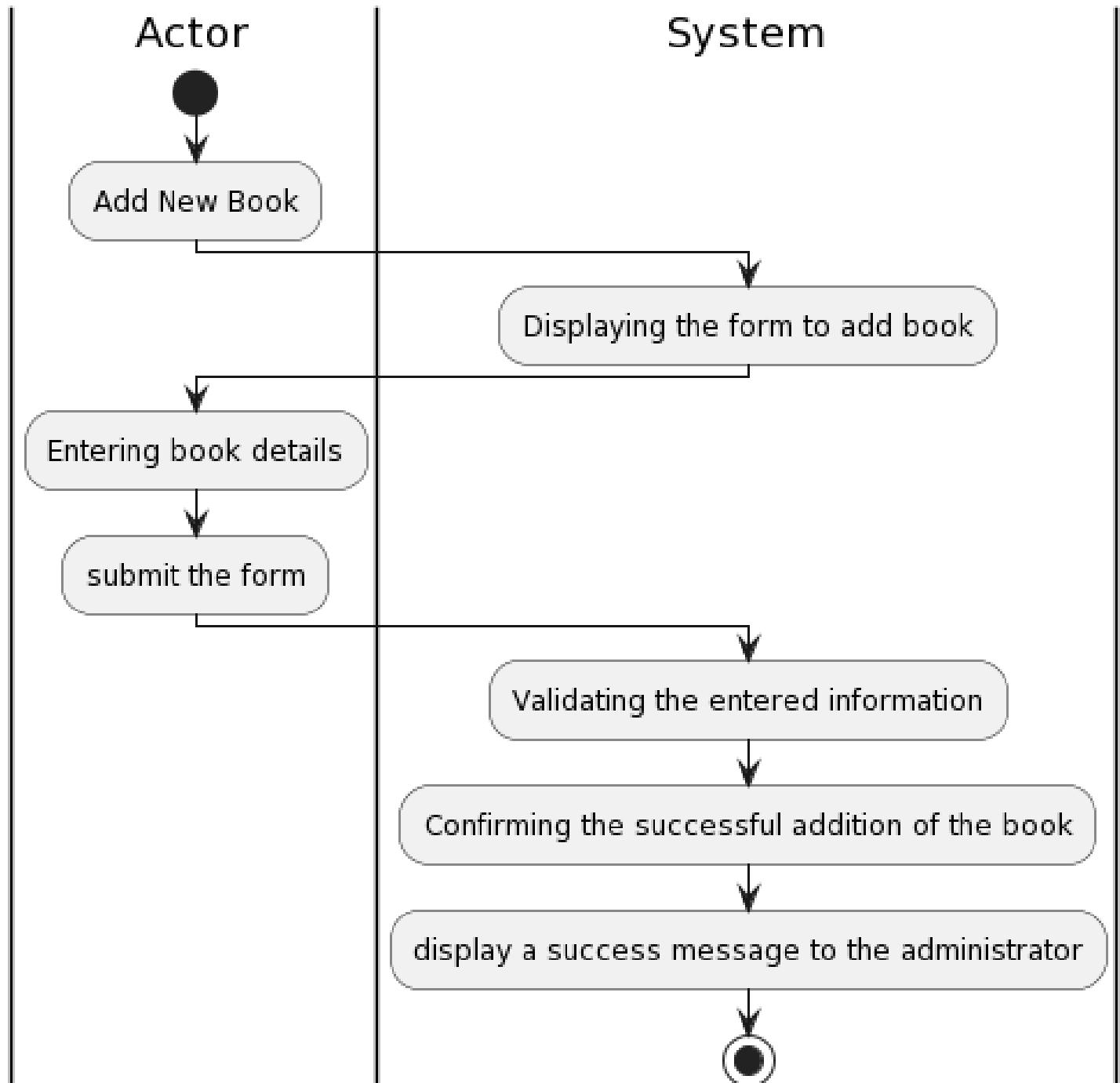
- Use Case Description Of Administrator Updates Book :

Use case name:	The Administrator Updates Book											
Triggering Event:	The Administrator wants to Updates Book informations .											
Brief Description:	use case describes the interactions between a administrator and a system, allowing the administrator to modify and update the information related to a book in the library's collection.											
Actors:	Administrator											
Preconditions:	<ul style="list-style-type: none">• The administrator must log into the system .• The book to be updated must already exist in the library's collection .											
Postconditions:	<ul style="list-style-type: none">• The book's information is updated with the new data provided during the update process.											
Flow Of Activities:	<table border="1"><thead><tr><th>Actor</th><th>System</th></tr></thead><tbody><tr><td>1.The administrator searche for the book he wants to update.</td><td>1.1 System validates search criteria (name).</td></tr><tr><td>2.The administrator identifies the fields or attributes they wish to update .</td><td>1.2 The system displays the existing information associated with the selected book, such as title, author.</td></tr><tr><td>3.The administrator modifies the desired fields, making changes to the book's information as needed.</td><td>4.1 The system confirms the successful update and may display a notification or confirmation message to the administrator.</td></tr><tr><td>4.The administrator submits the updated information to the system .</td><td></td></tr></tbody></table>	Actor	System	1.The administrator searche for the book he wants to update.	1.1 System validates search criteria (name).	2.The administrator identifies the fields or attributes they wish to update .	1.2 The system displays the existing information associated with the selected book, such as title, author.	3.The administrator modifies the desired fields, making changes to the book's information as needed.	4.1 The system confirms the successful update and may display a notification or confirmation message to the administrator.	4.The administrator submits the updated information to the system .		
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4.The administrator submits the updated information to the system .												
Exception Conditions:	<p>1.1 If the book is not available, system displays an message " book is not found ".</p> <p>4.1 If the system experiences technical difficulties during the update proces , the system displays an error message. the administrator retry to update process again.</p>											

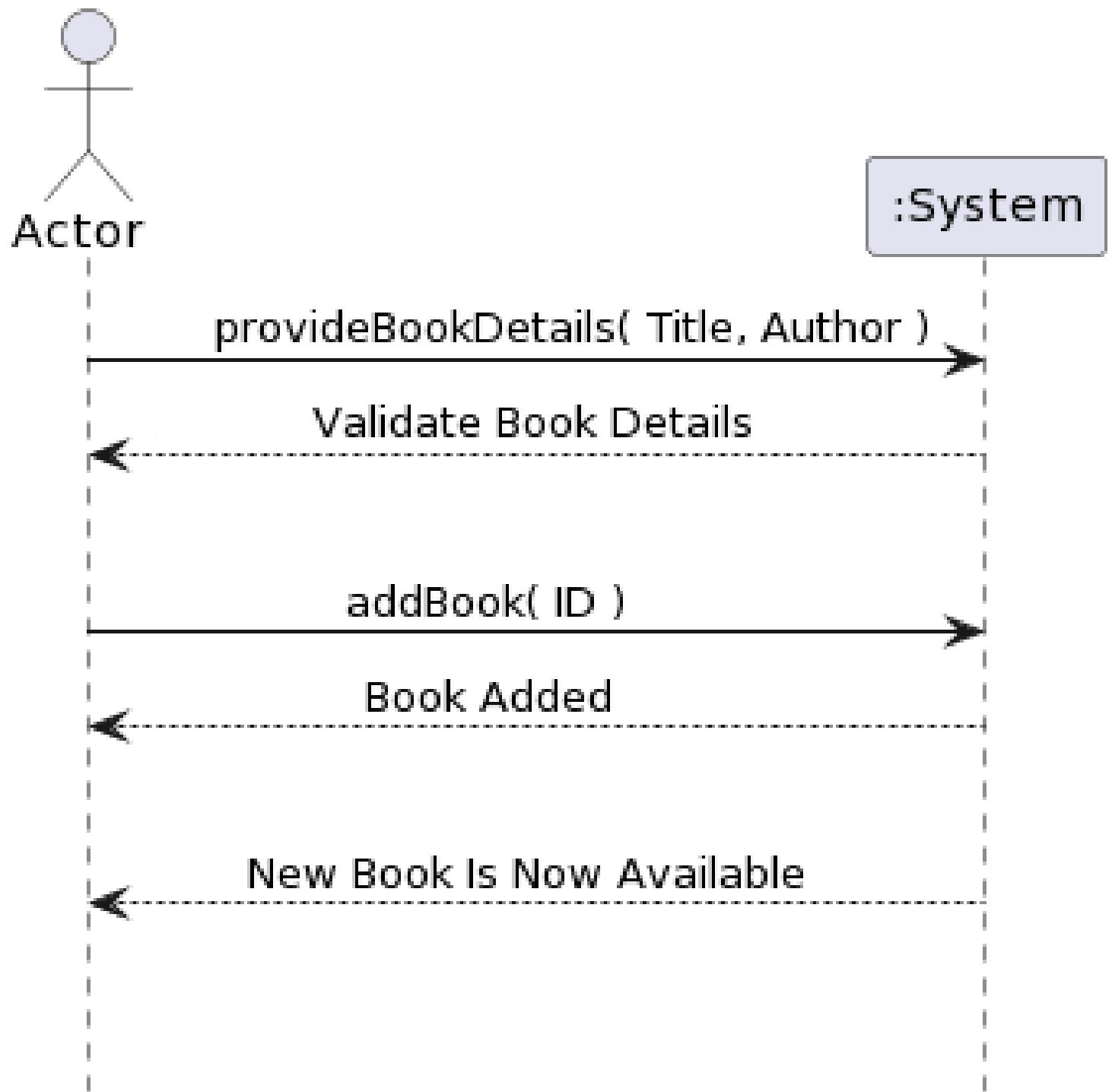
- Use Case Description Of Remove book from inventory:

Use case name:	Administrator Remove book .	
Triggering Event:	Administrator wants to Remove book from invent.	
Brief Description:	This use case focuses on the specific task of Removing book from inventory system.	
Actors:	Administrator	
Preconditions:	<ul style="list-style-type: none">• Administrator must login to system• book must be present in the inventory.	
Postconditions:	<ul style="list-style-type: none">• The book is successfully removed from the inventory system .	
Flow Of Activities:	Actor	System
	<ol style="list-style-type: none">1.The administrator searches for the book want to remove .2.The administrator remove the book from the inventory .	<p>1.1 System validates search criteria(name).</p> <p>2.1 The system confirms the successful Removal of the book from inventory.</p>
Exception Conditions:	<p>1.1 If the book is not available, system displays an message " book is not found ".</p>	

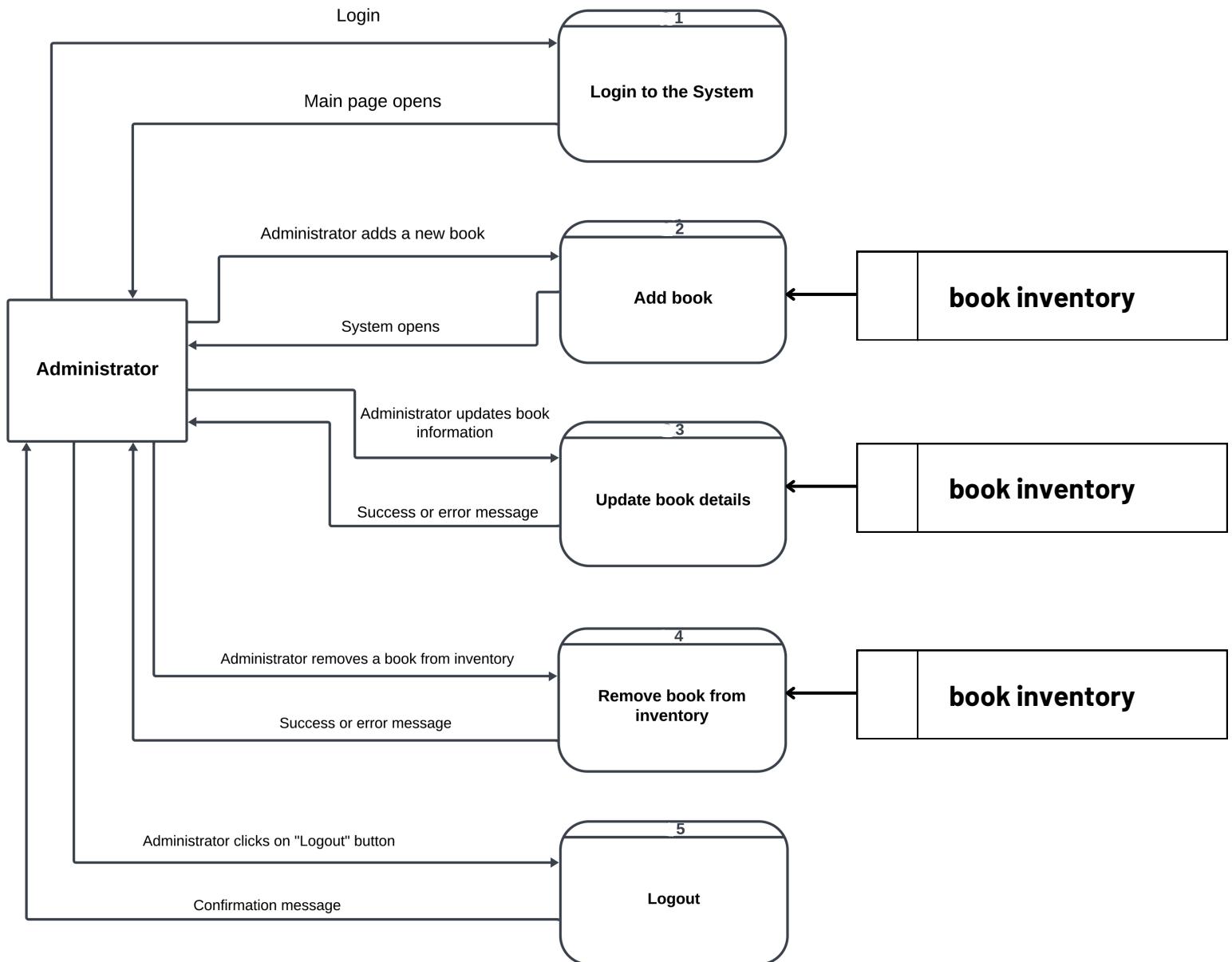
-Activity Diagram For Add New Book :



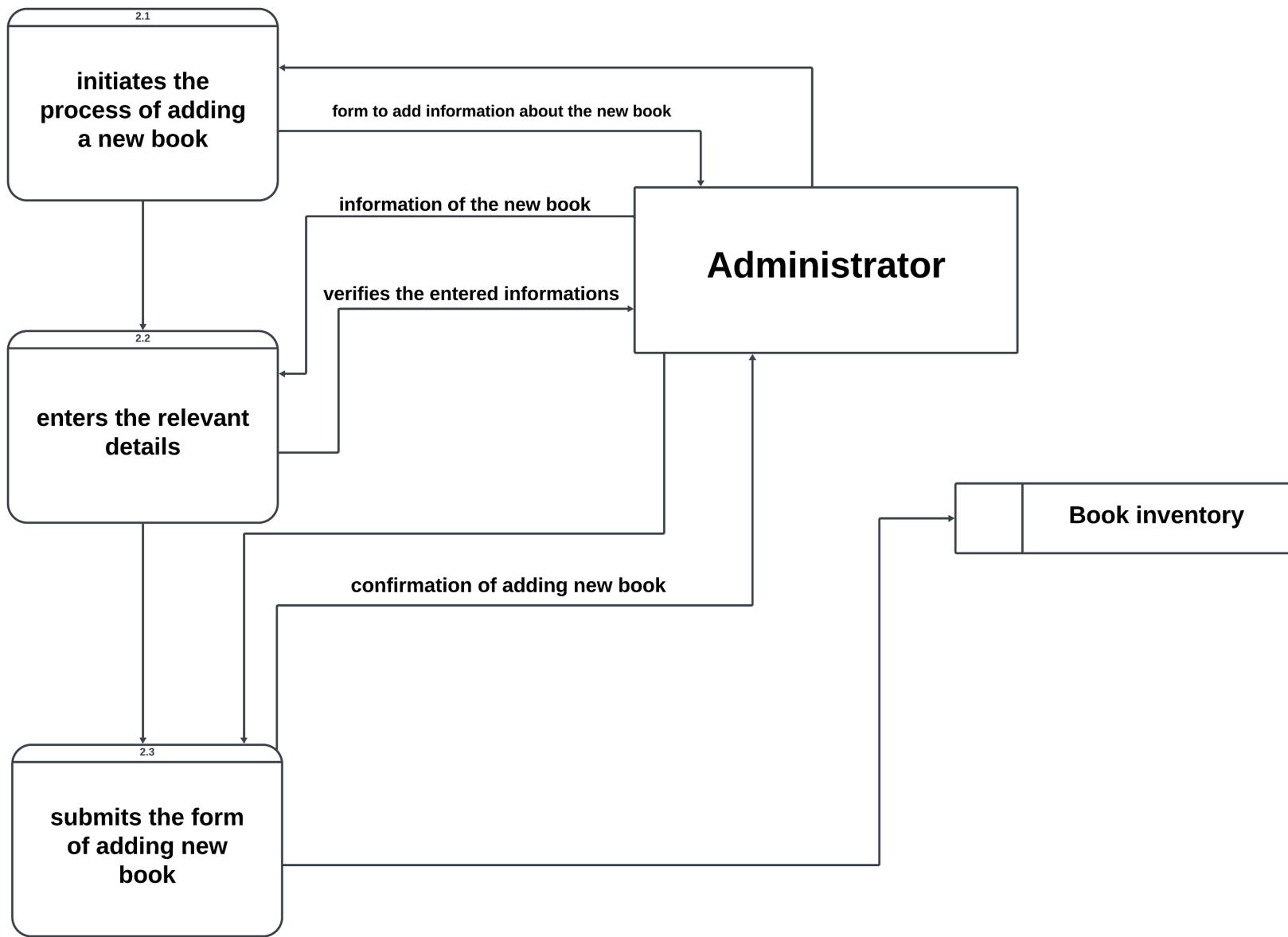
-System Sequence Diagram For Add New Book :



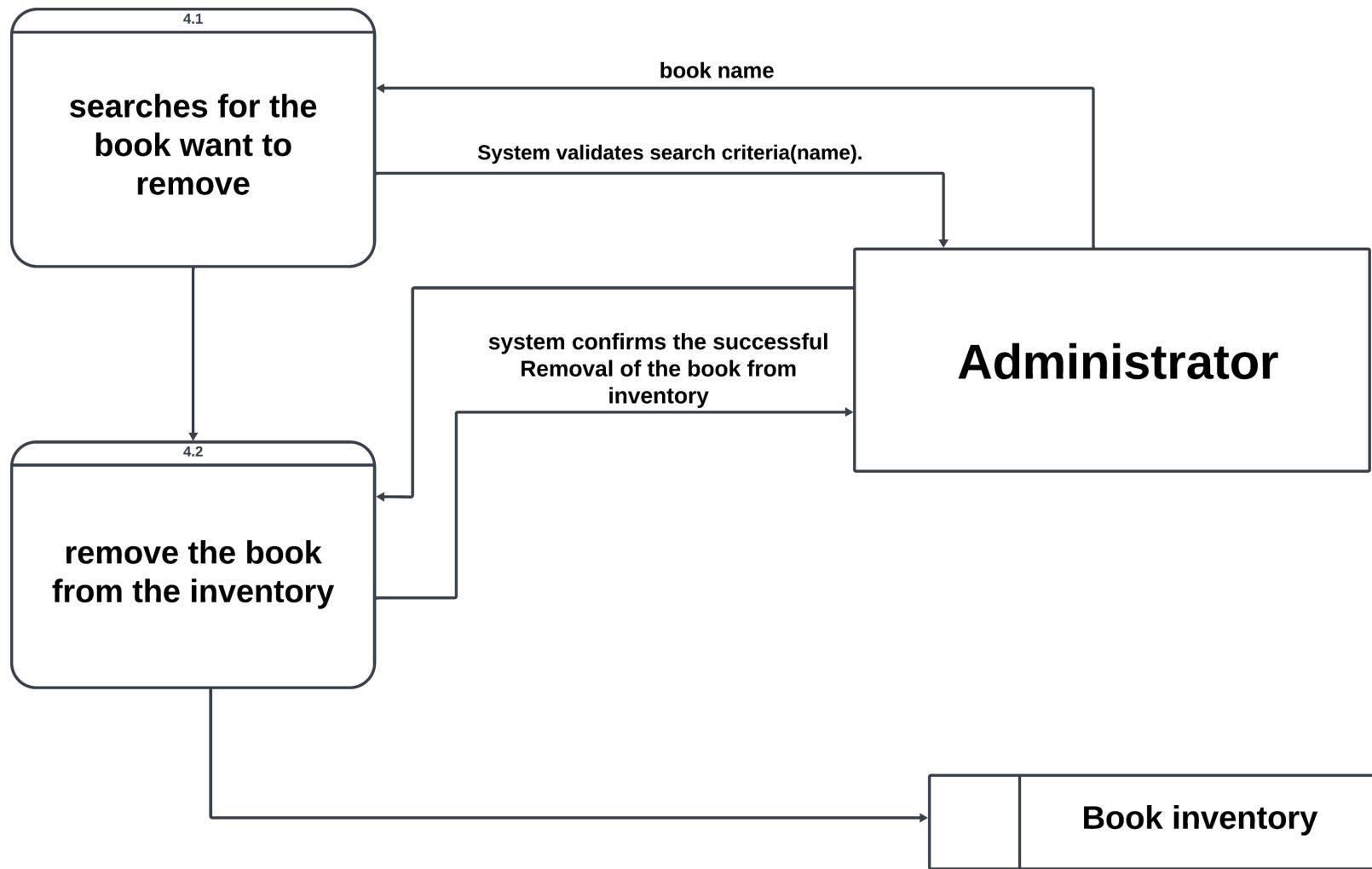
Inventory Management Subsystem (DFD Level 0)



The Administrator Updates Book(detailed DFD)



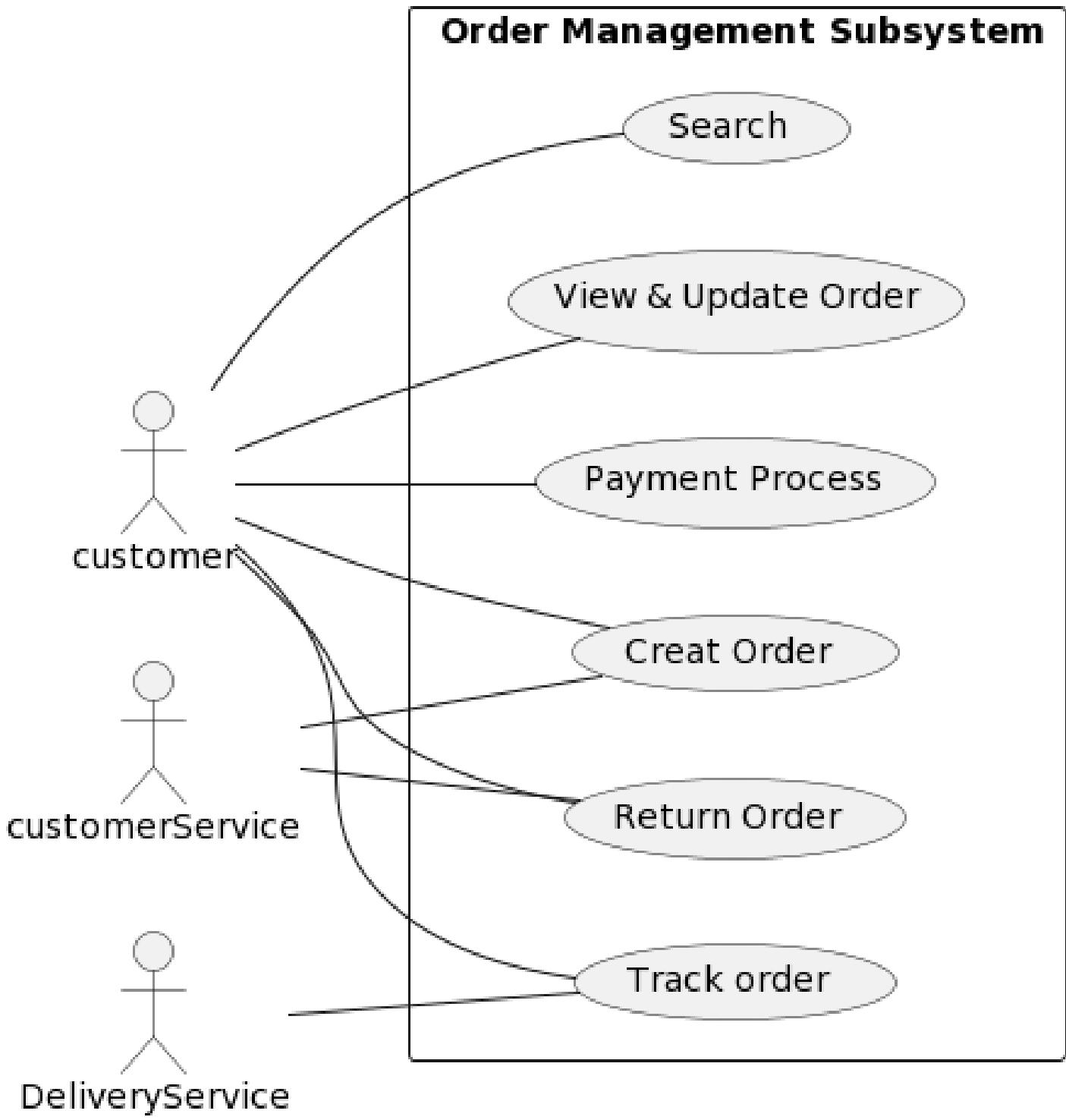
The Administrator Remove book (detailed DFD)



Order Management Subsystem

Event	Trigger	Source	Use Case	Response	Destination
Customer Search Books	Book inquiring	Customer	Search for books	List of relevant book results	Customer
Customer creates order	Creating order	Customer	Create new order	<ul style="list-style-type: none"> • Order confirmation and details • Notification to customer service 	<ul style="list-style-type: none"> • Customer • Customer service
Customer view and Updates orders	View & Update Order	Customer	View & Update Order	List of orders	Customer
Customer Processes Payment	Payment processing	Customer	Process payment	Payment confirmation or error message	Customer
Customer can return order	Return order	Customer	Return order	<ul style="list-style-type: none"> • Email confirmation • Notification to customer service 	<ul style="list-style-type: none"> • Customer • Customer service
Customer can track order	Following track order	<ul style="list-style-type: none"> • Customer • Delivery service 	Track order	<ul style="list-style-type: none"> • Email confirmation • Notification to delivery service 	<ul style="list-style-type: none"> • Customer • Delivery service

-Use Case Diagram:



- Use Case Description Of Search for Books:

Use case name:	Search for Books.	
Triggering Event:	Customer wants to Search Books.	
Brief Description:	This use case describes the process of searching for books in an online bookshop system based on specific criteria (name).	
Actors:	Customer	
Preconditions:	<ul style="list-style-type: none">• User is logged in to the online library system.• The online system is accessible and operational.	
Postconditions:	<ul style="list-style-type: none">• Customer has successfully searched for books matching their name.• failed search with message (not found).	
Flow Of Activities:	Actor	System
	1. Customer accesses the online system . 2. Customer enters search criteria(name). 3. Customer explores the search results to find desired books. 4. Customer selects a book for more details.	2.1 System validates search criteria(name). 2.2 System displays the search results to the Customer. 4.1 System displays detailed information about the selected book.
Exception Conditions:	2.2 No search results found.(System displays a message indicating no results were found). 2.1 Technical issues or errors.(System displays an error message).	

- Use Case Description Of Customer Creates Order :

Use case name:	Customer Creates Order .	
Triggering Event:	Customer wants to Create order .	
Brief Description:	This use case describes the process in which a customer creates a new order .	
Actors:	<ul style="list-style-type: none">• Customer• Customer Service	
Preconditions:	<ul style="list-style-type: none">• customer must login to system• Desired books are available on the system.	
Postconditions:	<ul style="list-style-type: none">• customer order is successfully created.• The system send order confirmation emails and notifications to the customer .	
Flow Of Activities:	Actor	System
	<ol style="list-style-type: none">1.The customer selects the desired book .2.The customer proceeds to the checkout process .3.The customer enters the required information into the checkout form .	<p>2.1 The system presents a checkout page where the customer provides information required to complete the order .</p> <p>3.1 The system validates the entered information, including payment authorization</p>
Exception Conditions:	<p>3.1 The customer provides incomplete or invalid information , An error message may be displayed.</p> <p>3.2 The payment transaction fails or is declined , The system providing an error message and potentially offering alternative payment methods.</p>	

- Use Case Description Of Customer View & Update order:

Use case name:	Customer View and Update order	
Triggering Event:	Customer wants to view and update order.	
Brief Description:	This use case describes the interactions between a customer and an online library system, allowing the customers to modify and update their order .	
Actors:	Customer	
Preconditions:	<ul style="list-style-type: none">• The customer must be logged into their account.• The customer must have an existing order for books .	
Postconditions:	<ul style="list-style-type: none">• The customer's order details are updated with the new data provided during the update process.	
Flow Of Activities:	Actor	System
	1.The customer identifies the specific order they want to update 2.The customer identifies the fields or attributes they wish to update within the order . 3.The customer modifies the desired fields, making changes to the order details as needed. 4.The customer submits the updated information to the system.	1.1 The system presents the details of the selected order . 4.1 the system updates the order record with the new data. 4.2 The system confirms the successful update and may display a notification or confirmation message to the customer.
Exception Conditions:	4.4 If the system experiences technical difficulties during the order update process, the customer may not be able to save the changes. In such cases, the system should display an error message and customer retry process again .	

- Use Case Description Of Process payment:

Use case name:	Process payment	
Triggering Event:	Customer wants to pay the money of the order.	
Brief Description:	This use case describes the process of processing a payment for an order in an online bookshop.	
Actors:	Customer	
Preconditions:	<ul style="list-style-type: none">• Customer is logged in to the online bookshop system.• Customer has selected books proceeded to checkout.	
Postconditions:	<ul style="list-style-type: none">• Customer's payment for the order is successfully processed.• Customer receives confirmation of the payment.• Order status is updated to reflect a successful payment.	
Flow Of Activities:	Actor	System
	<ol style="list-style-type: none">1. Customer accesses the online bookshop system.2. Customer selects a payment method (e.g., credit card, cash on delivery, etc.).3. Customer receives confirmation of the payment status and an order summary.	<ol style="list-style-type: none">2.1 System verifies the payment details and performs necessary security checks.2.2 System checks the payment status (success or failure).2.3 System updates the order status based on the payment status.
Exception Conditions:	<ol style="list-style-type: none">2.2 Invalid payment details. (System displays an error message indicating that the payment details provided are invalid).2.3 Technical issues or errors. (System displays an error message).	

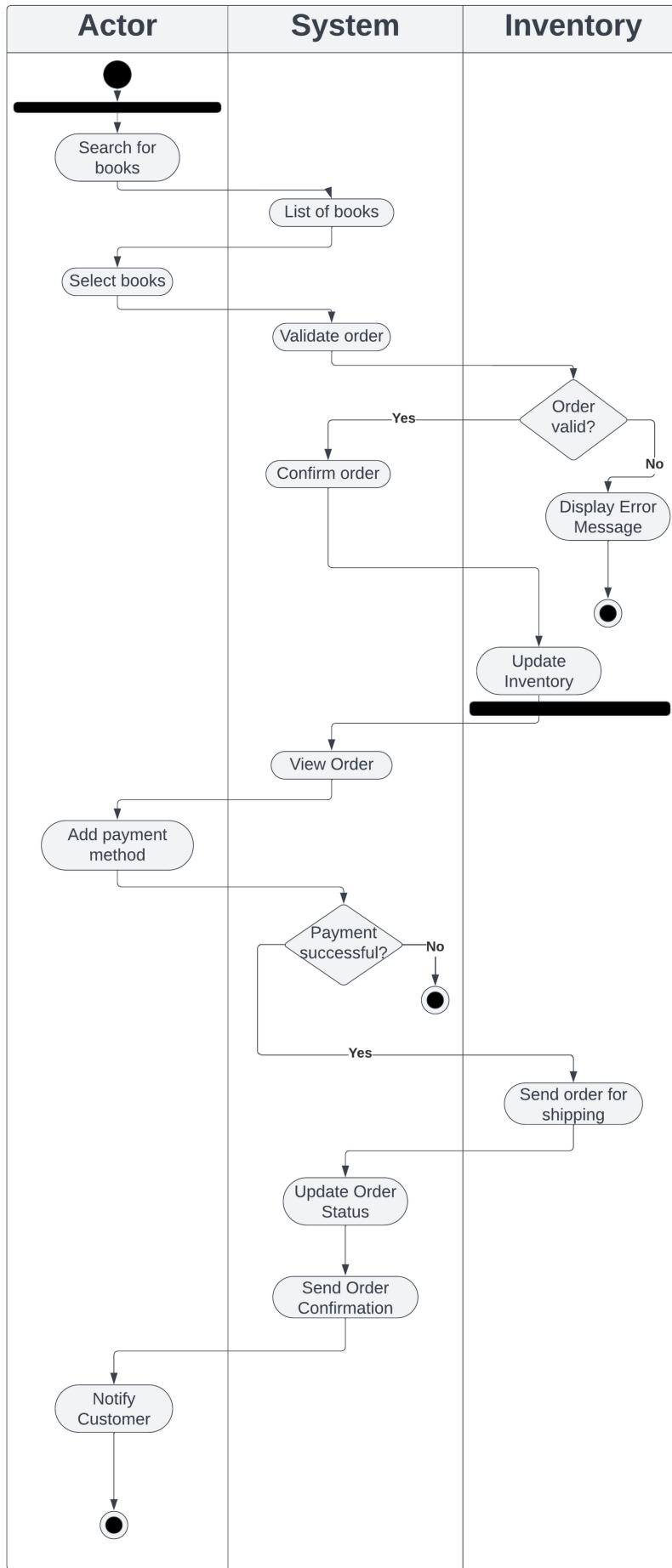
- Use Case Description Of Customer Return Order:

Use case name:	Return Order					
Triggering Event:	Customer wants to Return Order.					
Brief Description:	This use case describes the process of searching for books in an online bookshop system based on specific criteria (name).					
Actors:	<ul style="list-style-type: none">• Customer• Customer Service					
Preconditions:	<ul style="list-style-type: none">• The customer must have previously bought a book from the system.• The return period for the bought book must not have expired.					
Postconditions:	<ul style="list-style-type: none">• Customer has successfully returned the book to the system.					
Flow Of Activities:	<table border="1"><thead><tr><th>Actor</th><th>System</th></tr></thead><tbody><tr><td>1. Customer accesses the online system. 2. The customer selects the "Return" or a similar option to initiate the return process for the selected book . 3. The customer confirms the return.</td><td>1.1 system prompts the customer to confirm the return action. 2.2 The system updates the status of the returned book in the system 3.1 System initiates the refund process if applicable. 3.2 The system displays a success message indicating that the book has been successfully returned.</td></tr></tbody></table>	Actor	System	1. Customer accesses the online system. 2. The customer selects the "Return" or a similar option to initiate the return process for the selected book . 3. The customer confirms the return.	1.1 system prompts the customer to confirm the return action. 2.2 The system updates the status of the returned book in the system 3.1 System initiates the refund process if applicable. 3.2 The system displays a success message indicating that the book has been successfully returned.	
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Exception Conditions:	<p>1.1 Ineligible order for cancellation such as already shipped .(System displays an error message indicating that the selected order cannot be cancelled.)</p> <p>3.1 Technical issues or errors.(System displays an error message).</p>					

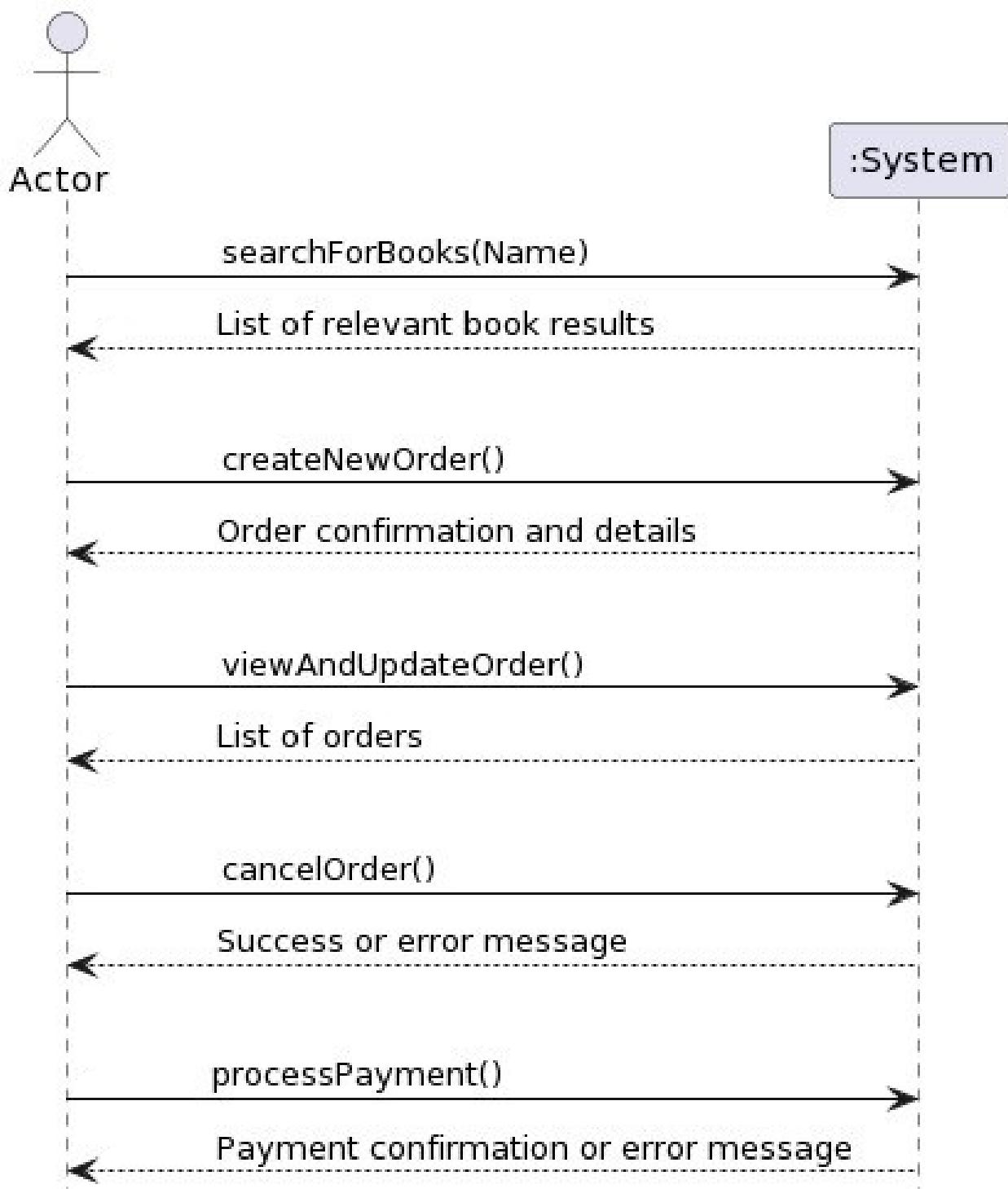
- Use Case Description Of Track order:

Use case name:	Customer Track order .	
Triggering Event:	Customer wants to track order.	
Brief Description:	This use case describes the interactions between a customer and an online library system, enabling the customer to track the status and progress of their order .	
Actors:	<ul style="list-style-type: none">• Customer• Delivery service	
Preconditions:	<ul style="list-style-type: none">• The customer must be logged into their account.• The customer must have an existing order for books .	
Postconditions:	<ul style="list-style-type: none">• The customer gains access to the current status and tracking information of their order.• The customer can monitor the progress of their order until it is successfully delivered.	
	Actor	System
Flow Of Activities:	<ol style="list-style-type: none">1.The customer identifies the specific order they want to track .2.The customer can periodically check the tracking information for updates and monitor the progress of their order until delivery is completed.3.The customer may choose to contact Delivery service or follow any provided instructions if they encounter issues or have questions regarding the order's tracking.	<p>1.1 The system presents the details of the selected order, including the current order status, estimated delivery date, and any available tracking information.</p> <p>2.1 The system redirects the customer to the tracking page or displays the tracking updates directly within the online system.</p>
Exception Conditions:	<p>1.1 If the customer enters an invalid or non-existent order , the system displays an error message and prompts the customer to re-enter the correct order.</p>	

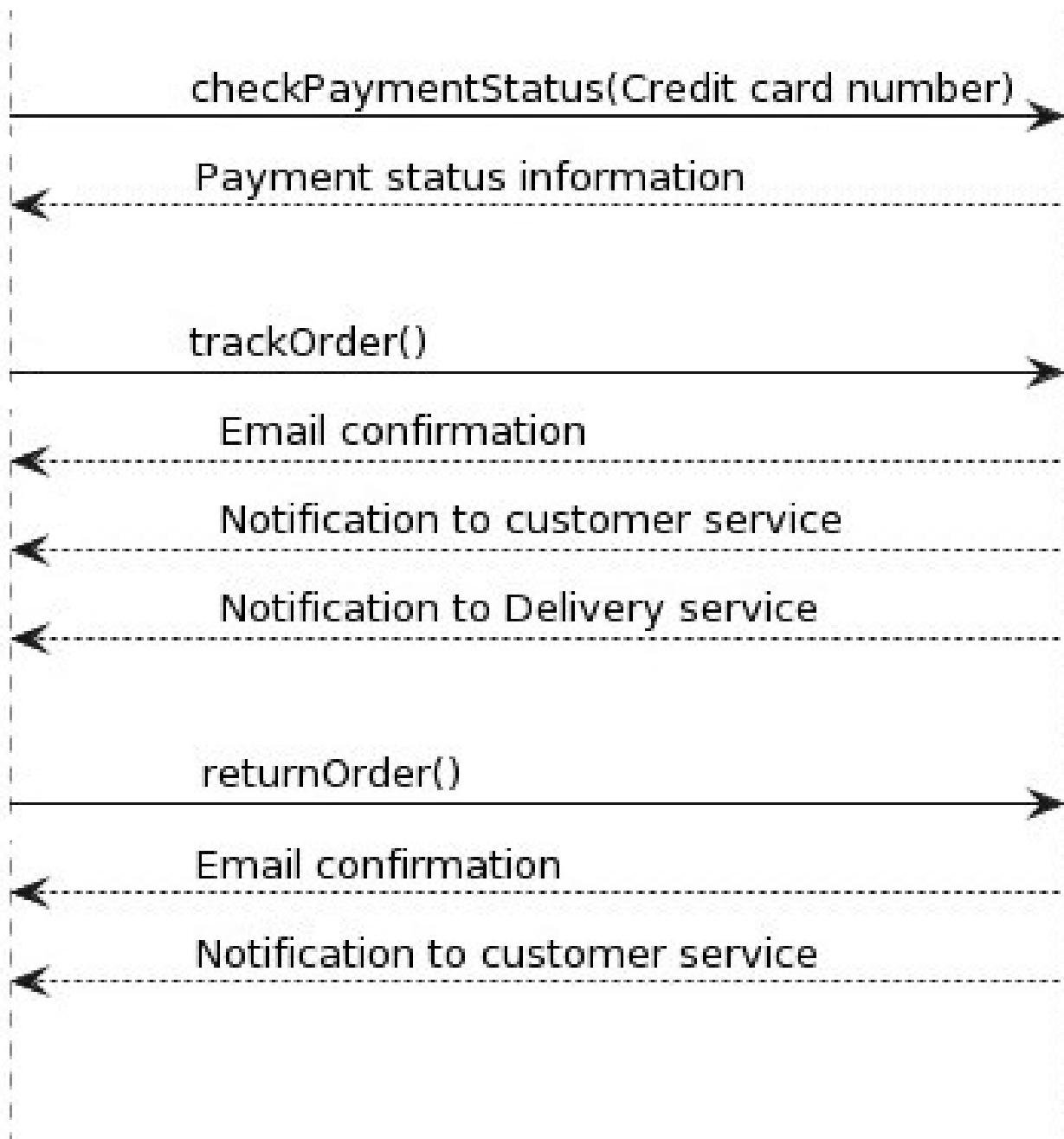
-Activity Diagram For Order Management Subsystem:



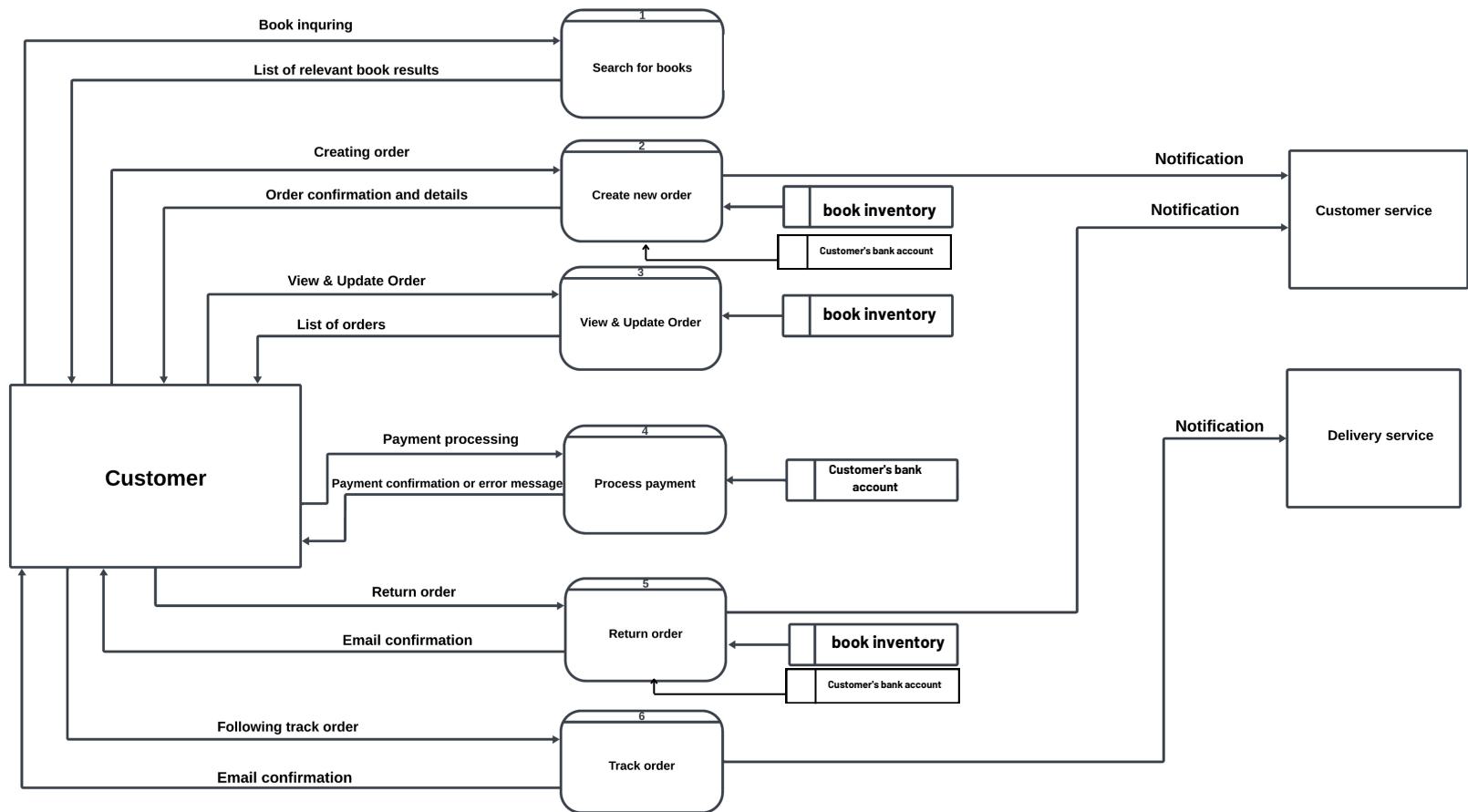
-System Sequence Diagram For Order Management Subsystem:



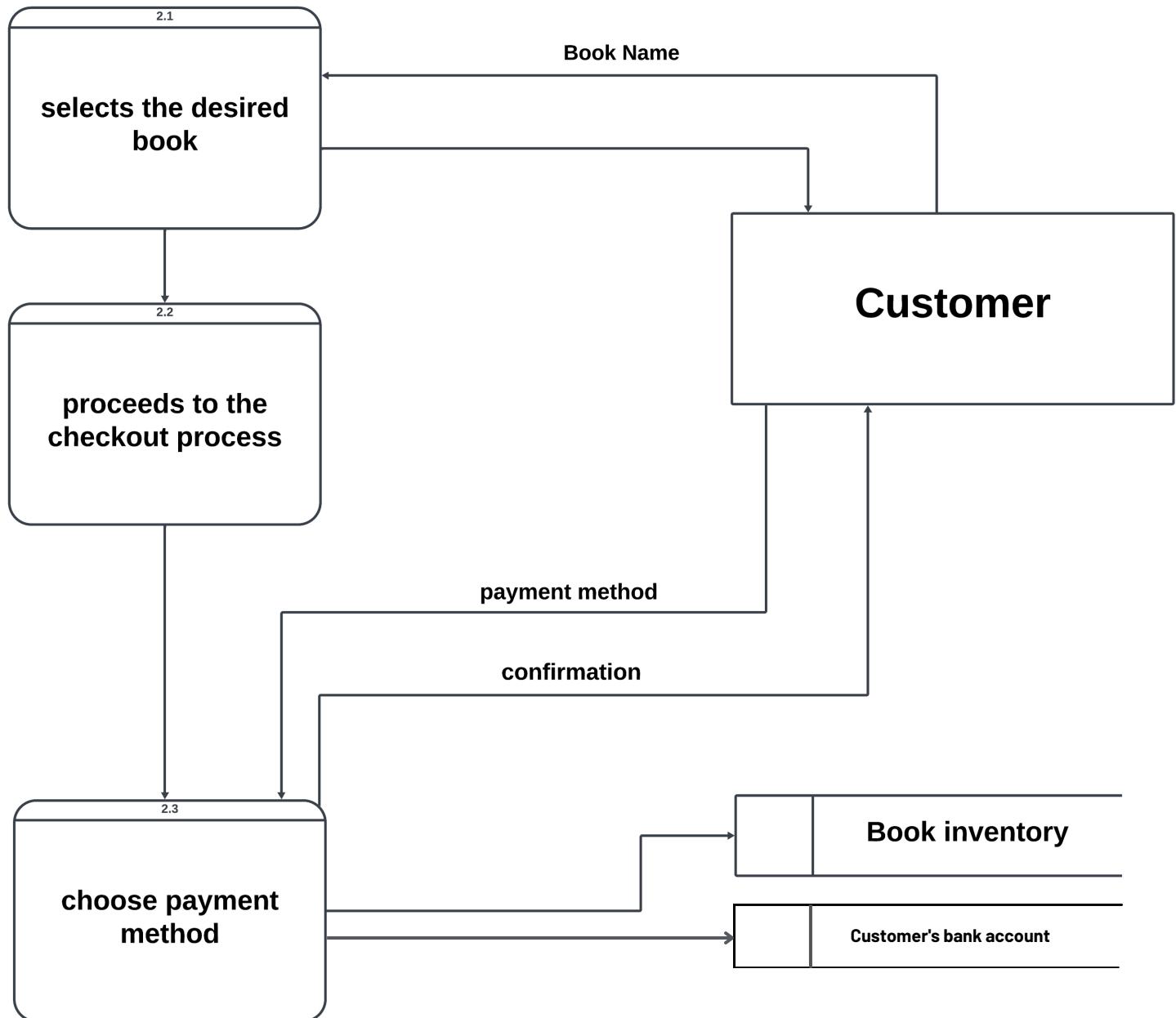
-System Sequence Diagram For Order Management Subsystem(Cont.):



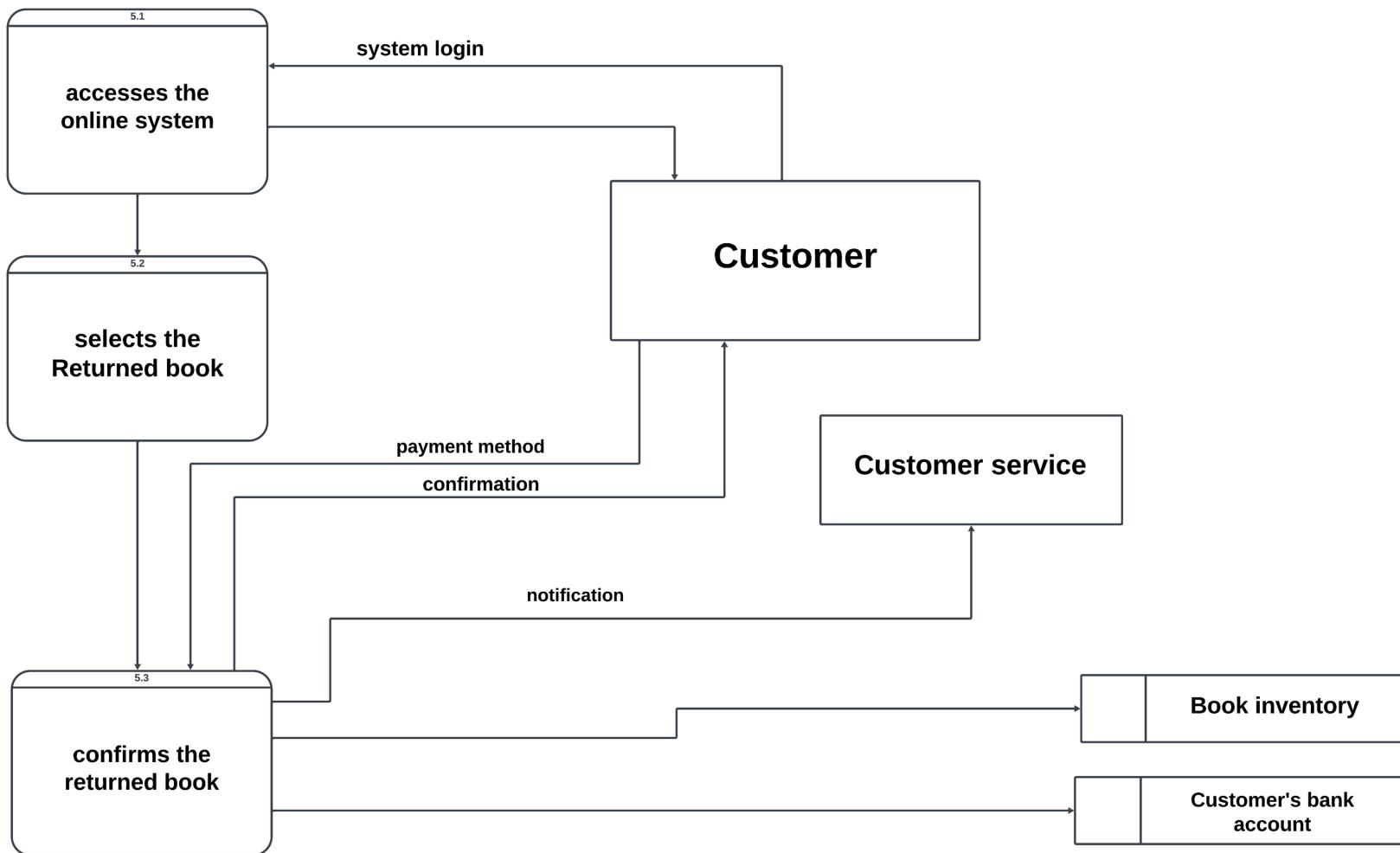
Order Management Subsystem (DFD Level 0)



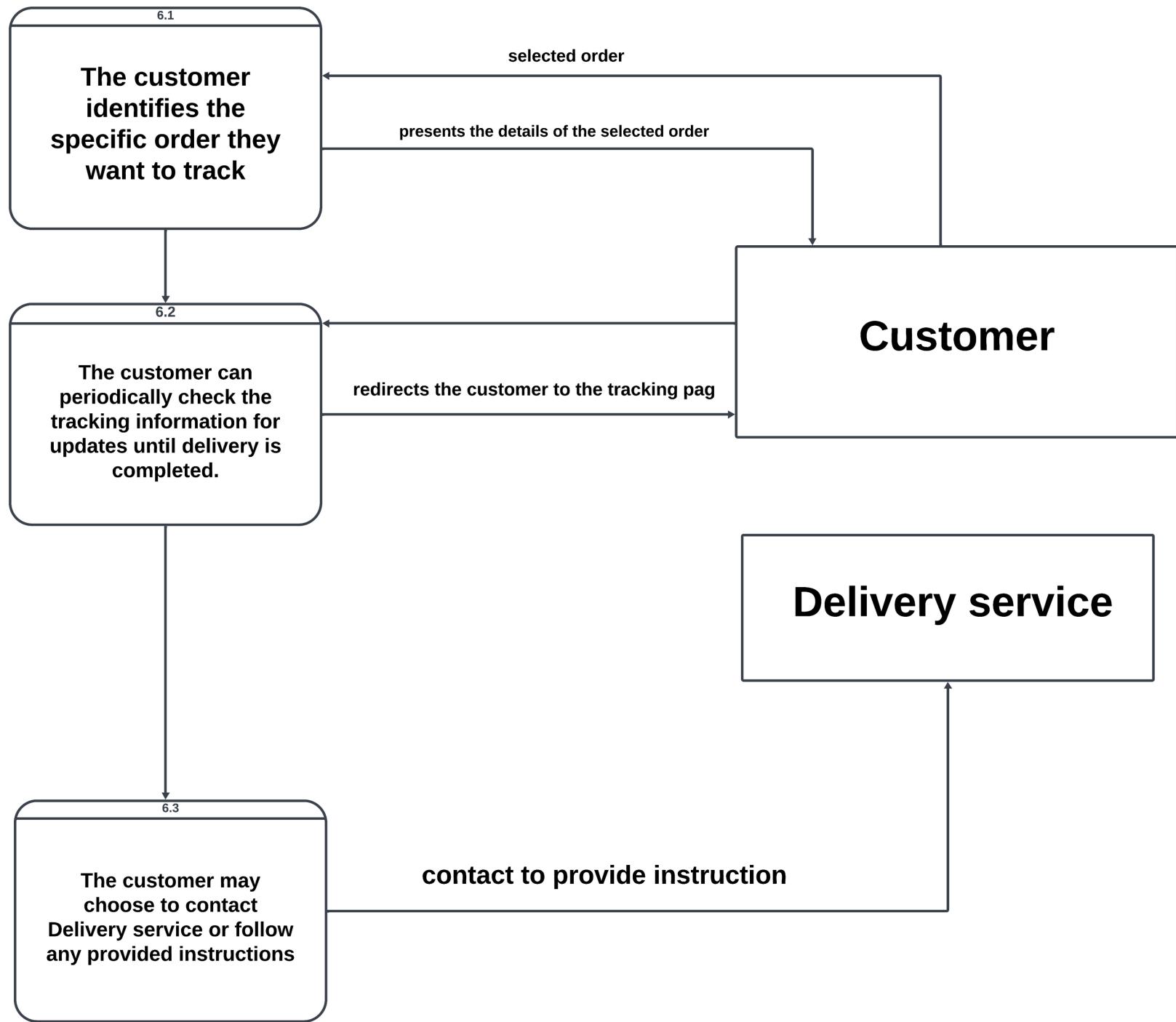
The Customer Creates Order (detailed DFD)



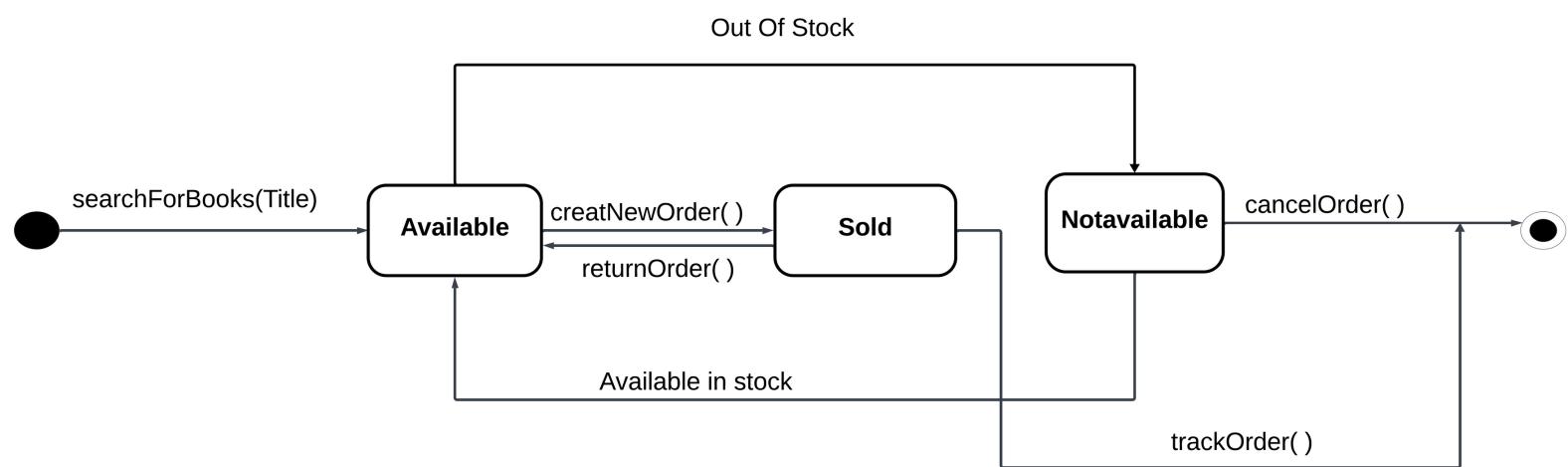
Return Order (detailed DFD)



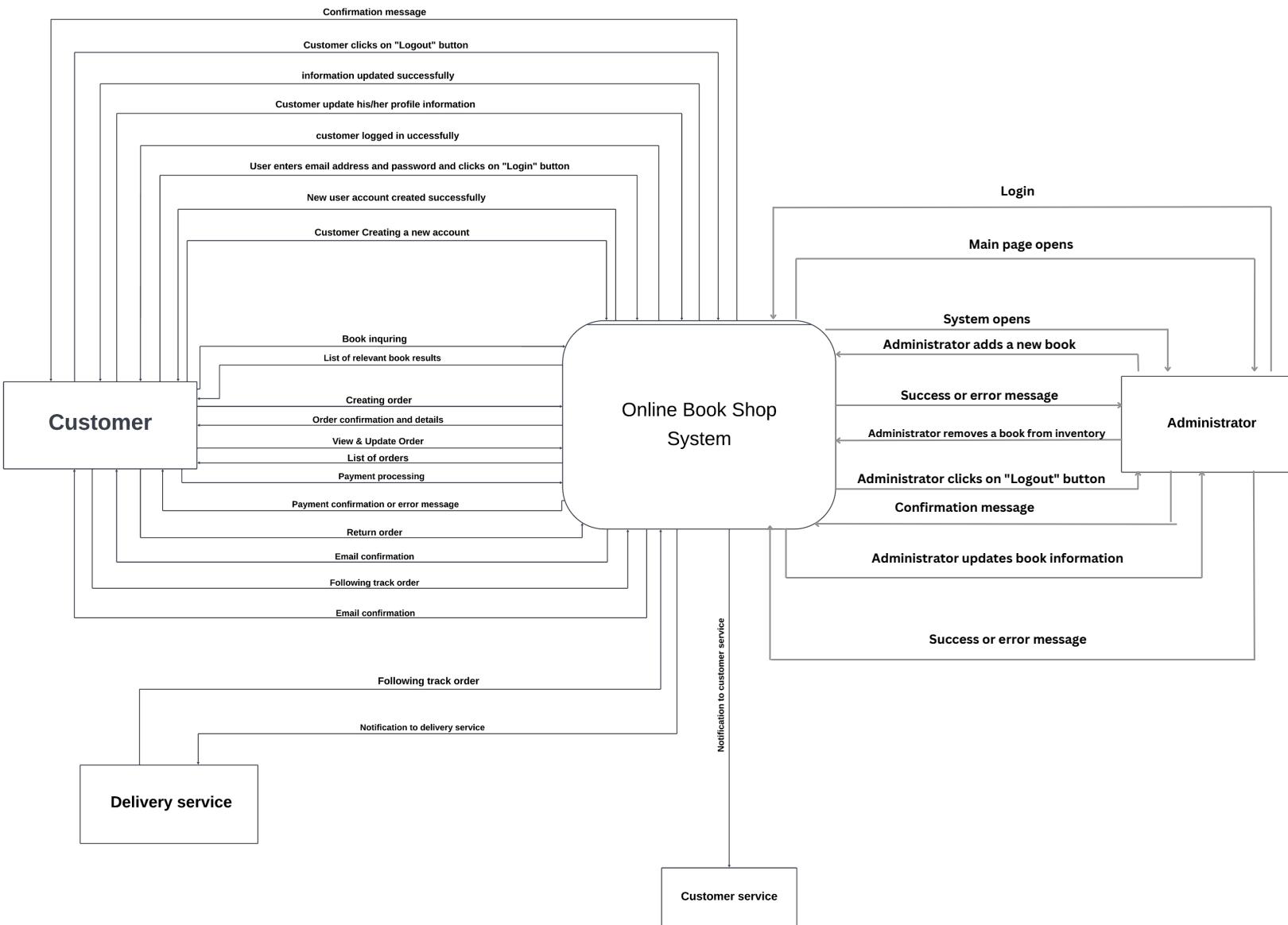
Customer Track order (detailed DFD)



-Simple State Machine Diagram for a Book :



Context DFD



The Cost Benefit Analysis

Costs				
Category	Item	Quantity	Price	Total
Hardware & services	User workstations	7	\$2,000	\$14,000
	Server system	2	\$4,000	\$8,000
	Secure networked printers	2	\$1,750	\$3,500
	Cable installation	1	\$6,200	\$12,400
	Software licenses	1	\$22,000	\$44,000
System training	System overview	10	\$625	\$6,250
	Software	10	\$625	\$6,250
	Tools	15	\$875	\$13,125
TOTAL COSTS				\$107,525
Benefits				
More effective promotion campaigns				\$58,000
Improved lead conversion				\$42,000
Better customer retention and loyalty				\$28,000
Enhanced productivity				\$35,000
Workflow efficiencies				\$28,000
Higher quality database				\$45,000
TOTAL BENEFITS				\$236,000

Gantt Chart

Gantt Chart