VIETNAM GENERAL CONFEDERATION OF LABOUR

**TON DUC THANG UNIVERSITY**

**FACULTY OF INFORMATION TECHNOLOGY**



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**SUPPORTED TRADING BOOKS ONLINE SYSTEM**

**FINAL REPORT**

**ENTERPRISE SERVICE-ORIENTED ARCHITECTURE**

**HO CHI MINH CITY, YEAR 2024**

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Instructor

**Mr. Dương Hữu Phúc**

**HO CHI MINH CITY, YEAR 2024**

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*Ho Chi Minh City, May 12, 2024*

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**DECLARATION OF AUTHORSHIP**

Our group assures that this is our own report and was guided by Mr. Dương Hữu Phúc. The research content and results in this report are honest and have not been published in any form before. The figures in the tables used for analysis, comments, and evaluations were collected by the authors from various sources clearly stated in the reference section.

Additionally, the report includes some comments, evaluations, and data from other authors and organizations, all of which are cited and noted for their origin.

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*Ho Chi Minh City, May 12, 2024*

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**SUPPORTED TRADING BOOKS ONLINE SYSTEM**

**ABSTRACT**

Modern Commerce: In today’s world, e-commerce has become an indispensable part, opening new opportunities and creating breakthroughs in global market access. E-commerce systems are not just tools but also a source of inspiration for development and progress in business. Online book transaction support systems are also part of this development.

Online Book Transactions: The online book transaction support system allows users to update information, list books for sale, and help users search for and purchase their favorite books. Therefore, building an online book transaction website is a typical case of e-commerce activity. The project analyzes and designs an online book transaction support system based on an e-commerce approach, programming platform, and the following parts of the project are presented as follows:

Chapter 1: System Overview: This chapter presents the approach and relates to system development.

Chapter 2: System Analysis and Design: In this chapter, the system is analyzed and designed using object-oriented diagrams such as use-case, ERD, etc.

Chapter 3: System Implementation: This chapter discusses the technologies used to implement the system and lists the APIs corresponding to the system’s functions.

Chapter 4: System Demo Presentation: This chapter will present a demo of the system.

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# LIST OF ABBREVIATIONS

# CHAPTER 1: SYSTEM OVERVIEW

## *1.1. Introduction of the topic:*

In today's digital age, online shopping has become a popular and undeniable trend in people's daily lives. Searching and buying books online has become a popular and convenient choice for millions of readers worldwide. To keep up with the increasing demand and ensure a shopping experience for book lovers, the development and enhancement of a book trading support system has become urgent. This article delves into the importance of building and improving a book trading support website in Vietnam.

This website is not only a place to buy new books, but also a space for interaction, sharing, and connection for book lovers. This is where readers not only have the opportunity to discover new titles but also connect with other book enthusiasts, sharing emotions, thoughts, and experiences about the books they have read.

In addition, the website also provides a special opportunity for those who want to pass on the books they have read. Selling books is not only to recover capital but also to share passion with other readers. Used books often carry intact spiritual values and knowledge value does not decrease. Reusing books not only helps reduce waste but also creates sustainability and environmental friendliness.

Moreover, buying books on the website also brings a wonderful and diverse online book shopping experience for users. With a rich and diverse library of books from genres such as novels, business, science, self-help, children, and many other genres, users can easily find their favorite books or suitable for their reading interests and needs.

Buying books on this website is not only choosing and buying goods but also an interesting experience of exploring book culture. With an intuitive and friendly interface, along with advanced search features, users can easily browse book categories, search by author, title, or genre, and discover new books conveniently and quickly.

Payment also becomes easier and safer than ever with the payment method via Momo without waiting like cash on delivery (COD). This makes users feel secure and trust when making transactions on this website.

In addition, buying books on the website also brings opportunities for users to enjoy preferential prices when ordering. This not only helps users save costs but also creates an interesting and memorable book shopping experience.

In this case, we will explore the main factors emphasizing the importance of the online book trading support website in the book field in Vietnam, focusing on how this system meets the needs of the reading community. We will discuss how this website optimizes the buying and selling process, increases transparency, and contributes to the development of reading culture and the country's economy. Moreover, we will study the challenges and potential opportunities related to the development and expansion of this platform. As Vietnam continues to develop into a cultural and academic center, developing a strategy for the online book trading support system becomes an important factor in exploiting the potential of the industry and promoting sustainable national development, while supporting the reading community and the benefits of businesses in the book field.

## *1.2. System specification:*

+ Registration to create an account is mandatory for users. They need to provide information such as email, full name, password, phone number and address.

+ In case of forgetting the password, users can retrieve it via registered email.

+ When entering the website, users can search or select information such as author, title, etc. Users can view detailed information about the book, including descriptions, images, prices, and reviews from other users before deciding to buy.

+ When users want to delete books, sellers can select the books they have posted on the system.

+ When users want to post a book for sale, sellers need to provide the following information:

1/ Information about GHN (Quick Delivery) account

2/ Details about the book, including title, author, description and images. They can set the selling price for their books and manage book purchases from other users.

+ After selecting the book and providing the necessary information, the order will be considered. When the seller confirms the order, the order will be transferred to the shipping unit (GHN) and the buyer can see the order status on the system.

+ Shipping will be handled by the Express Delivery unit and shipping quotes will be provided to customers.

+ The website only provides payment methods through Momo e-wallet.

+ Once the user completes the transaction, they can rate the book with a number of stars (maximum 5 stars and only rate once) on the book they purchased.

+ Users can manage accounts, including updating accounts or closing accounts.

+ The system administrator will monitor the system, manage user accounts and books, and view orders from users. For book management rights, system administrators can confirm books before sellers post them to the system or delete books posted on the system. For user management rights, administrators can view user information or delete user accounts.

+ The main user page will provide information about popular books, as well as provide options to log in or register for an account.

+ Each book product on the website will be presented with detailed information such as book title, book cover, quantity, price, author, product description and user reviews.

+ When users buy or sell books, they will be provided with an order code, buyer code or seller code, details about the book product (book name, book cover, author, description, selling price, reviews), status, etc. order status, total order value (order cost and shipping cost) and transaction time.

+ Users can check their order history after logging into the system.

+ Fast delivery will receive orders from the seller including seller code and buyer code, order information and seller's order confirmation to create a shipping order. The shipping order will include information from the order that the buyer sends to the seller and the delivery code of the shipping unit.

+ The system can send a notification to the user's email address upon successful registration.

## *1.3. Scope of the topic:*

### 1.3.1. Limitations on the subject and function:

1. Users:

* Functions:

+ Register and log in to the system.

+ Browse, search, and buy books from the online store.

+ Add books to the shopping cart.

+ Perform online payment through the Momo e-wallet.

+ Post book information for sale and manage the status of posted books.

+ Track the status of orders and receive books after placing an order.

+ Can view order history after logging into the system.

2. Administrators:

* Functions:

+ Log into the system with administrative rights.

+ Manage user account information, including viewing information or deleting user accounts.

+ Manage books, including browsing detailed book information before users post for sale or deleting books.

+ Can view user orders if desired.

3. Fast Delivery:

* Functions:

+ Receive information about confirmed orders from the website.

+ Deliver goods to the address specified in the order.

+ Update delivery status and related information for users.

4. System:

* Functions:

+ Integrate the API of the Momo e-wallet to process payments.

+ Send notifications and update order status to users and administrators.

+ Manage the database, including storing information about books, users, and orders.

### 1.3.2. Limitations on technology:

+ Programming language: No problem.

+ Database: Difficulty in optimizing.

+ User interface: Difficult to design user-friendly interface.

+ Security: Decentralize user rights in the system: Send a request to the server to check the API key and the API key does not contain the user's role (permission). Ensure the security of cash flow.

## *1.4. Practical significance:*

+ Convenience: The system allows users to buy and sell books from the comfort of their own homes, without the need to physically visit a bookstore. This is particularly beneficial in today's digital age where online shopping is becoming increasingly popular.

+ Variety: The system provides users with a wide range of books to choose from, catering to various interests and preferences. This is often more diverse than what can be found in a physical bookstore.

+ Efficiency: The system streamlines the process of buying and selling books, making it quicker and more efficient. Users can easily search for specific books, make payments, and track their orders all in one place.

+ Community: The system also serves as a platform for book lovers to connect and share their passion for books. Users can share reviews and ratings, helping others make informed decisions about their purchases.

+ Sustainability: By facilitating the sale of used books, the system promotes sustainability and reduces waste. This is in line with global efforts to promote a circular economy and reduce our environmental impact.

+ Economic Opportunities: The system provides economic opportunities for individuals to earn income from selling their used books. It also supports the growth of the online retail sector and contributes to the digital economy.

+ Literacy and Education: By making books more accessible, the system supports literacy and education. It enables more people to have access to a wide range of educational resources, contributing to lifelong learning and personal development.

# CHAPTER 2: ANALYSIS AND SYSTEM DESIGN

## *2.1. Functional Requirements of the System:*

## *2.2. Non-functional Requirements of the System:*

## *2.3. System Function Diagram:*

### 2.3.1. Use-case Diagram:

### 2.3.2. Use-case Description:

## *2.4. System Database Diagram:*

### 2.4.1. ERD diagram:

### 2.4.2. Physical level database diagram:

|  |  |
| --- | --- |
| User | |
| fullName | String |
| email | String |
| password | String |
| phone | String |
| address | String |
| roles | Array |
| lastAccess | Date |
| status | String |
| ghnAcc | Schema.Types.Mixed |

|  |  |
| --- | --- |
| ghnAcc | |
| user\_id | Schema.Types.ObjectId |
| ghn\_shop\_id | String |
| ghn\_client\_id | String |
| ghn\_token\_id | String |
| verify | Boolean |

|  |  |
| --- | --- |
| Book | |
| book\_name | String |
| book\_author | Array |
| book\_description | String |
| book\_price | Number |
| book\_quantity | Number |
| book\_quality | String |
| book\_genre | String |
| book\_coverLink | String |
| book\_user | Schema.Types.ObjectId |
| book\_slug | String |
| book\_ratingAverage | Number |
| isDraft | Boolean |
| isPublished | Boolean |
| book\_details | Schema.Types.Mixed |

|  |  |
| --- | --- |
| BookDetail | |
| book\_coverType | String |
| book\_publisher | String |
| book\_length | Number |
| book\_width | Number |
| book\_height | Number |
| book\_weight | Number |
| book\_user | Schema.Types.ObjectId |

|  |  |
| --- | --- |
| inventory | |
| inven\_book\_id | Schema.Types.ObjectId |
| inven\_stock | Number |
| inven\_user\_id | Schema.Types.ObjectId |
| inven\_reservations | Array |

|  |  |
| --- | --- |
| cart | |
| cart\_state | String |
| cart\_books | Array |
| cart\_count\_book | Number |
| cart\_user\_id | String |

|  |  |
| --- | --- |
| order | |
| order\_user\_id | String |
| order\_checkout | Object |
| order\_shipping | Object |
| order\_payment | String |
| order\_books | Array |
| order\_trackingNumber | String |
| order\_status | String |

* Lưu ý: Document của user thêm status(active close)

# CHAPTER 3: SYSTEM IMPLEMENTATION

Database: MongoDB, Frontend: Reactjs, Backend: Javascript. Lý do là cộng đồng lớn.

# CHAPTER 4: SYSTEM DEMO

## *4.1. System Demo Scenarios:*

## *4.2. System Demo:*

# REFERENCES