"OUSLBookStore" new web-based system

Functional Requirements

Customer Management:

- ✓ Customers can create an account, log in, and log out.
- ✓ Edit customer information.

Book Browsing and Searching:

- ✓ Customers can browse available books.
- ✓ Customers can search for books by title, author, or genre.

Shopping Cart:

- ✓ Add and remove books to/from the shopping cart.
- ✓ Update quantity of items going to order

Checkout and Payment:

- ✓ Checkout with a summary of items in the cart.
- ✓ Provide online payment options for order completion.

Order Management:

- ✓ Track the status of orders after payment.
- ✓ View order history for registered customers.

Administrative Functions:

- ✓ Administrators can add, update, and remove books.
- ✓ Generate sales and revenue reports.

Non-Functional Requirements:

Performance:

- ✓ The system should handle up to 1,000 simultaneous users.

Usability:

- ✓ User-friendly interfaces for both desktop and mobile.

Security:

- ✓ Secure customer account handling with encrypted passwords.
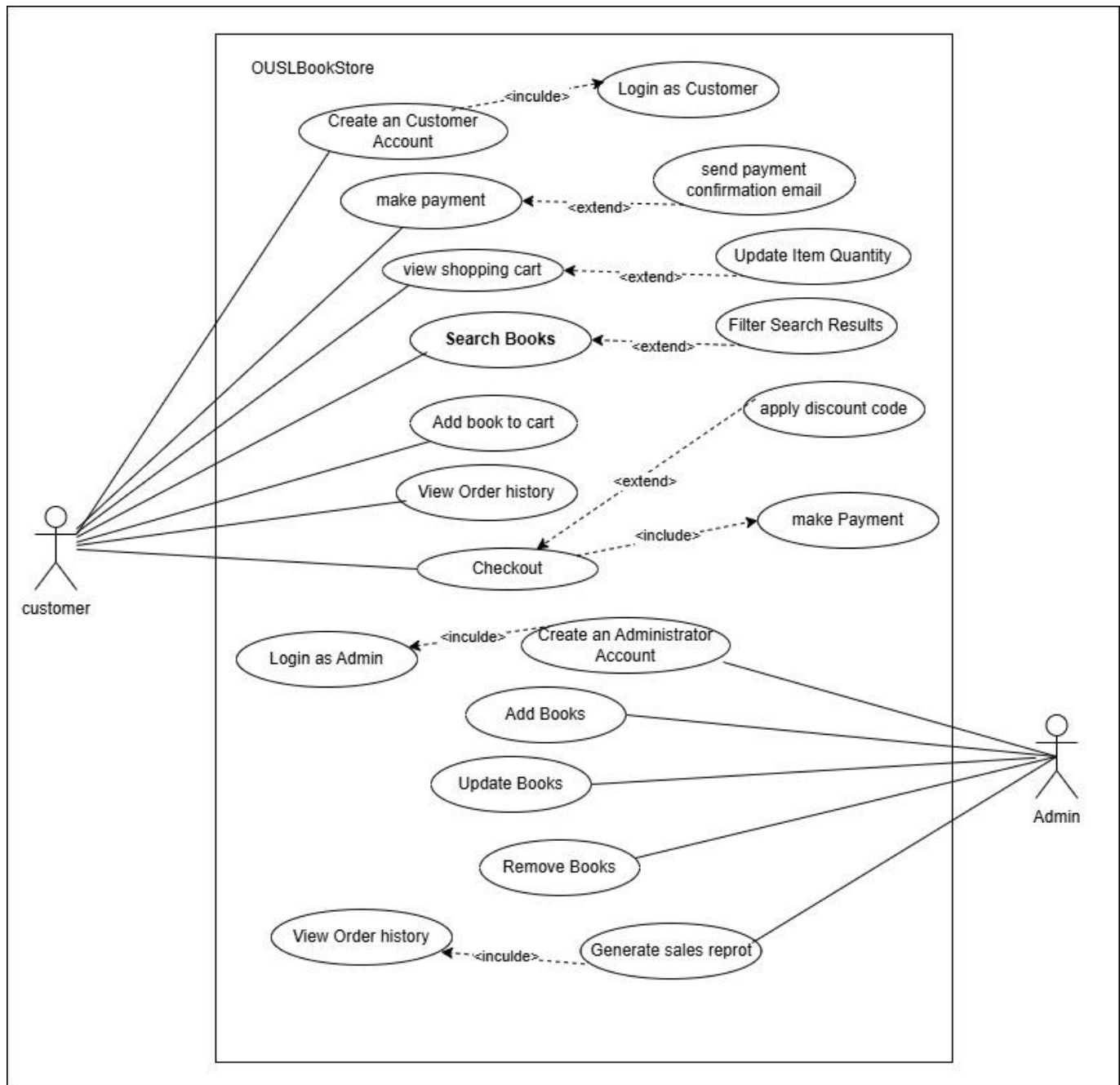- ✓ Secure online payment processing with data encryption.

Scalability:

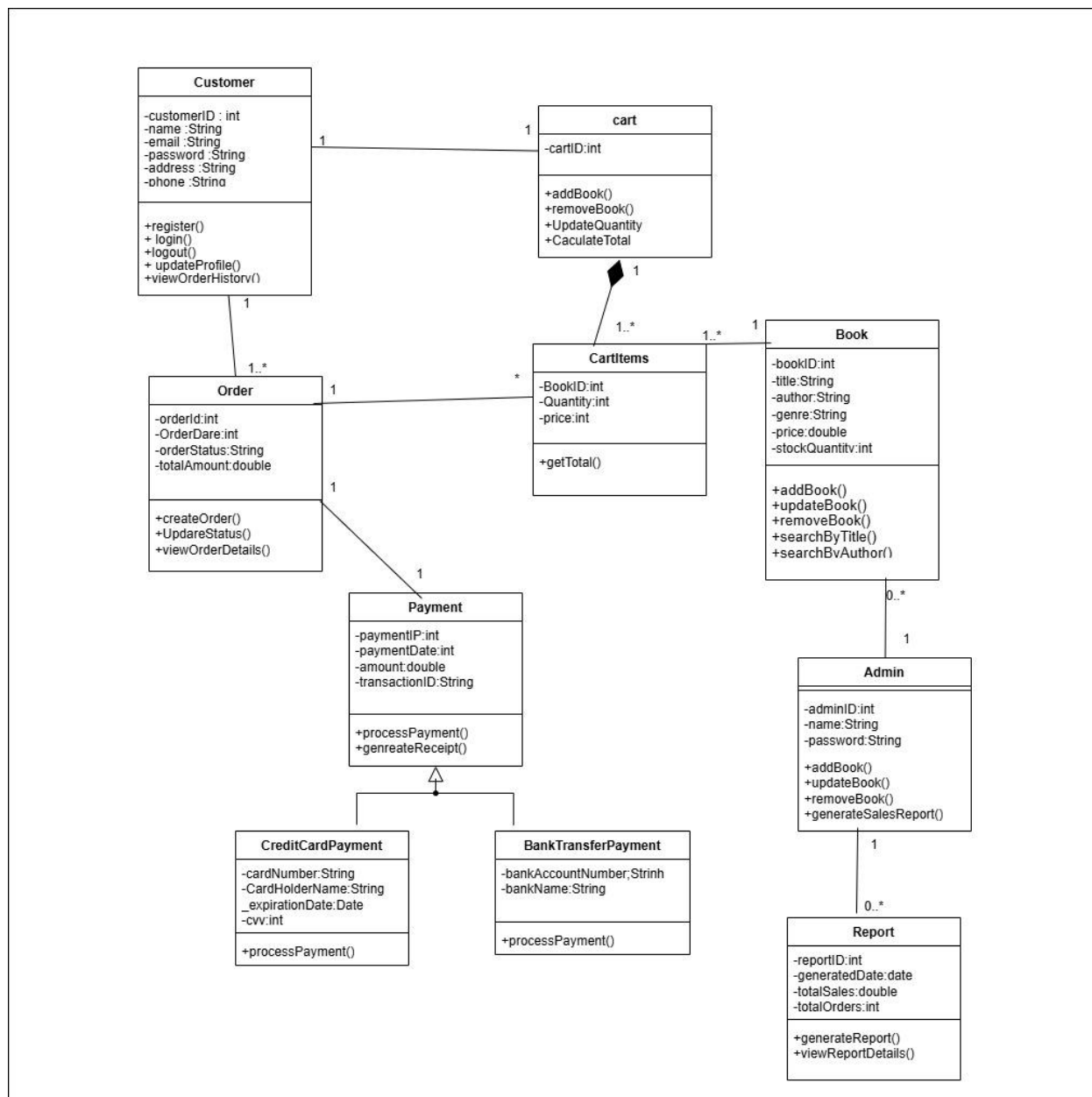- ✓ System should allow accommodate for future growing number of customers.

Accessibility:
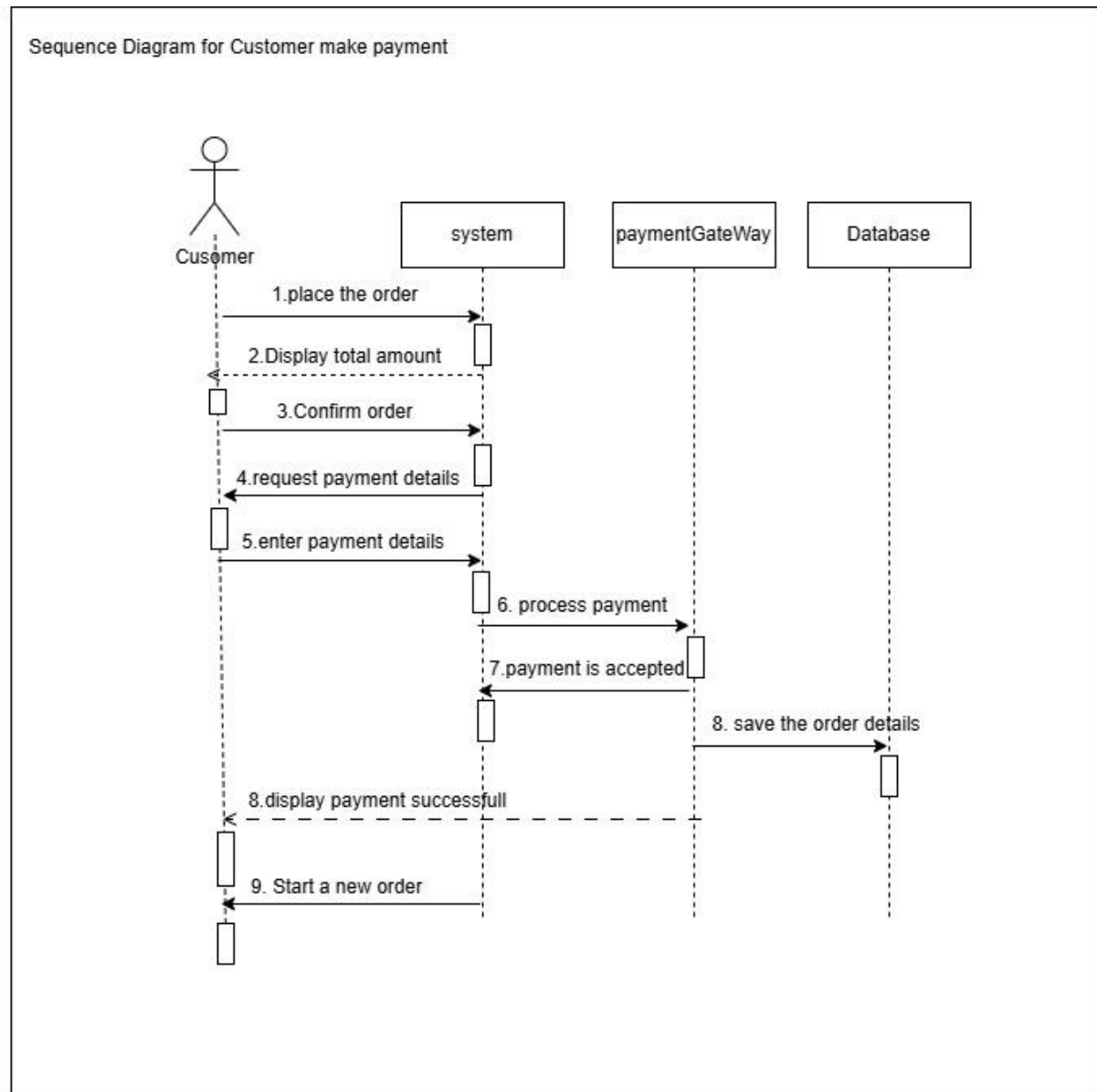
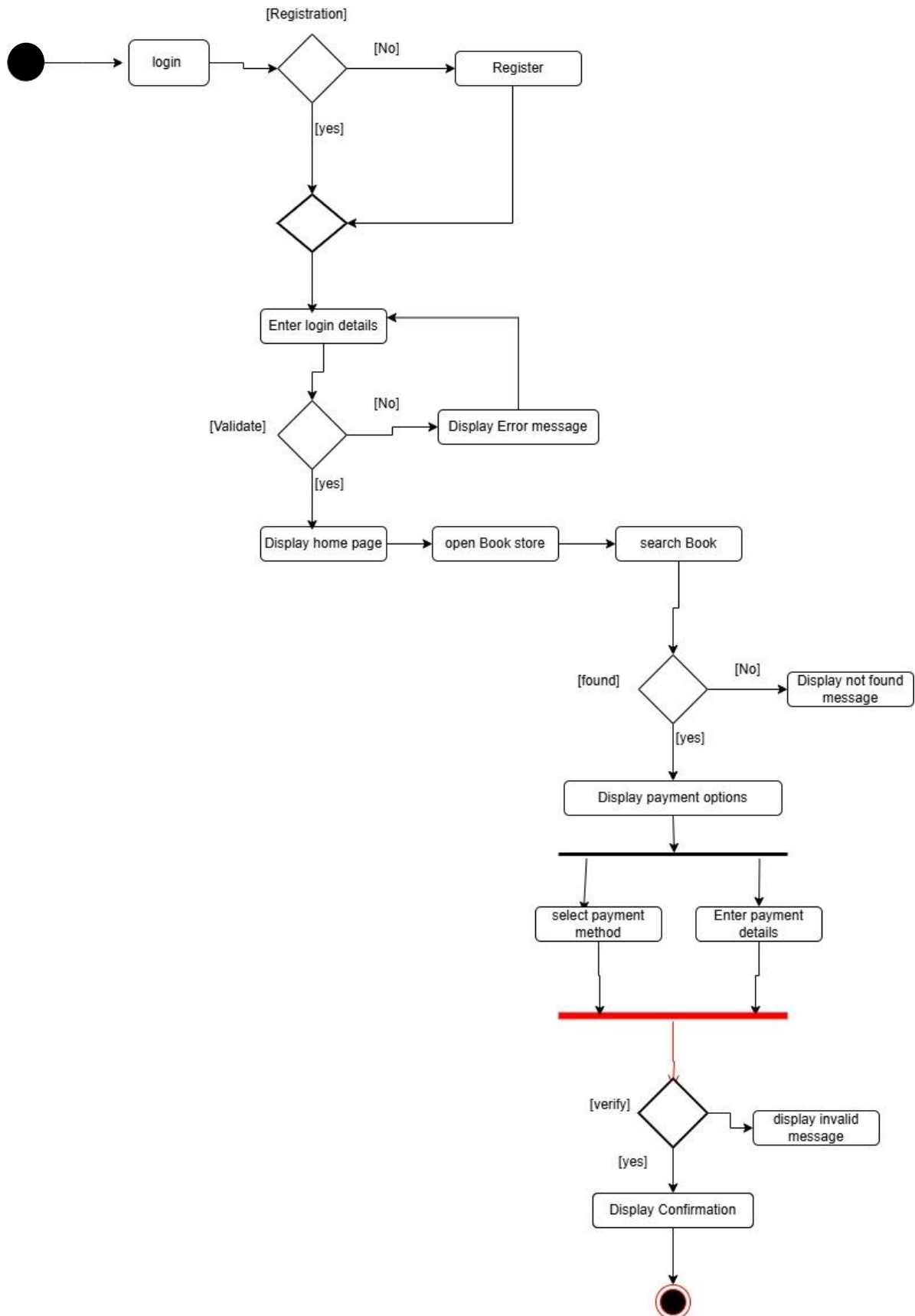- ✓ Accessible on both desktop and mobile devices.

Use Case Diagram:

Class Diagram:

Customer
-customerID : int
-name :String
-email :String
-password :String
-address :String
-phone :String

+register()
+ login()
+logout()
+ updateProfile()
+viewOrderHistory()

cart
-cartID:int

+addBook()
+removeBook()
+UpdateQuantity
+CaculateTotal

Order
-orderId:int
-OrderDare:int
-orderStatus:String
-totalAmount:double

+createOrder()
+UpdareStatus()
+viewOrderDetails()

CartItems
-BookID:int
-Quantity:int
-price:int

+getTotal()

Book
-bookID:int
-title:String
-author:String
-genre:String
-price:double
-stockQuantity:int

+addBook()
+updateBook()
+removeBook()
+searchByTitle()
+searchByAuthor()

Payment
-paymentIP:int
-paymentDate:int
-amount:double
-transactionID:String

+processPayment()
+genreateReceipt()

Admin
-adminID:int
-name:String
-password:String

+addBook()
+updateBook()
+removeBook()
+generateSalesReport()

CreditCardPayment
-cardNumber:String
-CardHolderName:String
_expirationDate:Date
-cvv:int

+processPayment()

BankTransferPayment
-bankAccountNumber;Strinh
-bankName:String

+processPayment()

Report
-reportID:int
-generatedDate:date
-totalSales:double
-totalOrders:int

+generateReport()
+viewReportDetails()

Sequence Diagram for make payment

Sequence Diagram for Customer make payment

Activity Diagram (For **Customer Registration Use Case**):

➢ Developed web based system codes have been submitted with this

Git Hub link : GITHUB LINK