



Books World

Online Bookstore

SRS

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Section: 3
Group: SE2018G03



Cairo, Egypt

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1. Introduction

1.1. Executive Summary

This software system -Books World- is an online bookstore. It is made for customers who are interested in buying or exchanging books via the Internet. This system is designed to “provide automation support” for the process of placing books for sale on the Internet and facilitating the actual sale.

Books World will allow any user to create an account to be part of our community. The system allows customers to browse, search, select, and add books to their shopping cart, add or delete books from the cart, also our unique feature which is exchanging books, the user can exchange any book he has with any book from the exchangeable section from our website. Also our customers become members of our small reading community to read other users recommendations and feedbacks and be up to date with our news field about bestselling books new releases, anticipated releases and so on...

1.2. Document Overview

Software Requirements Specification document is designed to document and describe the agreement between the customer and the developer regarding the specification of the software product requested. Its primary purpose is to provide a clear and descriptive “statement of user requirements” that can be used as a reference in further development of the software system. This document is broken into a number of sections used to logically separate the software requirements into easily referenced parts.

This **SRS** document aims to describe the Functionality, External Interfaces, Attributes and Design Constraints imposed on Implementation of the software system described throughout the rest of the document. Throughout the description of the software system, the languages and terminology used should be unambiguous and consistent throughout the document.

This **SRS** document describes the software requirements specifications for Books World which is an online bookstore, it's a Fast Track e-shopping Software System specifically developed for use in any bookstore that would want to automate electronically its book sales. This document includes a description of the software and its subsystems.

Throughout this document, Books World will sometimes be referred to as " BW " Defining and describing the functions and specifications of this online Bookstore software Requirements Specification (**SRS**). This Software Requirements Specification illustrates, in clear terms, the system's primary uses and required functionality as specified by the customer.

1.3. Abbreviations and Terminology

No.	Abb. /Term.	Description
1	SRS	Software Requirements Specification
2	BW	Books World is the online bookstore application.
3	Use-Case	Oval shapes with titles that represent direct functionality within the system that must be implemented.
4	MTBF	Mean time between failure
5	TLD	Top-Level Domain
6	CDN	Content delivery network
7	SEO	Search Engine Optimization
8	IMA	Internet merchant account
9	PSP	Payment service provider
10	PCI SSC	Payment Card Industry Security Standard Council

1.5. References

This document is based on IEEE standards (IEEE Std 830-1998).

<https://standards.ieee.org/standard/830-1998.html>

2. System Description

2.1. Introduction

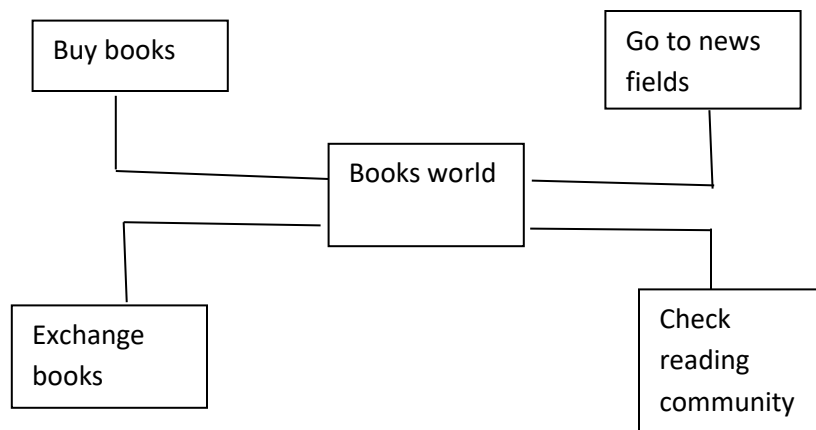
2.1.1. About BW

Books World is an online web application where customers can purchase books online. The user can search for any book by its title, author's name or ISBN, later he can add books to the shopping cart and finally purchase those using Cash on delivery method, and the user can also exchange any of his books with any book from the exchangeable section. The user can login using her/his account details or new customers can set up an account very quickly. They should give basic details as their name, contact number and delivery address. Books in the website are divided into categories based on their genres like Novels, arts, Education, Manga, etc...

A new feature that is included in Books World which is exchanging books between users. Users can exchange used books between one another without any costs except for the delivery fees , every registered user that has sign in and has any used book(s) can list his used books and supply information about her/his books as title, author's name, number of pages, type of cover page, image of the book, and the book's condition .

The Administrator will have additional functionality when compared to the common user. He can add, delete and update the book details, book categories, member information and also confirm a placed order, and manage exchanged books.

Books World is a user -friendly website that is designed with simple and friendly interface without complications.



2.1.2. System Functionalities

Books World has the following functionalities:-

- **A Home page with product catalog**

This is the page where the user will be navigated after a successful login. It will display all the book categories and will have a search keyword option to search for the required book. It also includes some special sections like top selling books, top author, recommended books etc.

- **Search**

A search by keyword option is provided to the user using a textbox .The keyword to be entered should be the book title. If the user would like to know details about a book user can click on the title or the image from where she/he will be directed to a Book description page. It includes the notes of the book content, the recommend book titles. Users can also comment about the book and show the commented articles.

- **Shopping Cart**

The user can manage a shopping cart which will include all the books selected by the user. The user can edit, delete and update her/his shopping cart. A final shopping cart summary is displayed which includes all the items the user selected and the final total cost.

- **Managing user account**

Each user should have an account to access all the functionalities of website. User can login using login page and logout using the logout page.

- **Exchanging Books**

Users can exchange used books between one another without any costs except for the delivery fees, every registered user that has sign in and has any used book(s) can list her/his used books and supply information about her/his books as title, auther, number of pages, type of cover page, image of the book, and status of the book .

- **Administration**

The Administrator will be provided with special functionalities like

- Add or delete a book category
- Add or delete a member.
- Add or delete author and publisher.
- Manage member orders.
- Add or delete a Payment status.

2.1.3. System Facilities

The online bookstore BW system will provide facilities to the System administrator, Guest users and Registered:

Facilities to be provided to the system administrator.

- System administrator will have user friendly asynchronous GUI (Graphical User interface) system.
- To have the details information of order, average selling rate, top selling books information, weekly selling books information etc...

Facilities to be provided to the registered user.

- User can choose and buy any kinds of books easily from this site only by registering.
- User can search any kind of books from this website.
- User can easily access this website
- User can add, update or cancel his/ her shopping cart within limited time

Facilities to be provided to the Guest user.

- User can show all information of books.
- User can search any kind of books from this website.
- User can read review about a book.

2.1.4. System Development

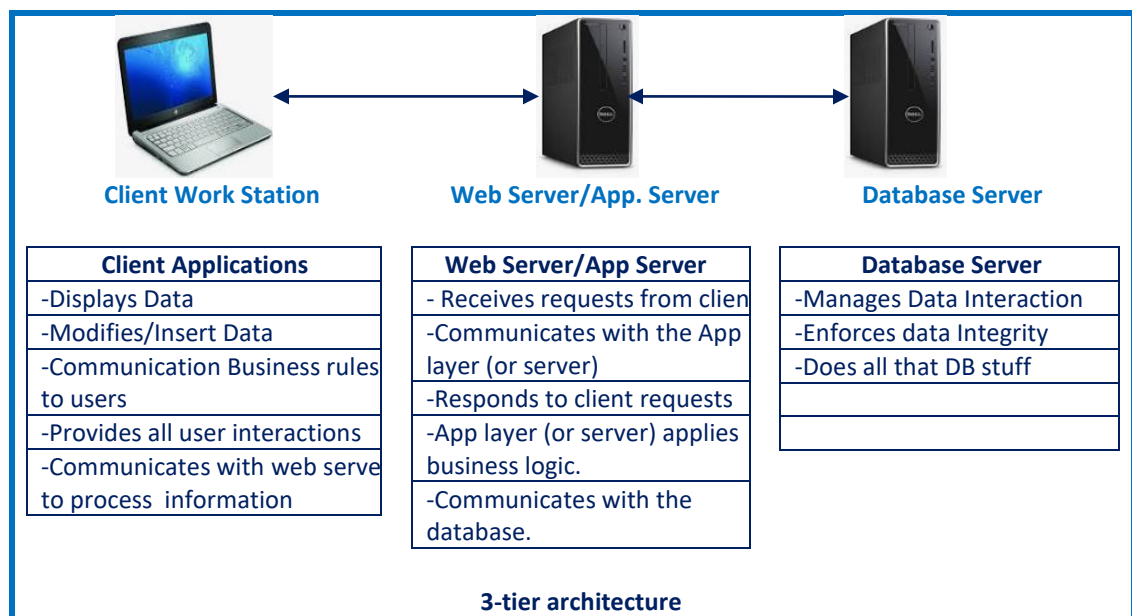
2.1.4.1. Architecture

Three-tier (layer) is a client-server architecture in which the user interface, business process (business rules) and data storage and data access are developed and maintained as independent modules or most often on separate platforms.

The Architecture of Online Book Store is based on three-tier architecture. The three logical tiers are

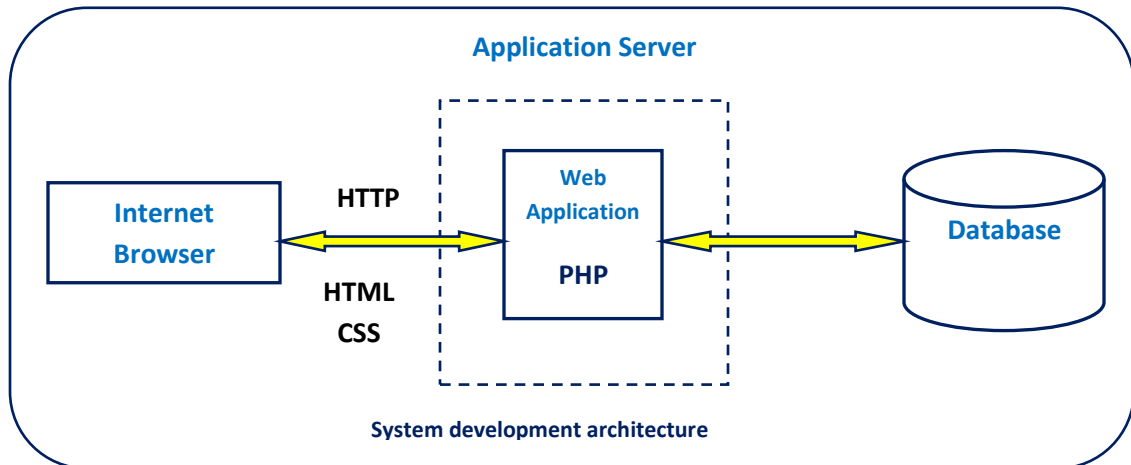
- Presentation tier – HTML and CSS Web forms, Master Pages, Images.
- Middle tier – PHP.
- Data tier- Database

The main reason for considering three-tier architecture for WB the Online Book store is Flexibility, Reusability, Security, below shows the model of 3-tier architecture.



2.1.4.2. Development

This application is going to be developed using **HTML** and **CSS** as for Frontend development to create user interface and GUI components like graphics, buttons, containers, labels, text and anything that the user will deal with or watch. Also going to use **PHP** as for backend to create the actions that is fired by the user like searching for a certain book, adding books to shopping cart, browsing categories or actions made by the BW administrator. As shown below is system development architecture.



2.2. Users

- 1- Administrator: The person who will administrate and manage BW.
- 2- User/Guest User: The person who will operate the software product.
- 3- Customer: A customer is a registered user.

2.3. Modules

The system is divided into three main modules:

1. Buying books:
The user can select books from the different genres of books available in the website, the user can search any book he wants by typing the book's name, author's name or ISBN.

2. Exchanging books:

A unique feature that the website holds is that the user can exchange books from the exchangeable section, through simple steps, the user must fill the basic details about the book such that the book's name, condition, brief description and upload the book's photo.

3. Reading community:

The website has a small reading community which allows the users to read each other recommendations, feedbacks, book's rating, and interact with each other, also the user will be up to date with books' news as bestselling books, new releases, anticipated releases and so on.

3. System Users

There are two main system users whom will use this online book store, Administrator of the application and internet users that will use WB as a service provider for buying books online through this ecommerce application.

Listed below is a brief description of the activities for every type of system users, those are :-

System Users	Activity
Administrator	The person who will administrate and manage BW which is the application of the online bookstore software product. The administrator will have a complete control over the BW concerning items in the e-store or concerning users of the online application.
User / (Guest User)	The person who will operate the software product, navigate or search for a book without registering to the application and without having an account. User is considered as a Guest User, she/he can show all information of books, search any kind of books from this website and read review about books.
Customer	A customer is a registered user that has an account in order to buy books or exchange her/his used book.


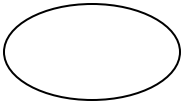
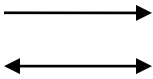

4. System Modules



The WB application is represented by Data Flow Diagrams. Each process within the system is first shown as a Context Level DFD and later as a Detailed DFD. The Context Level DFD provides a conceptual view of the process and its surrounding input, output and data stores.

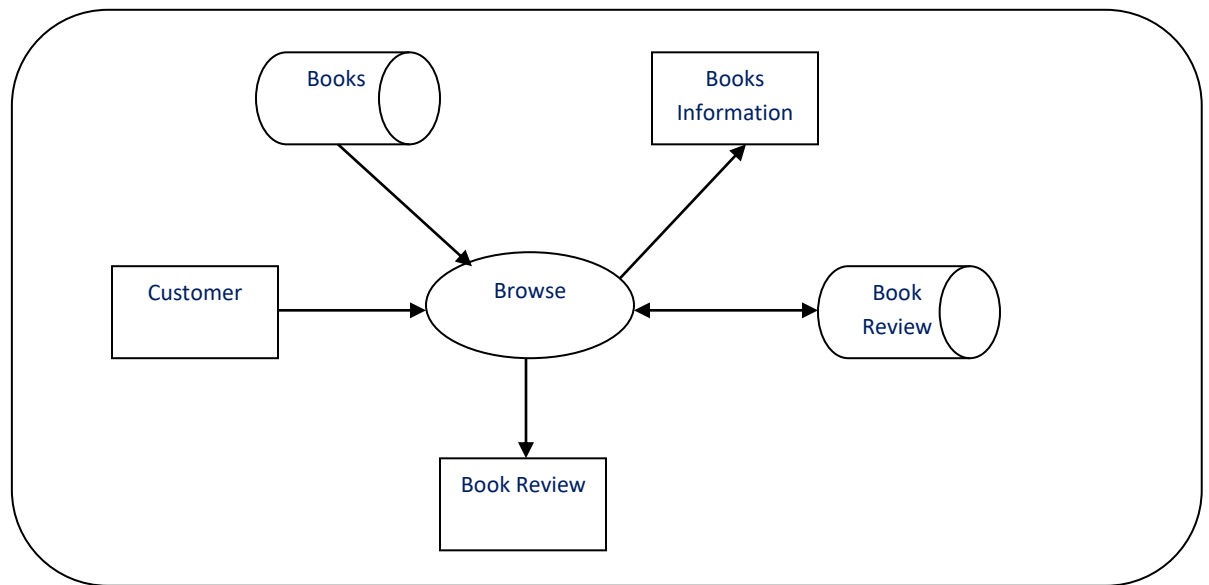
The Detailed DFD provides a more detailed and comprehensive view of the interaction among the sub-processes within the system. Data Flow Diagrams show the flow of data from external entities into the system, and from one Process to another within the system.

There are four symbols for drawing a DFD.

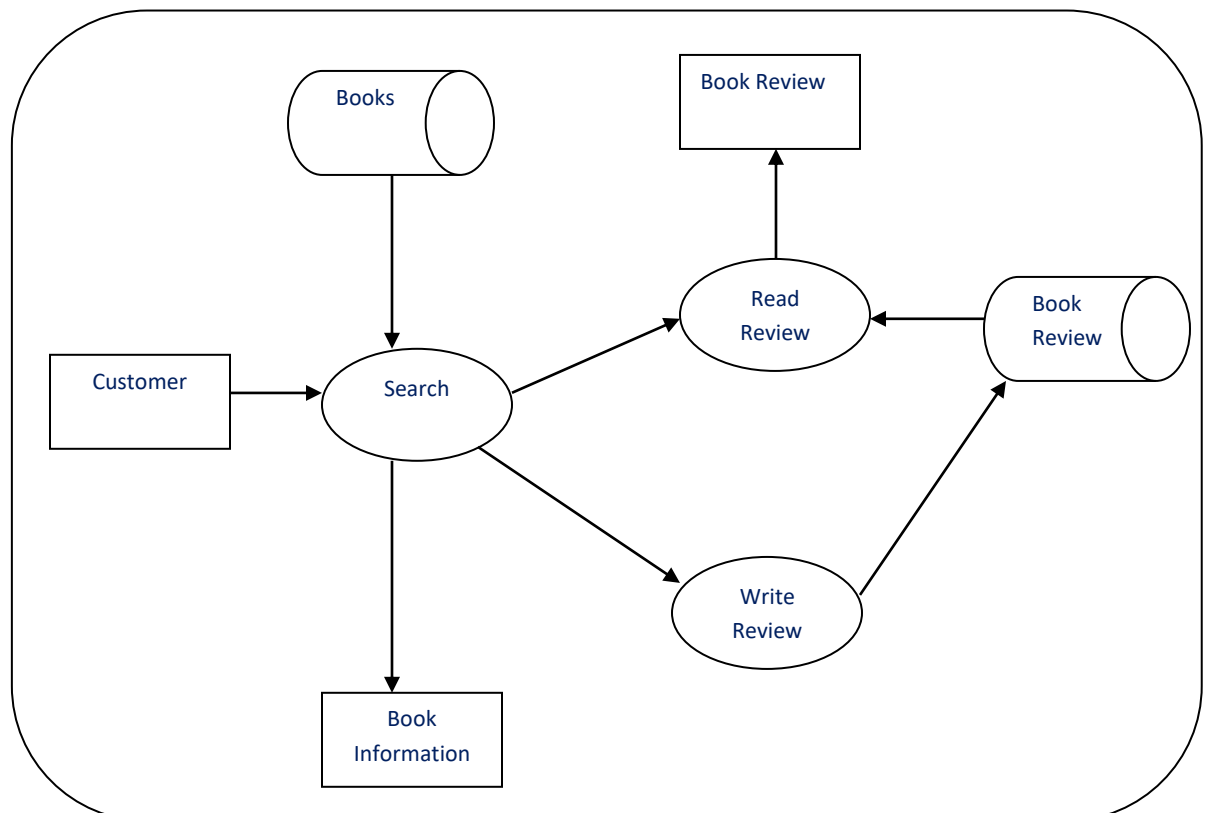
Symbol	Representing
Rectangles 	Representing <i>external entities</i> , which are sources or destinations of data.
Ellipses 	Representing <i>processes</i> , which take data as input, validate and process it and output
Arrows 	Representing the <i>data flows</i> , which can either, be electronic data or physical items.
Disk symbol 	Representing <i>data stores</i> , including electronic stores such as databases or PHP files and physical stores such as filing cabinets or stacks of paper.

4.1. Customer-Browse

4.1.1. Customer-Browse Context DFD

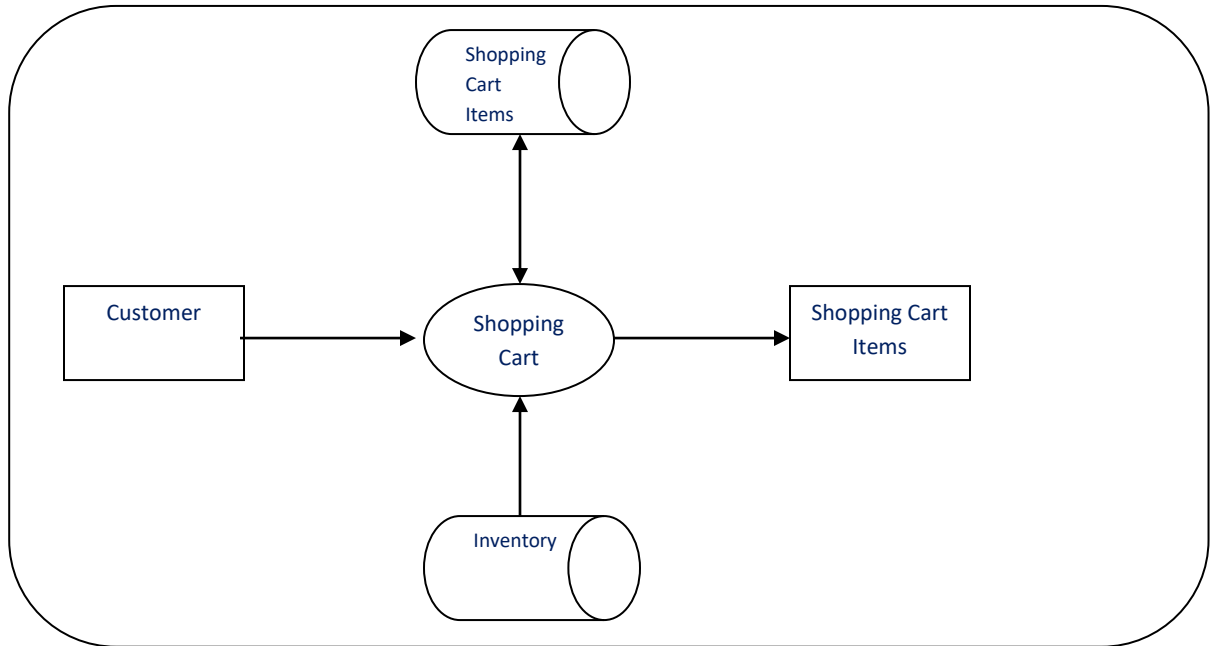


4.1.2. Customer-Browse Detailed DFD

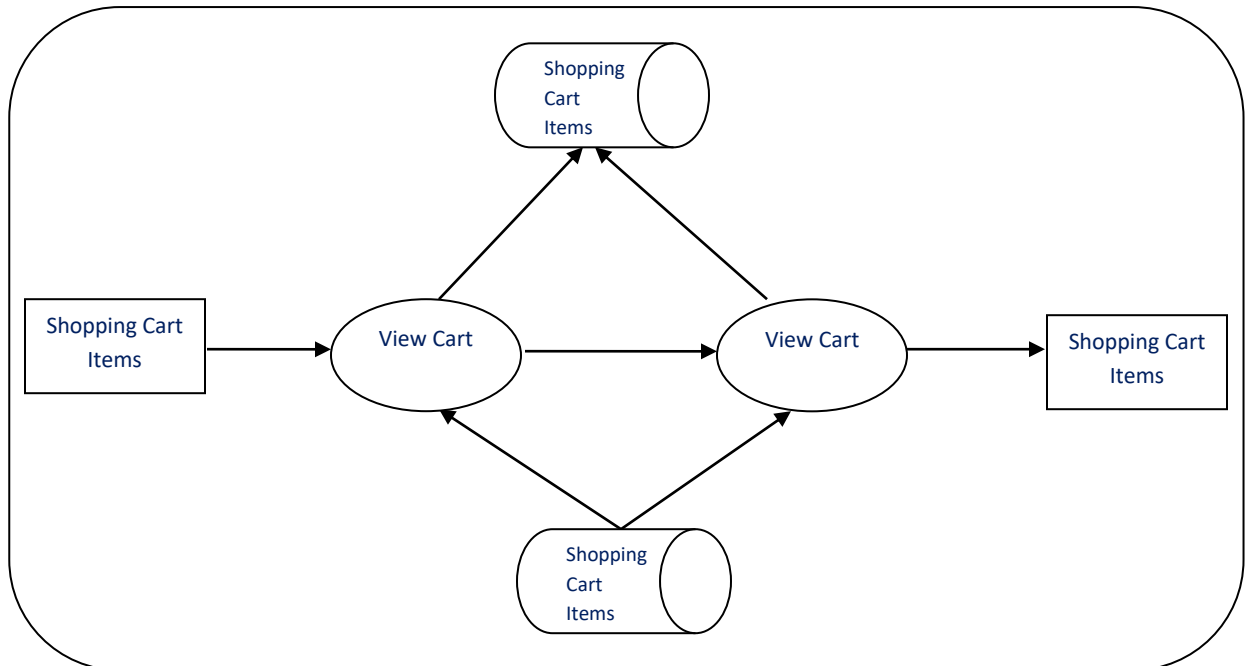


4.2. Customer-Shopping Cart

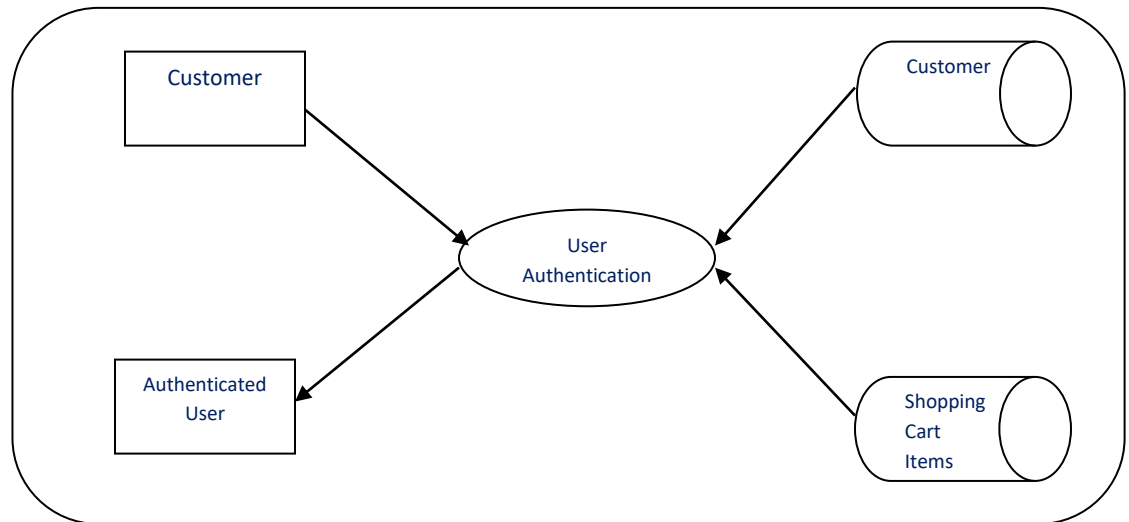
4.2.1. Customer-Shopping Cart Context DFD



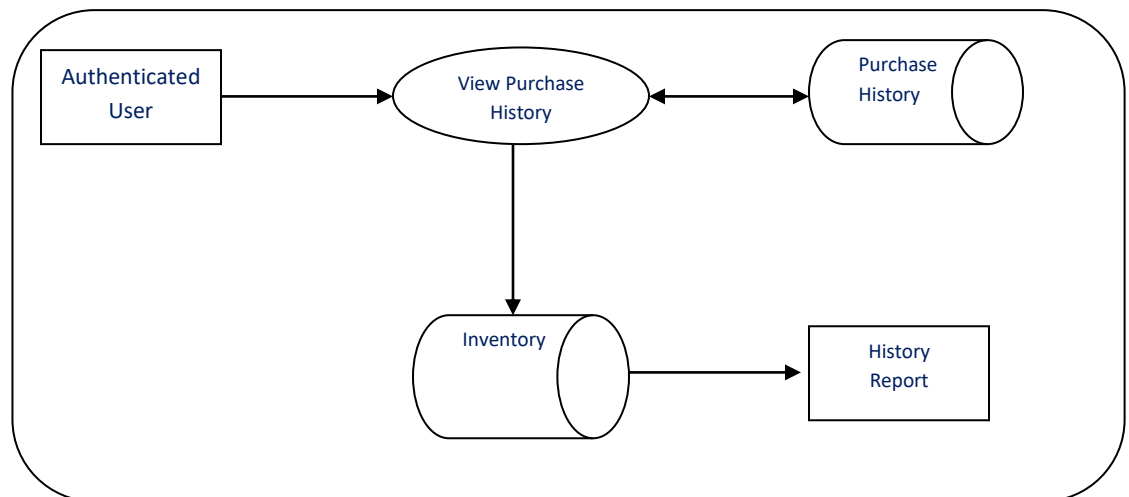
4.2.2. Customer- Shopping Cart Detailed DFD



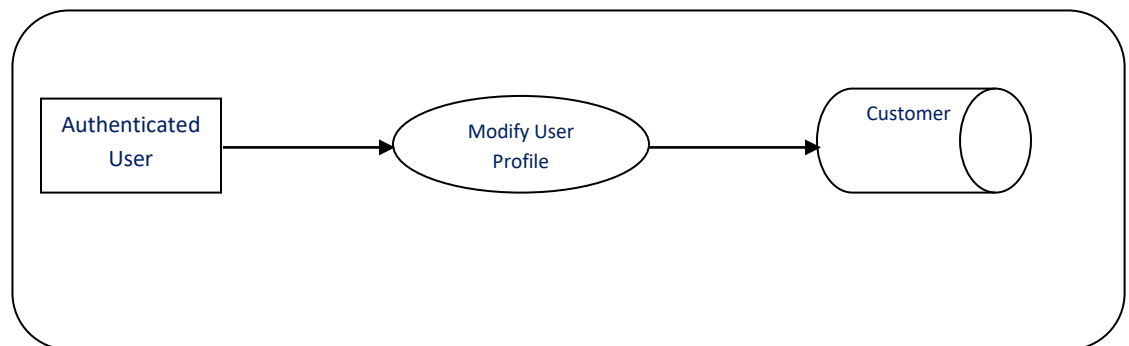
4.3. Customer-Authentication Context DFD



4.4. Authenticated Customer Purchase History DFD

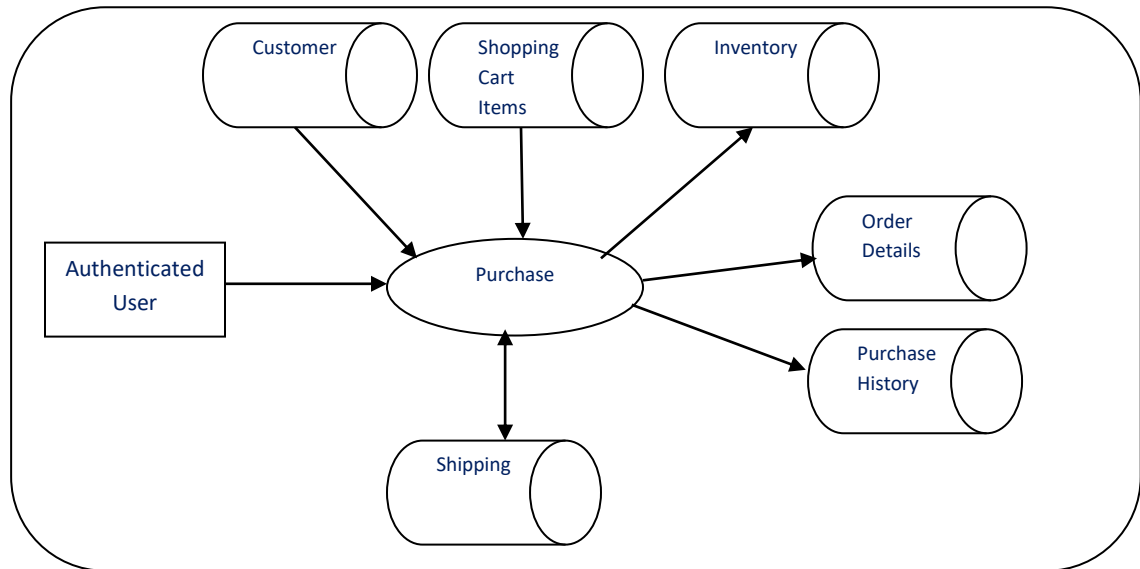


4.5. Authenticated Customer Modify Profile DFD

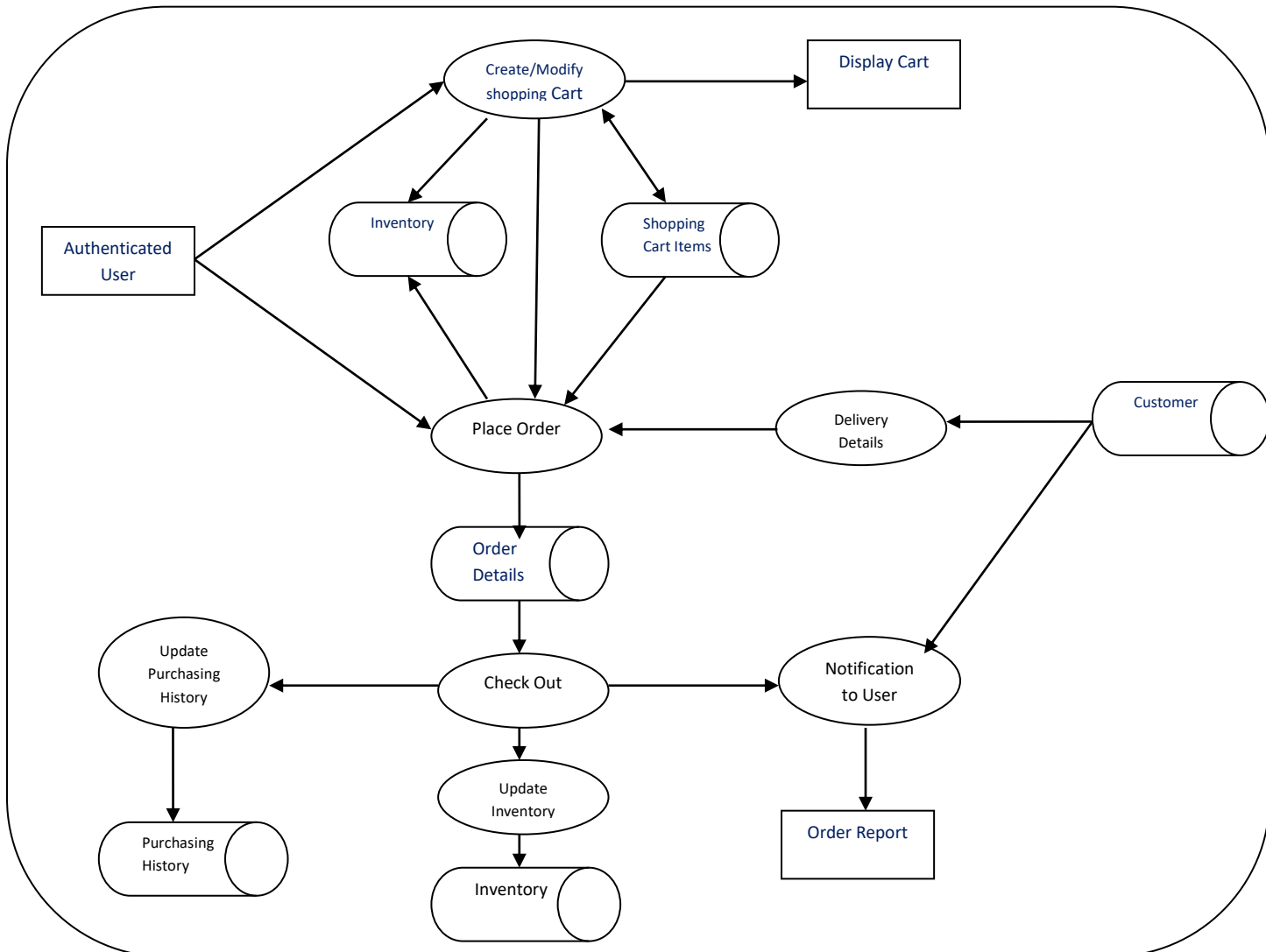


4.6. Customer-Purchase

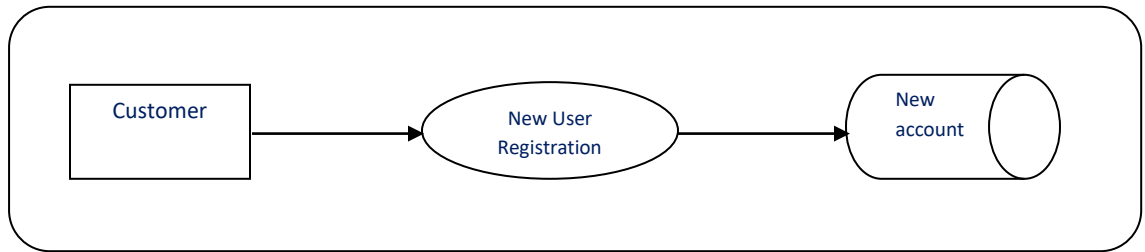
4.6.1. Authenticated User-Purchase Context DFD



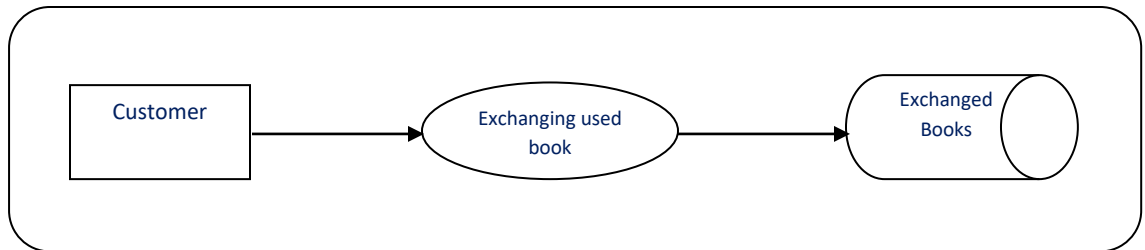
4.6.2. Authenticated User-Purchase Detail DFD



4.7. New User Registration DFD

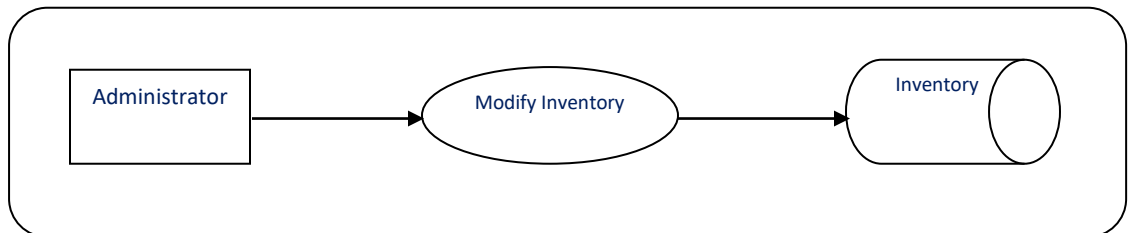


4.8. Exchanging Books DFD

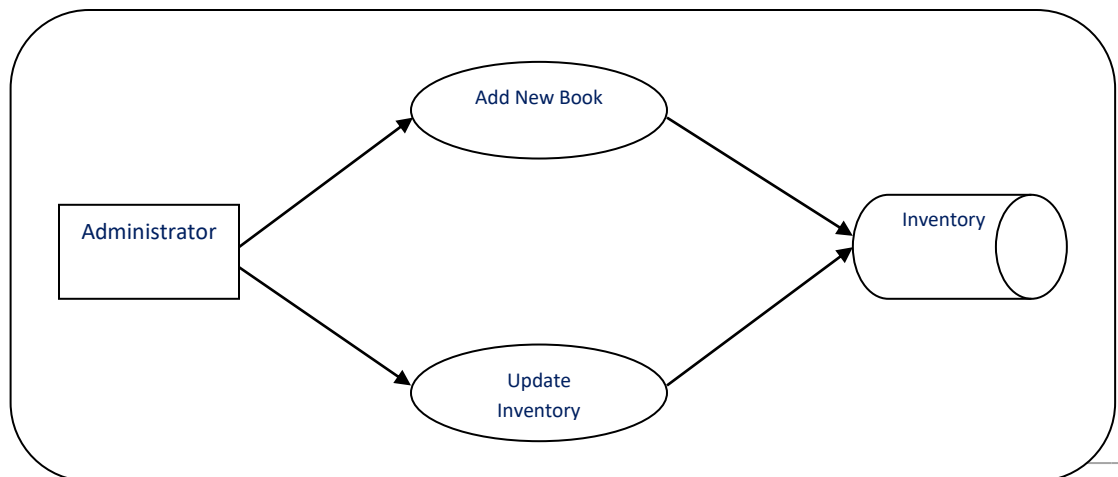


4.9. Administration

4.9.1. Administrating Inventory Context DFD



4.9.2. Administrating Inventory Details DFD



5. System Functions

5.1. Browse Catalog

5.1.1. Book Search

Description:	A user can search for a book of his choice by writing book's title, author's name, or ISBN. Then a select query is used to retrieve data from the database and display the selected information.
Actor:	User/Customer
Input:	The user will select a category and enter title in a text box provided.
Output:	The system will display the books which matches the selected search criteria. A dataset is created as a result of select query. Later the dataset is linked to the data repeater to display the selected data.
Pre-conditions:	Enter the home page.
Post-conditions:	Required books appear on the screen.

5.1.2. Rating a Book

Description:	If the user wants to give rating according to his opinion for a book he can select either Excellent, Very good, good, regular or deficient. The final rating of a book will depend on all the individual user rating.										
Actor:	User/Customer										
Input:	The user will select a rating based on his opinion.										
Output:	<p>The system will display the rating of a book and the total number of votes received.</p> <p>Below is the display for various ratings:-</p> <table><tr><td>*****</td><td>Excellent</td></tr><tr><td>****</td><td>Very Good</td></tr><tr><td>***</td><td>Good</td></tr><tr><td>**</td><td>Regular</td></tr><tr><td>*</td><td>Deficient</td></tr></table>	*****	Excellent	****	Very Good	***	Good	**	Regular	*	Deficient
*****	Excellent										
****	Very Good										
***	Good										
**	Regular										
*	Deficient										
Pre-conditions:	User must be signed in.										
Post-conditions:	Rating of the book is modified.										

5.2. Maintain Account

5.2.1. Register

Description:	If the user doesn't have an account then he will be asked to register.
Actor:	Customer
Input:	The user will enter details in the registration form according to the required fields. The fields include:- 1.First name 2.Last name 3.Password 4.Email 5.Phone 6.Delivery address 7.Governorate 8.City
Output:	After registration the user will be directed to the main home page.
Pre-conditions:	The user must be in the sign up page.
Post-conditions:	A new account is created.

5.2.2. Login

Description:	If the user wants to get access to all the functionalities of Online Book Store he should login using his username and password.
Actor:	Customer
Input:	The user will enter his username and password.
Output:	If it is a successful login the user will be directed to the main home page. Else if the user enters invalid information he will be asked to check the entered information.
Pre-conditions:	The user must be in the home page.
Post-conditions:	The user opens his account.

5.2.3. Logout

Description:	If the user wants to end his session and sign out of the website then he can use the logout option.
Actor:	Customer
Input:	The user will click the logout button.
Output:	The user's account session comes to an end and he should login again if he wants to enter into the website.
Pre-conditions:	The user must press the logout button.
Post-conditions:	The user is directed to Home page.

5.3. Manage Shopping Cart

5.3.1. Place an Order

Description:	If the user wants to purchase a book then he can place an order by selecting the add to shopping cart button and entering the quantity required under the book description.
Actor:	Customer
Input:	The user will enter the quantity required and click the add to shopping cart button.
Output:	The order will be added to the user's shopping cart.
Pre-conditions:	The user must be logged in.
Post-conditions:	The selected book is added to the shopping cart.

5.3.2. Update Shopping Cart

Description:	If the user wants to change the quantity of a book or change a book then he can update his shopping cart.
Actor:	Customer
Input:	The user will click the details button in the shopping cart summary to edit and update his order details.
Output:	The updated order details are reflected in the shopping cart summary.
Pre-conditions:	There must be one or more books in the shopping cart so that the user can modify it.
Post-conditions:	The shopping cart is updated.

5.3.3. View Shopping Cart

Description:	If the user wants to view the items he added to the shopping cart then he can click the shopping cart link at the top of the page.
Actor:	Customer
Input:	If the user wants to view the items he added to the shopping cart then he can click the shopping cart link at the top of the page.
Output:	The user's shopping cart summary will be displayed in the form of a tabular format with all the books and their quantity. A total cost of all the items is also displayed at the bottom.
Pre-conditions:	The user should press (my cart) button.
Post-conditions:	The cart is displayed.

5.3.4. Exchange Books

Description:	If the customer has any used book that she/he wants to exchange. Then through this link she/he can exchange it with another used book from a list.
Actor:	Customer
Input:	The customer should enter some required fields that describe the used book that is required to be exchanged.
Output:	After the customer press the exchange button, then a list of available used books are displayed for the customer to select one.
Pre-conditions:	The user must provide the book's details, in which he's going to exchange.
Post-conditions:	Exchange order is raised.

5.4. Administrator

5.4.1. Login

Description:	If the Administrator wants to get access to all the functionalities of Online Book Store he should login using his username and password.
Actor:	Administrator
Input:	The Administrator will enter his username and password.
Output:	If it is a successful login the Administrator will be directed to his menu page. Else if the Administrator enters invalid information he will be asked to check the entered information.
Pre-conditions:	The admin must provide his username and password.
Post-conditions:	The admin account is opened.

5.4.2. Add or Delete a Book

Description:	If the Administrator wants to add or delete a book then he can insert or delete a book using his administration rights and the book table will be updated in the database.
Actor:	Administrator
Input:	<p>If the Administrator wants to add or delete a book then he can insert or delete a book using his administration rights and the book table will be updated in the database.</p> <ol style="list-style-type: none">1.Book title2.Book's Category3. Author4.Publisher5.Edition version6.Number of pages7.ISBN= International Standard Book Number8. language9. Cover type10.Price11.Discount12.Image of the Book13.Store Review14.Number of books available <p>If he wants to delete a book he can click the delete button to remove it from the database.</p>
Output:	The updated books list will be displayed in the main home page under their particular category.
Pre-conditions:	There must be books in the website
Post-conditions:	Books' stock is modified.

5.4.3. Manage Orders

Description:	If the Administrator wants to add or delete an order then he can insert or delete an order using his administration rights.
Actor:	Administrator
Input:	If the Administrator wants to add an order the he should click the insert link button in the orders page else he can delete a particular selected order.
Output:	The updated orders list will be processed to the users.
Pre-conditions:	There must be one or more orders.
Post-conditions:	Ordered are excuted.

5.4.4. Add or Delete member

Description:	If the Administrator wants to add or delete a book category then he can insert or delete a book category using his administration rights and the category table will be updated in the database.
Actor:	Administrator
Input:	If the Administrator wants to add a book category the he should click the insert link button in the category page else he can delete a particular selected book category.
Output:	The updated categories list will be displayed in the main home page.
Pre-conditions:	Admin must be logged in.
Post-conditions:	Members are modified.

5.4.5. Logout

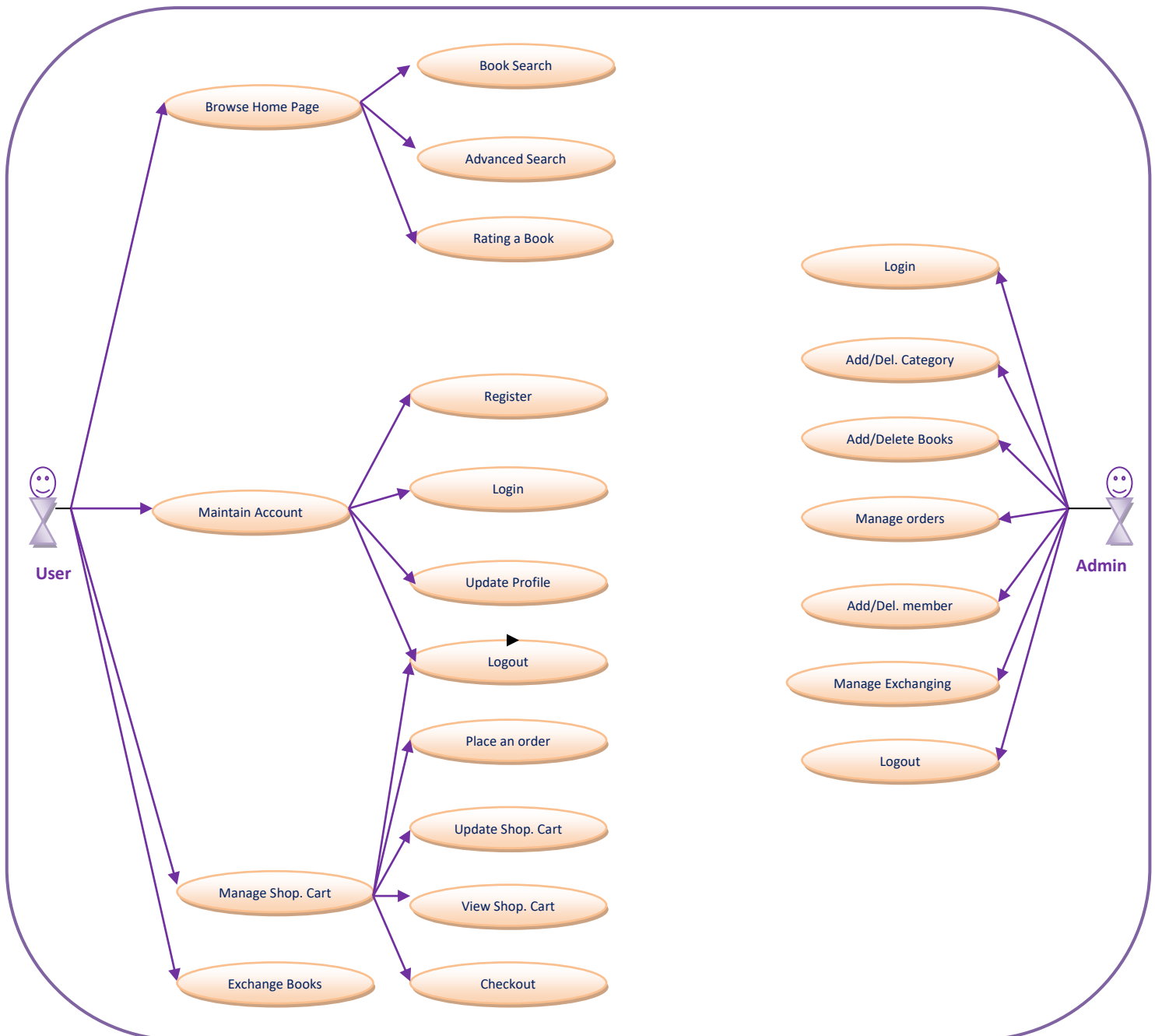
Description:	If the Administrator wants to end his session and sign out of the website then he can use the logout option.
Actor:	Administrator
Input:	The Administrator will click the logout button.
Output:	The Administrator's account session comes to an end and he should login again if he wants to enter into the website.
Pre-conditions:	The admin must press the logout button.
Post-conditions:	Admin Is logged out.

6. System Models

6.1. Use-Case diagram

6.1.1. User & Administrator Use-Case

Users and Administrator are the two actors included in BW, the Online Book Store. Below is the use case diagram for this BW through the activities of both Users and Administrator.

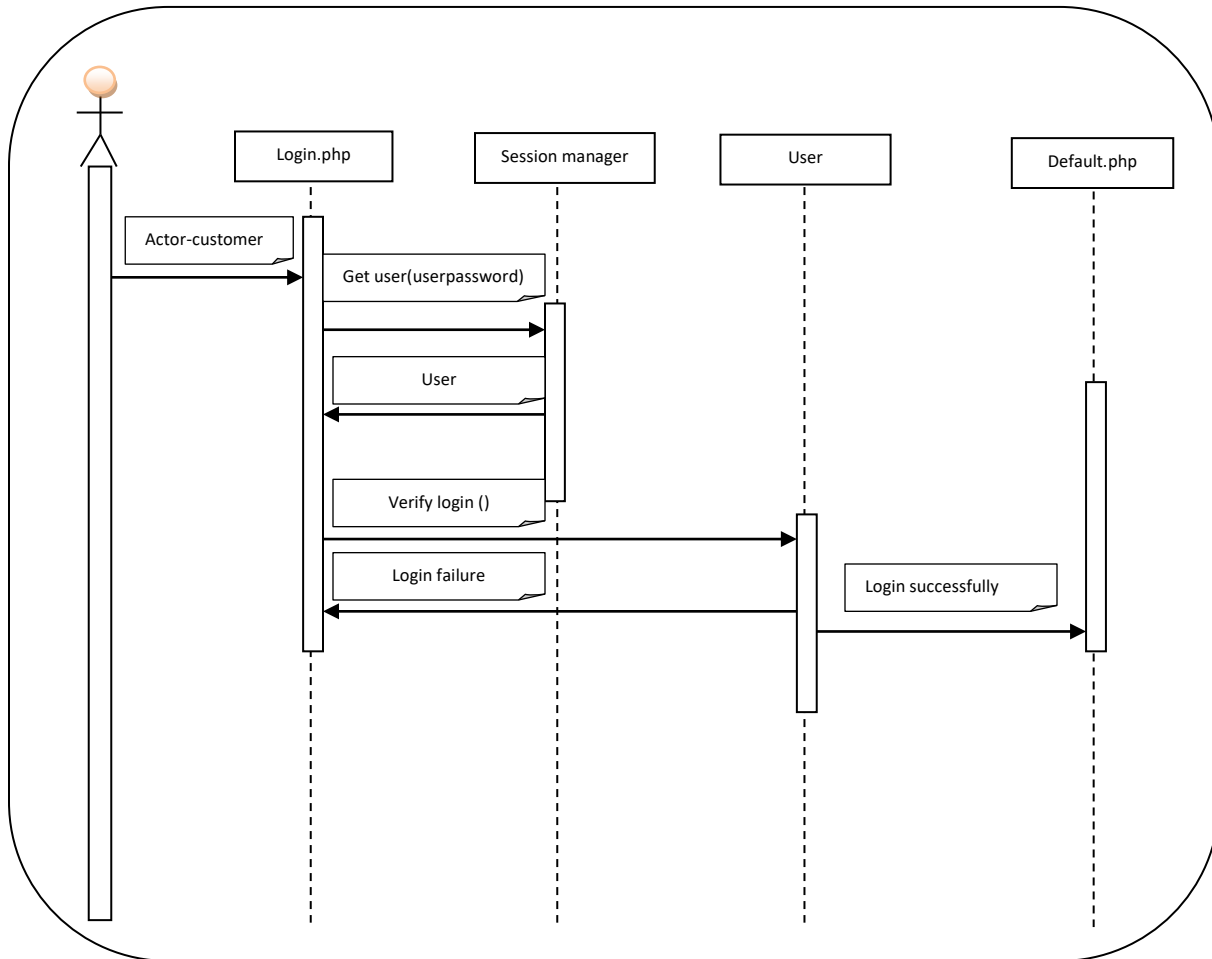


User & Administrator Use Case diagram

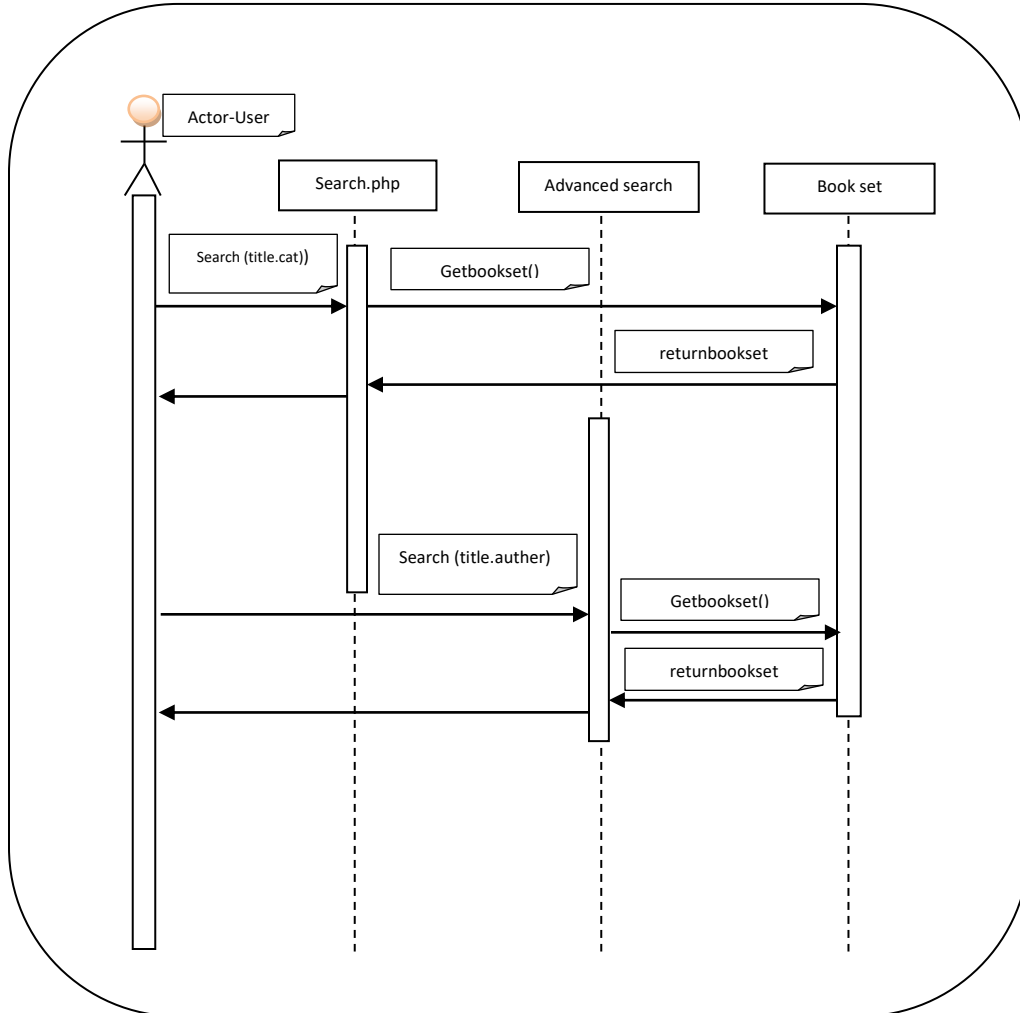
6.2. Sequence Diagram



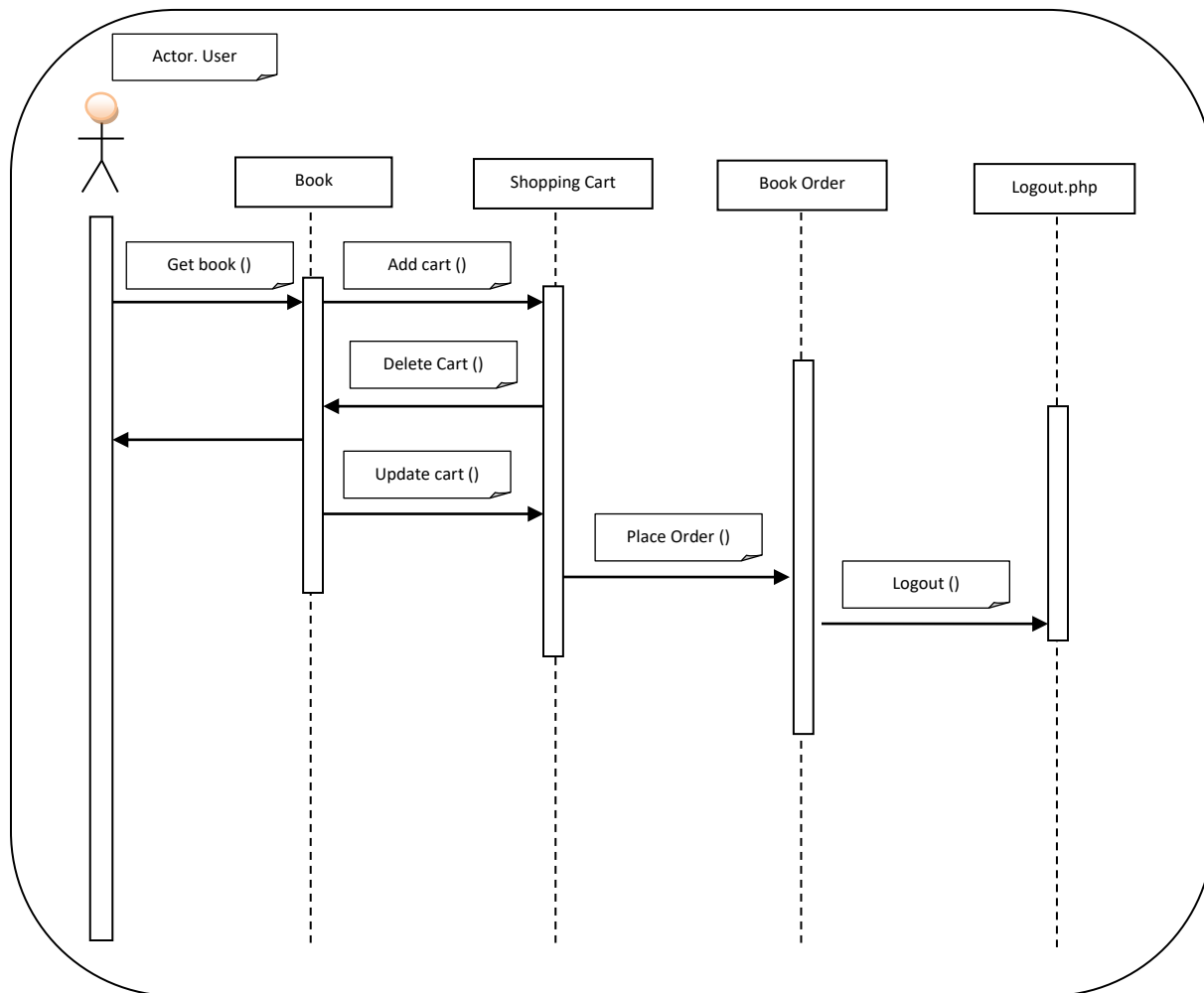
6.2.1. User Login



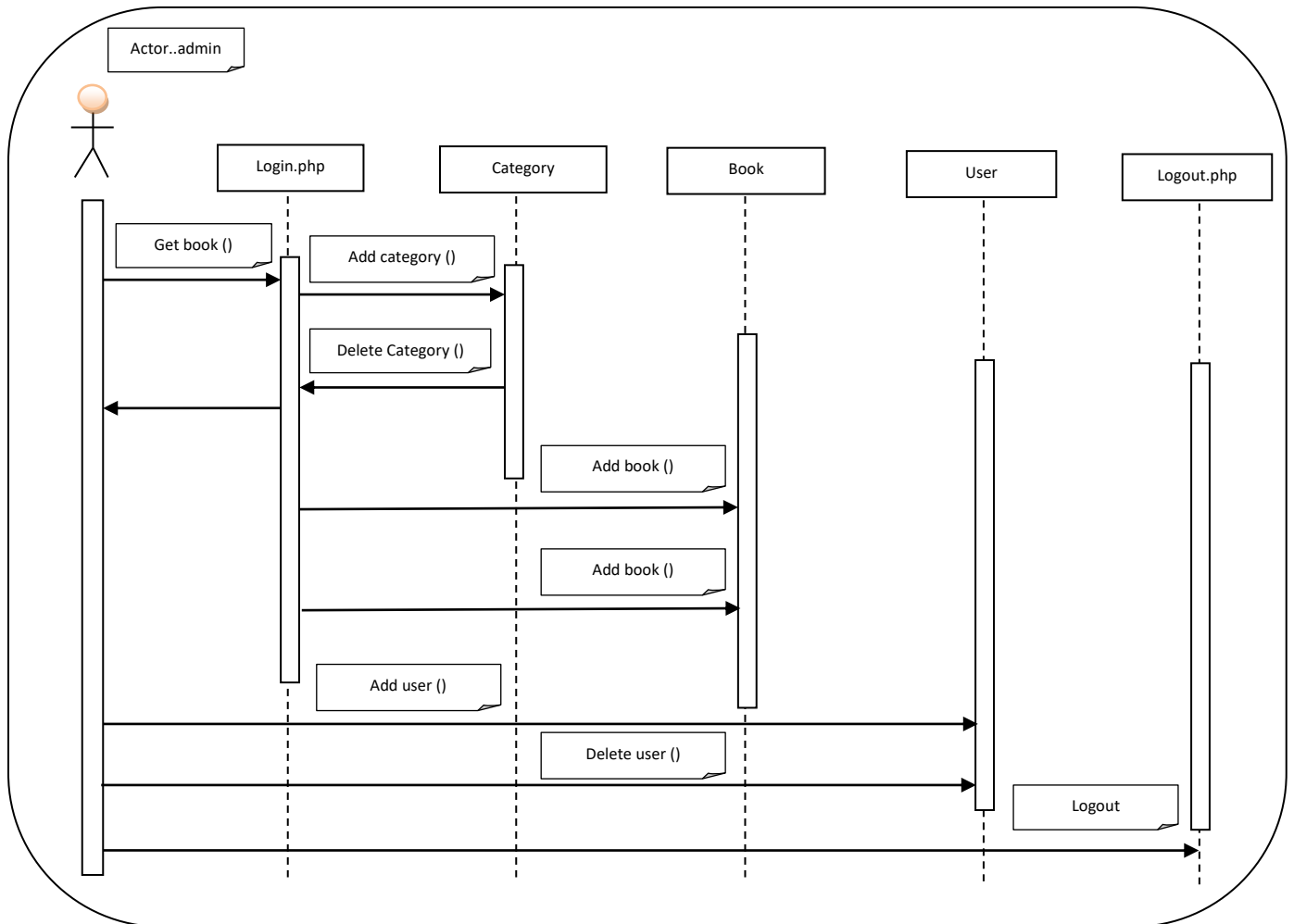
6.2.2. Book Search



6.2.3. Adding to Shopping Cart



6.2.4. Administrator



7. Non-Functional Requirements

Non-Functional Requirements covers the requirements that are related to the Online Bookstore System. This includes Extensibility, Legal and Regulatory requirements, Performance requirements, Reliability requirements and Security requirements, etc...

7.1. Security

Some key security aspects must be applied to the web application to secure transaction these are:

7.1.1. Securing Transactions

Security for online transactions, and maintaining confidential information security.

7.1.2. Securing Processed Information

Processed information must be kept secure

7.1.3. Securing Users data

All information gained from the end users that is processed must be kept secure.

7.2. Usability

Usability means user-centered design. Both the design and development process are focused around the prospective user to make sure their goals, mental models, and requirements are met and to build products that are efficient and easy to use.

The system must be easy to use with minimum training. It will be easy to navigate, search, sell and buy books. The application should be free of complications or errors.

Usability means test, test, and test again

There are principles of good website usability, we must make sure to consider these in BW.

7.2.1. Availability and Accessibility

7.2.1.1. Server uptime

It's important to ensure your visitors don't get an error trying to load your site. Invest in good hosting.

7.2.1.2. Broken links

Double check that there are no dead links on your site. Nothing sends a visitor back to Google search results faster than a 404 page.

7.2.1.3. Mobile responsiveness

Make sure your site can handle different screen sizes and slow connections.

7.2.2. Clarity

7.2.2.1. Simplicity

Focus on what's important. If you don't distract your visitors they will be more likely to do what you want them to do

7.2.2.2. Familiarity

Stick to what people already know. There is nothing wrong with looking at other sites for inspiration.

7.3. Performance

In order to provide the most optimal, fast, and efficient user experience to the BW customers, I must apply some strategies for enhancing BW website as:

7.3.1. Coding the site for mobile-first quality and speed

It's critical to ensure that your website is mobile first. The strategy should be to code for mobile users first and then progressively enhance the experience for tablets and desktops.

7.3.2. Reduce image size

According to the HTTP Archive, 61 percent of a website's page weight on a desktop computer is images. We must be sure that WB images are appropriately sized.

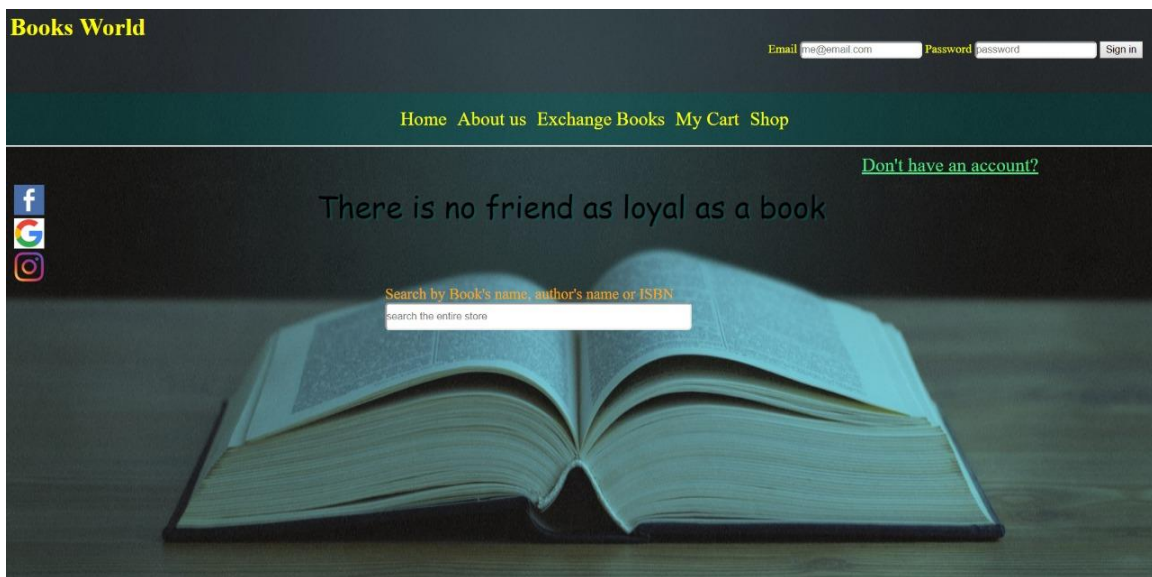
Adopting image formats, such as WebP and JPEG XR, can also help reduce image weight by 20 to 50 percent without sacrificing quality.

9. System Interfaces

9.1. User Interfaces

Before implementing the actual design of the application, a few user interface designs were constructed to visualize the user interaction with the system as they browse for books, create a shopping cart and purchase books. The user interface design will closely follow the Functional Decomposition Diagrams that show the initial designs of the web pages.

Home page



Sign up page

Books World

Join us and sign up here

* required field

First Name

Last Name

Email

Password

Confirm Password

Date of birth

Mobile

Female

Address

Exchange books' page

Books World

Lets Exchange Books :)

Book's name:

Upload book's photo:
 No file chosen

Book's description:

Selection of books (under construction)

This section is under construction :')



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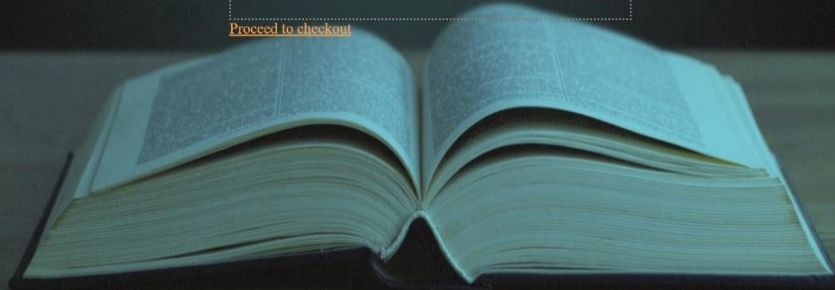
Shopping cart

Books World

My Cart

No.	Product	Quantity	Price	Delete
				Total:

[Proceed to checkout](#)



Check out

Books World

Checkout

First Name

Mobile

Postal code

City

Country

Shipping address

Billing address