

Book Store

Requirements Specification and Analysis

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ENGINEERING

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REQUIREMENTS ANALYSIS DOCUMENT

1. Introduction

Online shopping is the practice of consumers transacting directly and in-person with a vendor to purchase goods, services, etc. over the internet. Or in another saying, the act of purchasing products and services online from sellers is known as online shopping. The World Wide Web's creation, businesses have tried to sell their books to Internet users. Customers can browse online shops while lounging in their homes or while working at a computer. Customers purchase a wide range of goods from online retailers. In fact, businesses who sell their books online allow customers to buy just about everything.

Among the hundreds of books that customers can purchase from an online store are clothing, furniture, toys, hardware, software, and health insurance. Because it's convenient, many individuals choose to shop online. For instance, when someone shops in a physical store, she must drive there, find a parking space, and then go through the store until she finds the books she wants. She might frequently have to wait in line at the pay register after finding the products she wants to buy.

1.1. Purpose of the System

The project's main goal is to build an online bookstore that enables customers to browse and buy books based on title, author, and subject. The user can place an online order for their books using a credit card after seeing the selected books shown in a tabular manner. Comparing the Administrator to a regular user, the Administrator will have more features.

The online bookstore will be open to everyone and will include books for any classes, reading material, and stories. The cost of textbooks in school bookstores discourages many students from purchasing them, and many classes only use the required texts occasionally over the course of a semester. Students and other individuals start to feel quite frustrated by this waste of time. This is addressed by this online bookshop. Students will be able to purchase books online without paying a fee through this program. After placing any number of books in the cart, payment details will be required.

Saying "goodbye" to the times when you had to wait patiently in line for a store employee to finally check out your purchase was also one of our main motivation.

With this instantaneous online purchasing transaction, customers complete other errands while saving time. Additionally, unlike a physical store, online shopping has courteous customer service representatives who are accessible around-the-clock, seven days a week to help them find, buy, and ship items.

Our major goal is to create a book store that customers can access from anywhere at any time to examine the titles we have available, select any title, and order online or with cash on delivery. Any new books that become available for purchase will be continuously added by the

administrator. Only well-known publishers and book sellers will be accepted by the administrator.

1.2. Scope of the System

Online BookStore such as ours are web applications that allow users to buy books online. Customers can use a web browser to search for books by title or author, add them to their shopping carts, and then buy them using a credit card. The user can sign in with his account information or easily create an account for a new customer. They must provide information such as their name, phone number, and shipping address.

A user may also provide feedback for a book by rating it out of five. The books are broken down into numerous subject-based categories, such as software, databases, English, architecture, etc.

Customers have access to an almost endless variety of alternatives and products thanks our store. A person looking for a specialized item that might not be available locally can be sure to locate it online. Online comparison shopping is far more beneficial than in-store comparison shopping. While browsing simultaneously across several stores, customers can evaluate material quality, sizes, and costs. Let go of the days when you had to patiently wait in line for a store staff to ultimately check out your products.

Instantaneous online shopping transactions free up time so one can run other chores. Furthermore, unlike a physical store, online shopping has polite customer service agents available 24/7, seven days a week to assist customers in finding, purchasing, and shipping their purchases. Customers may access the book store we created at any time and from any location to browse the titles we have in stock, choose any title, and place an online or cash on delivery order. The administrator will continue to add any new books that become available for purchase. The administrator will only accept publishers and book merchants who are well-known.

1.3. Objectives and Success Criteria of the Project

Customers can log in to the BookStore website and utilize the search tools to access a variety of books. Before checking out the book they needed, the user had to sign up for this website. After registering, the user can search, make a selection, add it to their cart, and utilize the payment gateway to check out.

Instead of travelling to a store to buy the book, users can use this website to have it delivered. They are able to pay online directly.

As fewer customers visit the store and do online orders, the shopkeeper can manage inventory more easily. Customers that use this technique can save time and money on travel expenses. Additionally, by just conducting a keyword search in the system, users can learn about various book genres they were previously ignorant of. This website must meet each of the success criteria listed in order to be declared successful.

1.4. Definitions, Acronyms, and Abbreviations

Database: A database is an organized collection of data, generally stored and accessed electronically from a computer system.

Web-base: Web-base is a term used to describe any type of technology or system that is based on the World Wide Web.

Use Case: A use case definition is a document that describes the steps and interactions between a user and a system to achieve a specific goal.

System Models: System models are abstract representations of a system that are used to help understand, analyze, design, and document the system.

1.5. Overview

✓ *Current System:* In this section of the analysis, we have checked whether the UCS system is a replacement for another system or not. This section outlines the capabilities and issues of the current system, if the new system will replace an existing system. Otherwise, this part explains how the current system supports the tasks that need to be completed.

✓ *Proposed System:* This section outlines the new system's analysis model and requirements elicitation process.

✓ *Overview:* Overview section features a functional system overview.

✓ *Functional Requirements:* Functional requirements and non-functional requirements are the two categories into which requirements can be split. The system's high-level functioning is explained by the functional requirements.

✓ *Nonfunctional Requirements:* Nonfunctional Requirements outlines requirements at the user level that are not purely functional. This comprises operational, packaging, usability, performance, dependability, performance, supportability, implementation, interface, and legal requirements.

✓ *System Models:* explains the system's scenarios, use cases, object model, and dynamic models. The entire functional specification is included in this section, along with mock-ups of the system's user interface and navigational paths that depict the order of displays.

o *Scenario:* An example of a use case is a scenario.

o *Use Case:* A use case is a summary of many scenarios. As a result, the quantity of scenarios must be equal to or greater than the quantity of use cases.

Book Store

✓ *Glossary*: Developers specify the participating objects for each use case to create a clear nomenclature. Developers ought to clearly identify, label, and characterize each one before compiling them into a dictionary.

✓ *References*: This section should list any document that is cited elsewhere in the RAD or in a different, designated document. Indicate each document's title, publication organization, date, and report number, if appropriate. Indicate where the references can be found by providing the sources.

2. Current System

1. Lack of Online Presence: Many bookstores lack an online presence which limits their ability to reach new customers and increase sales.
2. Poor Payment Processing: Many bookstores have outdated payment processing systems which can lead to slow transaction times or security issues for customers' sensitive.
3. Inaccurate Inventory Tracking: Without an automated inventory tracking system, bookstores may struggle with keeping accurate records of their stock levels which can lead to overstocking or understocking of items in the store.
4. Limited Customer Engagement Tools: Without customer relationship management tools, bookstores may struggle with engaging their customers and building loyalty among them which can lead to decreased sales over time.
5. Inefficient Shipping & Delivery Processes: Without an automated shipping & delivery process, bookstores may struggle with getting orders out on time or providing accurate tracking information for customers which can lead to dissatisfied customers and lost sales opportunities.

3. Proposed System

1. Online Book Store: The proposed system should allow customers to browse and purchase books online. It should include features such as a search bar, product reviews, and a shopping cart.
2. Payment Processing: The proposed system should be able to securely process payments from customers using various payment methods such as credit cards, PayPal, and other online payment services.
3. Inventory Management: The proposed system should be able to track inventory levels and alert the store when stock is running low or needs to be replenished.
4. Shipping & Delivery: The proposed system should be able to manage shipping and delivery of orders in a timely manner with accurate tracking information for customers.

3.1. Overview

With the online bookstore system, customers no longer need to idly wander around looking for their own books. Instead, they simply need to log on to the system from a computer linked to the Internet, type the title of the book they're looking for in the search box, and click search. The ability to quickly determine whether a website has its own books allows you to make an

Book Store

online direct purchase. If not, you can switch to your local bookstore to continue your search or give the seller recommendations so they can supply. This greatly benefits the consumer by saving them time and effort.

The online bookshop system can perform three functions that are mutually beneficial while also lowering expenses, saving time and space and making everyone's lives more convenient.

3.2. Functional Requirements

- Allows customers to browse and search for books by category, author, title, and keywords.
- Displays detailed information about each book including cover image, title, author, publisher, price, and reviews.
- Allows customers to add items to their cart and proceed to checkout.
- Provides secure login and registration functionality for customers to create an account, login, and view their order history.
- Handles the processing of customer orders and payments using secure methods such as credit card, or other e-payment methods.
- Implement responsive design to support display on various devices.
- Provide an option for customer to review a book.

3.3. Nonfunctional Requirements

Features that govern the performance, security, and operating instructions of the system are known as non-functional requirements. These are the restrictions placed on the system.

3.3.1 Performance

- ✓ It should conduct a search in under two seconds.
- ✓ The system must be capable of processing orders at large volume effectively. This might include the system's speed, the number of orders it can process simultaneously, and its capacity to handle spikes in activity.
- ✓ The application must operate on a web server and be web-based.
- ✓ The initial loading time of the product will vary based on the speed of the internet connection and the environment in which it is being used.
- ✓ The hardware components used by the client will determine performance.

3.3.2 Security

- ✓ Following an interval of inactivity, the system must automatically log out all users.
- ✓ The system must prevent any cookies from being stored on the client's computer that include the user's password.
- ✓ Only authorized administrators shall have access to the back-end servers of the system.

Book Store

- ✓ Before being transmitted across unreliable networks, such as the internet, sensitive data will be encrypted.

3.3.3 Reliability

- ✓ The system offers redundant computers with automated switchover for the storage of all databases.
- ✓ The dependability of the individual components affects the program's overall dependability. The database backup, which is regularly updated to reflect the most current changes, is the primary tenet of the system's dependability. As a result, the stability of the container and its underlying operating system determines the system's overall stability.

3.3.4 Usability

- ✓ With the exception of one hour each week for maintenance, the BookStore must be accessible to users twenty-four hours a day, seven days a week. The system should be back online in an hour if it crashes.
- ✓ The system must have an easy-to-use interface and straightforward navigation for both consumers and restaurant workers.

3.3.5 Maintainability

- ✓ The database is maintained by a commercial database, and the site is managed by the application server. The program will be re-initialized in the event of a failure. Additionally, modularity is being considered in the software design to facilitate effective maintenance.

3.3.6 Portability

- ✓ The BookStore will not depend on any particular platform. Any OS, including Windows and Linux, can be used by an end user to access this system. The system must function on PCs, laptops, PDAs, and other devices.

3.3.7 Accessibility

- ✓ The system will operate as a web-based application and be accessed through a web browser.
- ✓ The system must support multiple languages.

3.3.8 Supportability

- ✓ This system's source code must be kept up to date in a configuration management tool.

3.4. System Models

Scenarios

Scenario for Use Case: Search for a book
Primary scenario
Scenario ID: S1.1
Actor: User
Precondition: <ol style="list-style-type: none">1. The user has access to the bookstore website.2. The user is logged in.
Flow of events: <ol style="list-style-type: none">1.The user navigates to the homepage of a virtual bookstore website. User wants to purchase a new book and decides to search for one on the site.2.User reaches the homepage of the bookstore website and clicks on books button on home page3. The user sees the book types, clicks the button for the type of book they want to review and buy.4. The website displays a list of books.5.User sees "Istanbul Hatırası" on the list and clicks on it to see more details about the book.

Book Store

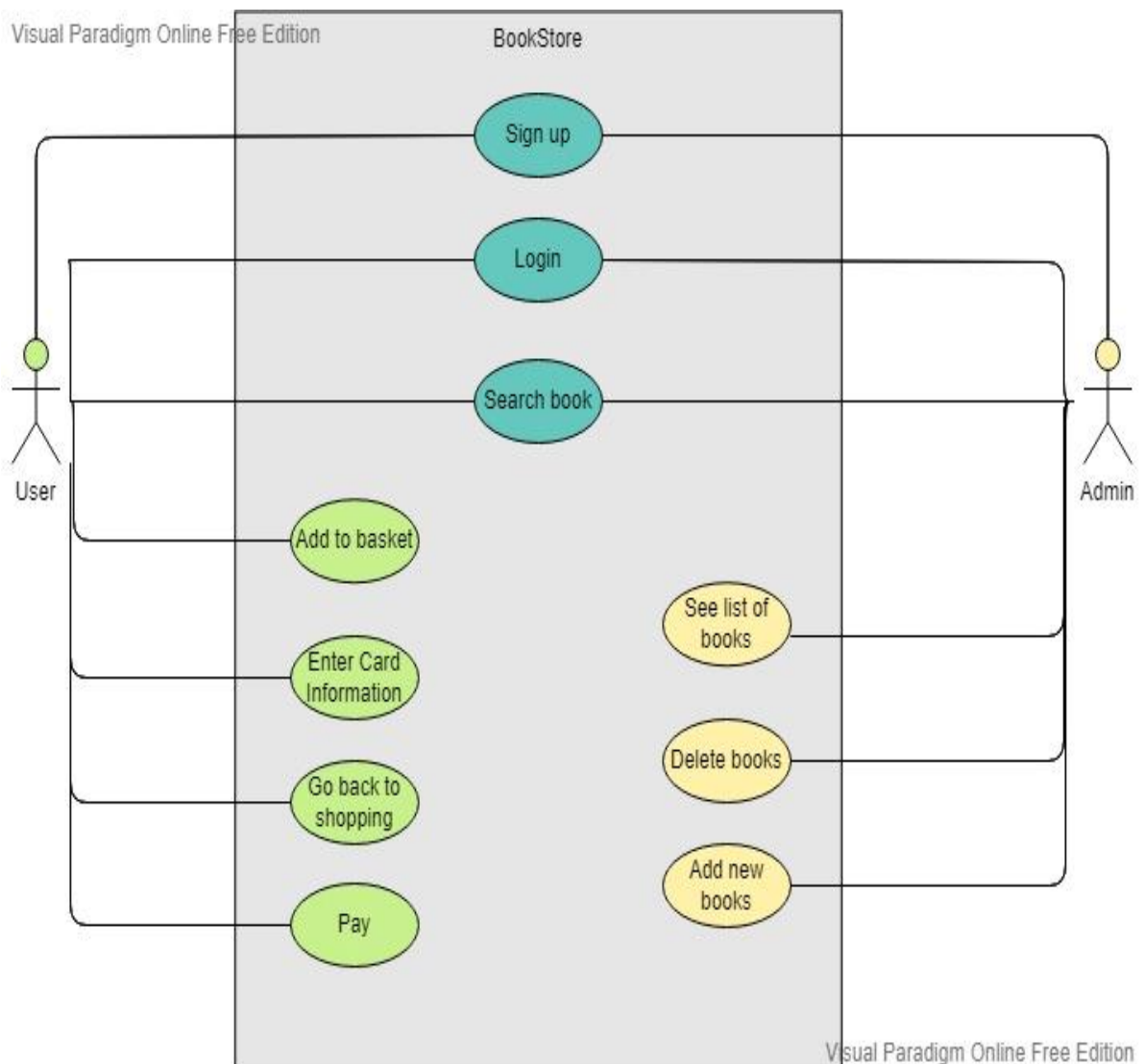
6.The website displays the book's description, author, and other information. User decides she wants to buy the book and clicks the "Add to Basket" button and the website updates user's shopping basket

7.The user can now navigate to other pages on the website to continue her shopping or checkout her purchases.

Postcondition:

- The user can find the book they were searching for
- The user can add the book to the shopping basket
- The user can navigate to other pages on the website.

Use case model



Flow of events:

1. This scenario starts when the user opens the bookstore website
2. The user clicks on books button on home page
3. The user sees the book types, clicks the button for the type of book they want to review and buy.
4. The system validates user's entry.
5. The system displays a list of books.
6. The user want to buy "Istanbul Hatırası" and user sees on the list and clicks on it to see more details about the book.
7. The system displays the book's description, author, and other information.
8. User decides she wants to buy the book and clicks the "Add to Basket" button. The system updates user's shopping basket.
9. The user can now navigate to other pages on the website to continue her shopping or checkout her purchases.

Secondary Scenario:

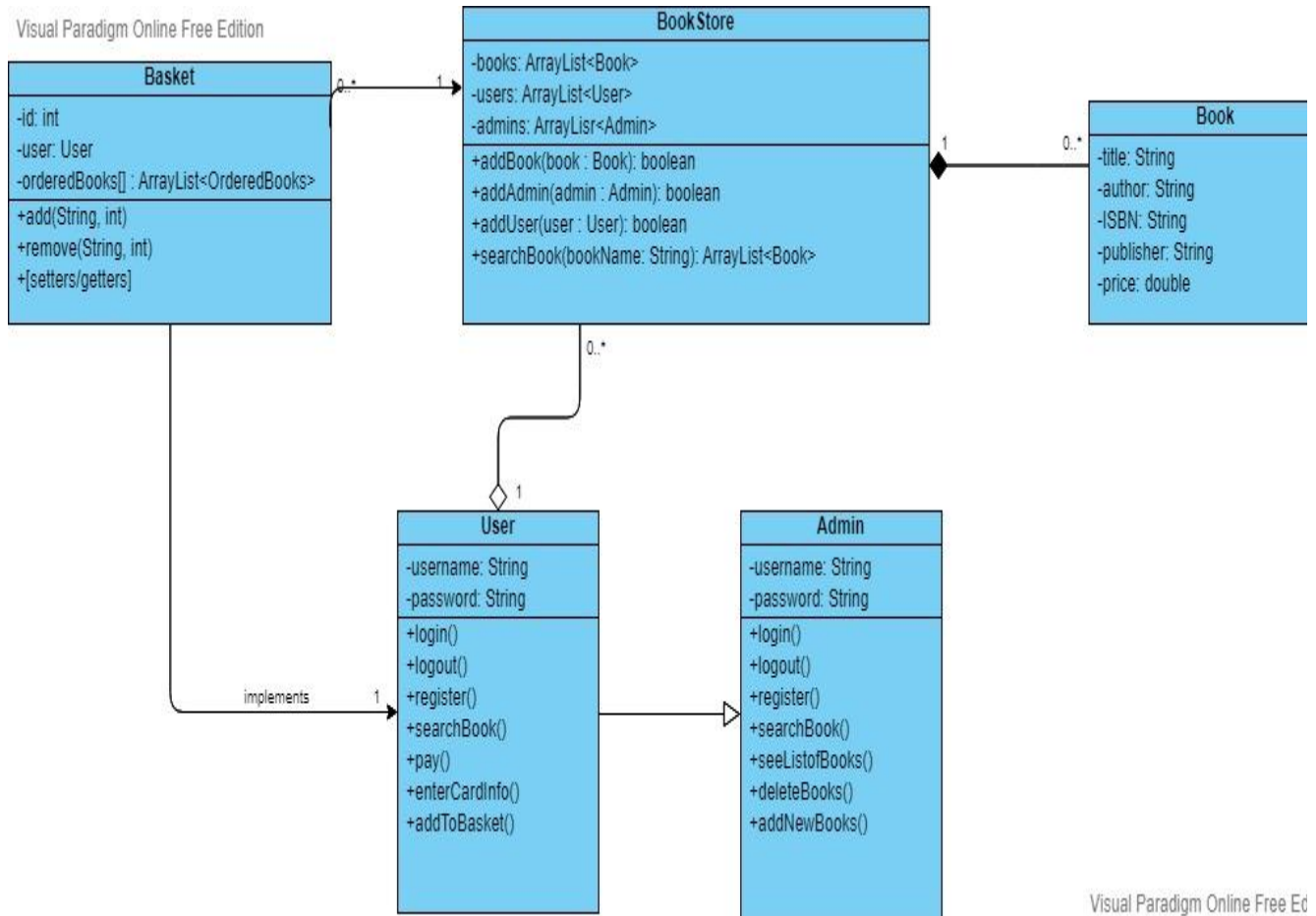
1. The user enters an invalid search query, the system displays a message "No books found"
2. The user enters a search query, but no results are found, the system displays a message "No books found"

Postcondition:

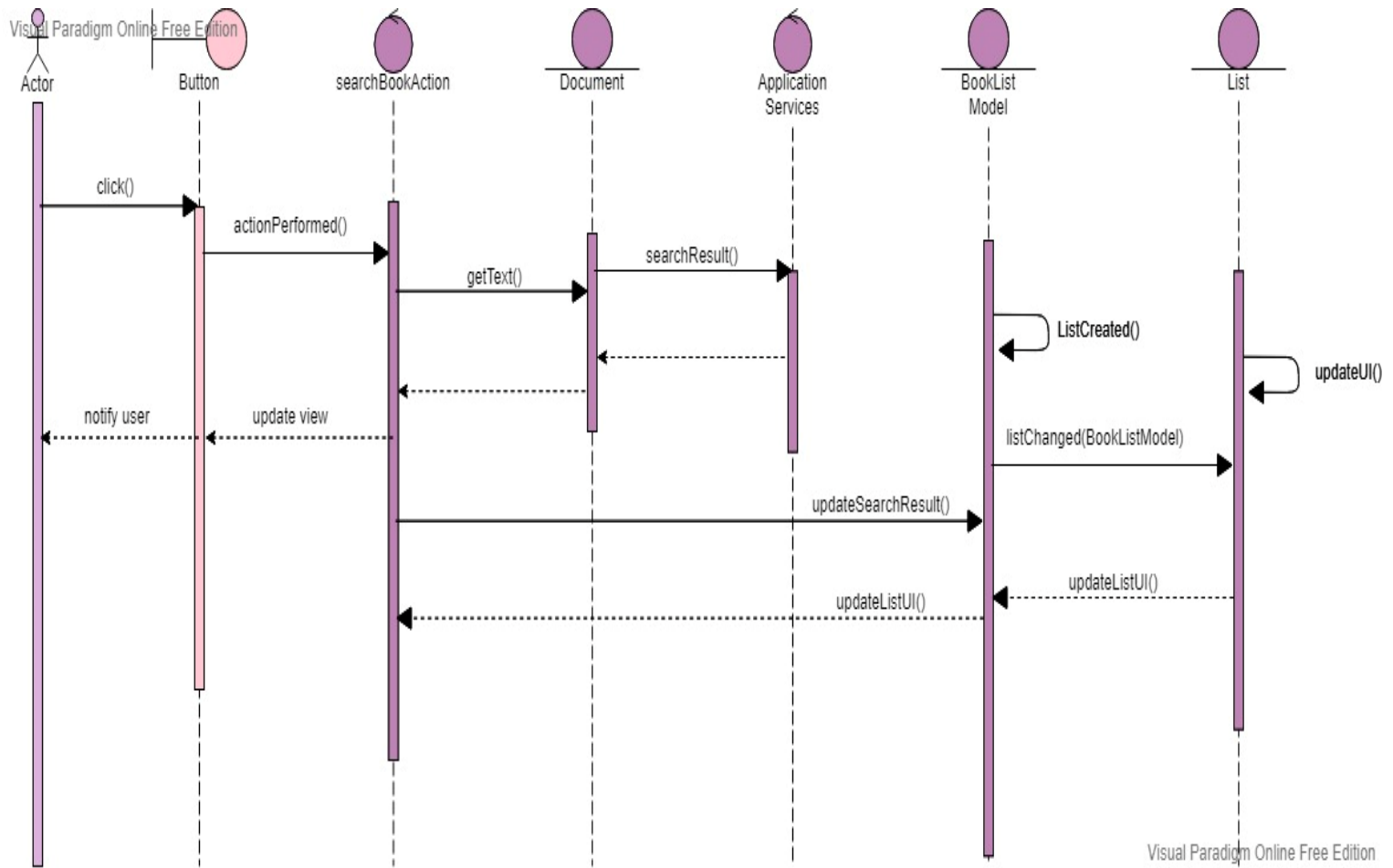
- The user can find the book they were searching for
- The user can add the book to the shopping basket
- The user can navigate to other pages on the website.

Book Store

Object model



Book Store



Register

Sign up to buy books

[Already have an account? Log in](#)

Book Store

Login

Book Store

Log in to Book Store

admin

↵

Login

Don't have an Book Store account?

Sign Up

About Us

Book Store

About usBooksBasketAdmin

🔍

Search

🔗

ABOUT US

- Gizem Bulut
- Ceren Ekayran
- Saadet Begüm Ekmeçiyi
- Güle İbrahim
- Nihan Topcu
- Dilara Kara

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Search

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ADMIN

Book List

Add New Book

Edit About Us

Book Name

Book Name

Author

Author

Type

Novel

Price

Price

Image

📁

 Dosya seç

 Dosya seçimi

Description

Submit

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Book Store

About usBooksBasketAdmin

Search

ADMIN

Book List

Add New Book

Edit About Us

ID	Book Name	Author	Type	Price	Delete
1	Istanbul Hatırası	Ahmet Ümit	novel	\$30	Delete
2	Çocuk Kâğıdı	Edmondo De Amicis	childrens	\$30	Delete
3	Levinia	Ödeme Araf	poem	\$40	Delete
4	Bilgiyletmenin Gücü	Joseph Murphy	self-help	\$60	Delete

Admin – About Us

Book Store

About usBooksBasketAdmin

Search

ADMIN

Book List

Add New Book

Edit About Us

About Us

Görmek Bulut

Ceren Edizoglu

Saadet Begüm Dimekiç

Submit

Basket

Book Store

About usBooksBasketAdmin

Search

Basket

Product	Quantity	Price	Total
Istanbul Hatırası	2	\$50	\$100
Total:			\$100

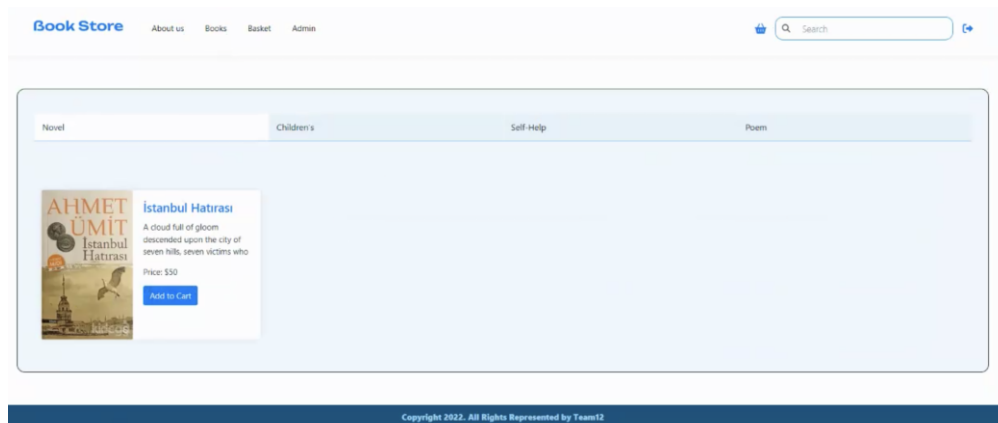
Continue Shopping

Clear Basket

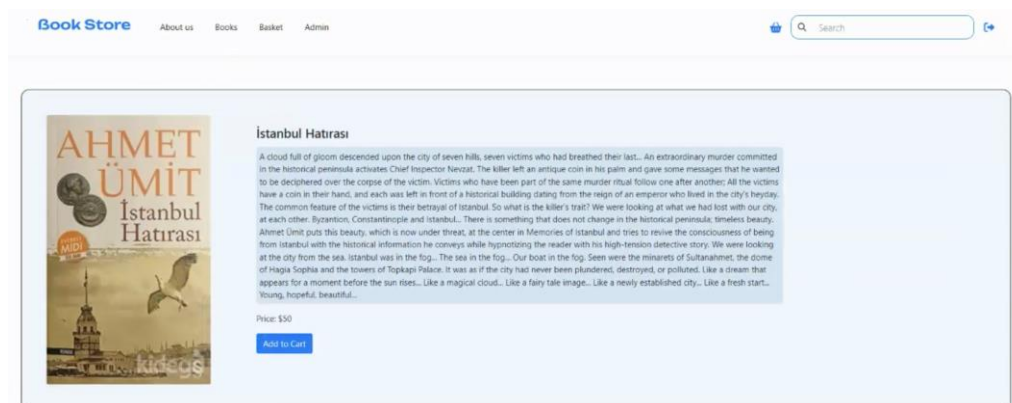
Checkout

Book Store

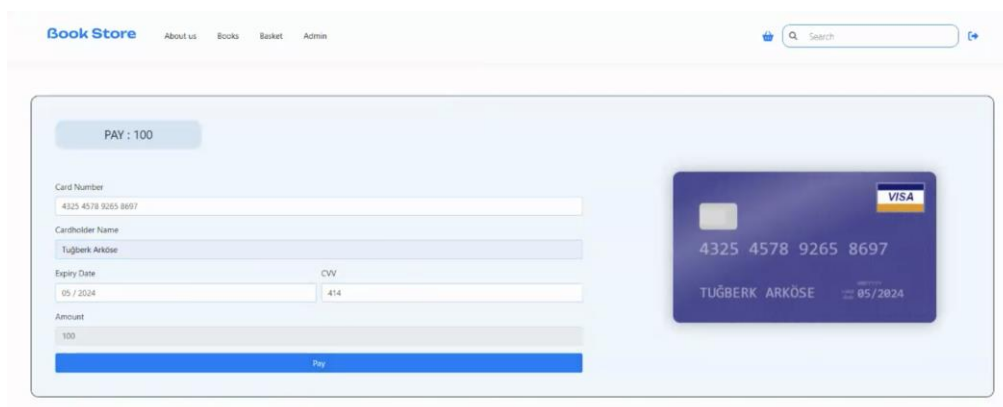
Books



Book's detail



Payment



4. Glossary

- **UML Class Diagram:** A type of diagram that shows the classes, attributes, and methods of a system, as well as their relationships and interactions.
- **Sequence Diagram:** A type of diagram that shows the interactions between objects or components over time, including the messages that are passed between them.
- **UML Class Diagram:** A type of diagram that shows the classes, attributes, and methods of a system, as well as their relationships and interactions.
- **UI (User Interface):** The part of the system that the user interacts with, including the layout, buttons, forms, and other elements that allow the user to perform actions.
- **Use case:** A description of a specific functionality of a system, including the actors, pre-conditions, flow of events, and post-conditions.
- **Scenario:** A specific example of a use case, detailing the steps and interactions that take place when the use case is executed.
- **Use case diagram:** A type of diagram that shows the relationships between actors and use cases in a system.
- **User:** An individual who uses the bookstore website to browse, search, and purchase books.
- **Search bar:** A user interface element that allows the user to enter a search query and initiate a search for books.
- **Search button:** A user interface element that, when clicked, triggers the search function and displays the results.
- **Search query:** The text entered by the user in the search bar, used to find books that match the query.
- **Admin:** A user who has additional permissions to manage the website, such as adding or removing books.

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4. The Elements of User Experience by Jesse James Garrett: <https://jgg.net/elements/>
5. Requirements by Collaboration by Ellen Gottesdiener:
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8. About Face: The Essentials of Interaction Design by Alan Cooper:
https://www.goodreads.com/book/show/7849.About_Face
9. Don't Make Me Think: A Common Sense Approach to Web Usability by Steve Krug:
https://www.goodreads.com/book/show/4085.Don_t_Make_Me_Think

Revision History

Name	Reason For Changes	Version
SRS for Book Store Website	Initial Draft	1.0.0
Dilara Kara	1 – 3.1	1.0.1
Nilhan Topçu	2 - 3 – 3.2	1.0.1
Saadet Begüm Ekmekçi	3.3	1.1
Şule İlkbahar	3.3	1.1
Ceren Erkıayran	3.4 - 4	1.2
Gizem Bulut	3.4	1.2