# A1: Porto's bookshelf

Porto's Bookshelf is a collaborative web project designed to provide users with easy navigation for discovering and purchasing books from our library. Our goal is to create a user-friendly platform that connects book lovers with a diverse selection of titles.

Our motivation for building Porto's Bookshelf comes from a shared passion for literature and a recognition of the need for an online platform that motivates people to read. We envisioned a vibrant literary hub where readers can connect with other readers and discover books through recommendations. This gives an opportunity to create a space that bridges the gap between traditional bookstores and modern online retail.

Porto's Bookshelf serves four types of users: Unauthenticated Users, Authenticated Users, Buyers, and Administrators, each with distinct roles and permissions.

Unauthenticated Users on the website can browse the catalog, search for specific books and authors, and view detailed information, including reviews and ratings. They have the ability to add items to their shopping cart and manage the cart's contents. However, to complete a purchase, Unauthenticated Users must create an account and log in. Additionally, Unauthenticated Users can explore author's profiles, read reviews, and discover all books by a specific author.

Authenticated Users enjoy all the capabilities of Unauthenticated Users , but with added benefits. These users can view their purchase history, manage wishlists, buy the books they wish and leave reviews for books they've bought. Authenticated users can also write reviews on author pages and revisit their order history to track the progress of their purchases or cancel them if needed. Notifications keep them informed about key events, such as payment approvals, changes in order processing stages, the availability of wishlist items, and price changes for items in their cart.

After making a purchase, an authenticated user becomes a Buyer.

Administrators have full control over product management on the platform. They can add new books and authors, update stock information, edit product details, and organize items into categories. Administrators can also access all users' purchase histories and monitor the status of their orders to ensure smooth operations across the site. They are also able to ban users from the website and delete reviews if they break the terms of service.

The platform has implemented a powerful search engine that enables users to find books by filtering through authors, ratings, and genres for a more tailored browsing experience.

# A2: Actors and User Stories

The following sections provide detailed information about our project such as Actors, User Stories and Supplementary requirements.

## 2.1 Actors



*Figure 1. Actors*

| Identifier | Description |
|---|---|
| User | A generic user with access to public information |
| Unauthenticated User | User that can sign up or sign in the website |
| Authenticated User | A registered user who, in addition to performing all user's tasks, can now purchase items, add books to their wishlist, and leave reviews for books and authors. |
| Buyer | An authenticated user that has purchased at least one product and has access to additional information, such as tracking orders or canceling them. |
| Administrator | User responsible for managing user accounts and handling various supervisory and moderation tasks. They can also introduce new features, such as adding new products. |
| OAuth API | External OAuth API that can be used to register or authenticate into the system. |

*Table 1. Actors*

## 2.2 User Stories

**User**

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US01 | View Products List | high | António Ferreira | As a User, I want to be able to view the products list, so that I can choose what product to purchase. |
| US02 | View Product Details | high | António Ferreira | As a User, I want to be able to view the details of a product, so that I know what kind of product I am purchasing. |
| US03 | Add Product to Shopping Cart | high | João Afonso Santos | As a User, I want to be able to add the products I want to buy to the shopping cart, so that I can proceed to checkout. |
| US04 | Manage Shopping Cart | high | João Afonso Santos | As a User, I want to be able to manage my shopping cart, so that I can remove products from it. |
| US05 | Search Products | high | José Ferreira | As a User, I want to be able to search for products, so that I can choose and add them to my shopping cart. |
| US06 | Browse Product Categories | medium | José Ferreira | As a User, I want to be able to browse product categories, so that I can browse my favorite category. |
| US07 | View Product Reviews | medium | João Afonso Santos | As a User, I want to be able to view the reviews of a product, so that I can know if the product is good or not. |

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US08 | FAQ Page | medium | José Ferreira | As a User, I want to be able to view the FAQ page, so that I can clarify some of my questions. |
| US09 | Contacts Page | medium | Félix Miranda | As a User, I want to be able to view the Contacts Page, so that I can contact the website if needed. |
| US10 | About Page | medium | Félix Miranda | As a User, I want to be able to view the About Page, so that I can see the website's description. |

*Table 2. User's User Stories*

**Unauthenticated User**

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US11 | Sign in | high | Félix Miranda | As an Unauthenticated User, I want to be able to sign in into the system, so I can become a member of the website and make a purchase. |
| US12 | Sign up | high | Félix Miranda | As an Unauthenticated User, I want to be able to register myself into the website, so I can authenticate myself into the system. |
| US13 | Sign in using API | low | João Afonso Santos | As an Unauthenticated User, I want to be able to sign in into the system using an external account, so I can become a member of the website and make a purchase. |
| US14 | Sign up using API | low | João Afonso Santos | As an Unauthenticated User, I want to be able to register myself into the website using an external account, so I can authenticate myself into the system. |

*Table 3. Unauthenticated User's User Stories*

**Authenticated User**

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US15 | Log out | high | Félix Miranda | As an Authenticated User, I want to be able to log out of my account, so I can ensure my account is secure when I am not using it. |
| US16 | View Purchase History | high | João Afonso Santos | As an Authenticated User, I want to be able to view my purchase history, so I can see what products I have previously bought and the purchase details. |

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US17 | Checkout | high | Félix Miranda | As an Authenticated User, I want to be able to proceed to checkout, so that I can finish my purchase. |
| US18 | View and Edit Profile | high | José Ferreira | As an Authenticated User, I want to be able to view my profile, so that I can view and edit it if needed. |
| US19 | Track and Cancel Order | medium | José Ferreira | As an Authenticated User, I want to be able to track and cancel my orders, so that I can know the status of the purchase. |
| US20 | Add Product to Wishlist | medium | António Ferreira | As an Authenticated User, I want to add products to my wishlist, so that I can save the products that interest me. |
| US21 | Manage Wishlist | medium | António Ferreira | As an Authenticated User, I want to remove items from my wishlist, so that I can efficiently keep the products I'm keen on buying. |
| US22 | Add and Edit Reviews | medium | José Ferreira | As an Authenticated User, I want to be able to review products and authors, so that I can give recommendations to other readers. |
| US23 | Manage Account Credits | low | João Afonso Santos | As an Authenticated User, I want to be able to manage my account credits, so that I have an easier time during my purchases. |
| US24 | Have Product Recommendations | low | Félix Miranda | As an Authenticated User, I want to have product recommendations, so that I have new ideas of what I should buy. |
| US25 | Manage Multiple Payment Methods | low | Félix Miranda | As an Authenticated User, I want to be able to manage multiple payment methods, so that I can complete my purchases more easily. |
| US26 | Report Review | low | António Ferreira | As an Authenticated User, I want the ability to report reviews, so that I can flag any reviews I find offensive. |
| US27 | Remove Review | medium | António Ferreira | As an Authenticated User, I want the ability to remove my reviews, so that I can delete any feedback I no longer wish to share. |
| US28 | Receive Notifications | medium | João Afonso Santos | As an Authenticated User, I want the ability to receive notifications, so that I can stay updated on important events and updates related to my account and orders. |

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US29 | Comment Reviews | low | José Ferreira | As an Authenticated User, I want the ability to comment on reviews, so that I can share my opinions and engage in discussions with other users. |

*Table 4. Authenticated User's User Stories*

**Administrator**

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US30 | Add Product | medium | António Ferreira | As an Administrator, I want to add items for sale to the shop, so I can expand the inventory. |
| US31 | Manage Product Information | medium | António Ferreira | As an Administrator, I want to update product information in the shop, so I can keep details accurate and relevant. |
| US32 | Manage Product Stock | medium | António Ferreira | As an Administrator, I want the ability to adjust and remove stock in the shop, so I can ensure the inventory is correct. |
| US33 | Manage Product Categories | medium | José Ferreira | As an Administrator, I want to manage product categories in the shop, so I can organize products efficiently. |
| US34 | View User Purchase History | medium | José Ferreira | As an Administrator, I want to view users' purchase history, so I can provide better support and understand user behavior. |
| US35 | Manage Order Status | medium | João Afonso Santos | As an Administrator, I want to modify order statuses, so I can keep customers informed of their order progress. |
| US36 | Ban Users | medium | João Afonso Santos | As an Administrator, I want to ban users who do not follow shop guidelines, so I can maintain a safe and respectful environment. |
| US37 | View Sales Statistics | low | Félix Miranda | As an Administrator, I want to view sales statistics for the shop, so I can assess shop performance and make informed decisions. |
| US38 | Manage Reports | low | Félix Miranda | As an Administrator, I want to view and manage user reports, so I can address issues raised by customers effectively. |
| US39 | Manage Product Discounts | low | Félix Miranda | As an Administrator, I want to manage discounts on products in the shop, so I can offer promotions to attract customers. |

| Identifier | Name | Priority | Responsible | Description |
|---|---|---|---|---|
| US40 | Manage Bans | low | José Ferreira | As an Administrator, I want to manage the users banned from the website, so I can control access and review ban decisions. |

*Table 5. Administrator's User stories*

## 2.3 Suplementary Requirements

Business rules

| Identifier | Name | Description |
|---|---|---|
| BR01 | Unique Credentials | User's credentials, such as email and username, cannot be the same on more than one account |
| BR02 | User Account Deletion | The User cannot delete his account if he has atleast one order to be delivered |
| BR03 | Keep data on banned / deleted accounts | Upon account deletion either by the user or by the administrator, author and product reviews are kept but are made anonymous |
| BR04 | Stock | An authenticated user can only purchase a product if it is available in stock |
| BR05 | Valid Date Sequence | The review date of a product must be greater than the product purchase date |
| BR06 | User comment on own review | The user is not allowed to comment on his own review |

*Table 6. Business rules*

Techinal requirements

| Identifier | Name | Description |
|---|---|---|
| TR01 | Availability | The system must be available 99 percent of the time in each 24-hour period |
| TR02 | Accessibility | The system must ensure that everyone can access the pages, regardless of whether they have any handicap or not, or the web browser they use |
| TR03 | Usability | The system should be simple and easy to use. |
| TR04 | Performance | The system should have short response times to ensure user's attention |
| TR05 | Web application | The system should be implemented as a web application with dynamic pages (HTML5, JavaScript, CSS3 and PHP). |
| TR06 | Portability | The server-side system should work across multiple platforms (Linux, Mac OS, etc.). |

| Identifier | Name | Description |
|---|---|---|
| TR07 | Database | The PostgreSQL database management system must be used, with a version of 11 or higher. |
| TR08 | Security | The system shall protect information from unauthorized access through the use of an authentication and verification system |
| TR09 | Robustness | The system must be prepared to handle and continue operating when runtime errors occur |
| TR10 | Scalability | The system must be prepared to deal with the growth in the number of users and their actions |
| TR11 | Ethics | The system must respect the ethical principles in software development (for example, personal user details, or usage data, should not be collected nor shared without full acknowledgement and authorization from its owner) |

*Table 7. Technical Requirements*

The three most important technical requirements for our online shop would be Security, Availability and Accessibility.

Security is crucial to protect sensitive customer data, including payment details and personal information. Without a robust security system, the online shop could be vulnerable to cyberattacks, resulting in data breaches and a loss of trust.

Ensuring the system is available 99% of the time is vital for customer satisfaction and revenue. Downtime can lead to missed sales opportunities, negatively affecting the business and user experience.

Accessibility ensures that the online shop can reach the widest possible audience, including individuals with disabilities. This not only aligns with ethical standards but also helps expand the customer base, enhancing business growth.

## 2.4 Restrictions

| Identifier | Name | Description |
|---|---|---|
| RE01 | Deadline | The system should be ready to be used at the end of the semester. |

*Table 8. Restrictions*

## A3: Information Architecture

This artifact includes two elements:

1. A sitemap, defining how the information is organized in pages;
2. Two wireframes, defining the functionality and the content for each page.

This presents a brief overview of the information architecture of the system to be developed.
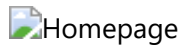
## 1. Sitemap

sitemap.drawio

## 2. Wireframes

The wireframes below show the template and localization of the important interactive elements.

**UI1: Homepage**

Homepage

1. **Access Pages**: FAQ, About, Contact, Shopping Cart, Log in/Register
2. **Search Bar**: Find products easily
3. **Book Navigation**: Left/Right buttons to scroll books, genre filter buttons to refine list
4. **Book Details**: View detailed information about books
5. **Add to Cart**: Add products to your shopping cart
6. **Add to Wishlist**: Save products for later

**UI2: Profile page**
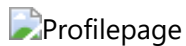
Profilepage

1. **Access Pages**: About Us, Contact Us, FAQ, Shopping Cart, Log out
2. **Edit Profile**: Button to update your profile information
3. **Remove from Wishlist**: Button to remove items from wishlist
4. **Homepage**: Button to return to the homepage
5. **Add Credits**: Add credits to your account

## Revision history

Changes made to the first submission:

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GROUP2462, 06/10/2024

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