

E-Library - Requirements Specification

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1 Introduction

This document is an example of a Software Requirements Specification document which can be imported into Polarion, then exported and re-imported in a collaborative process utilizing the Word Round-trip feature. It is intended for demonstration only.



The document describes a fictitious online eBook lending library with optional eBook online sales component. The focus is on simplicity rather than depth and completeness, that you may more easily understand the Document features.

1.1 Overview of the E-Library System

This system provides an online portal analogous to a public library where registered patrons can borrow books. The main difference is of course that the books in the library catalog are all in electronic formats which incorporate Digital Rights Management (DRM) enabling the system to “lend” an allowed number of copies to registered users. In addition, when a book has the proper rights, the E-Library can sell patrons a license for a personal copy of the electronic book which they can retain permanently.

1.2 Keywords

This document contains keywords which correspond to Severity values in the Polarion system when to document is imported for management by Polarion.

DOCUMENT KEYWORD	POLARION SEVERITY VALUE	MEANING
“MUST_HAVE”	must_have	No release without
“SHOULD_HAVE”	should_have	May slip to next release if time runs short
“MAY_HAVE”	may_have	May be included in release if dependent things are implemented, otherwise will not be included
“OPTIONAL”	optional	May be included in release if time/resources allow, otherwise will be postponed to another release

1.3 Abbreviations and Terms

TERM	DEFINITION
Cart	i.e. “shopping cart” – a collection of one or more eBooks that a patron has marked for purchase during the current session
Catalog	The database of eBooks available for loan and possibly for sale as well
Check Out	The act of “borrowing” an eBook from the library. Term is <i>not</i> used in reference to the process of paying for a purchased eBook (see Purchase)
Check In	The act or “returning” a previously “borrowed” (checked out) eBook.
DRM	Digital Rights Management
eBook	An electronic book or other publication lent or sold by the E-Library system
ISBN	International Standard Book Number
LC	Library of Congress

TERM	DEFINITION
Loan	see <i>Lend</i>
Lend	The process of flagging an eBook so the appropriate DRM understands that one of the allowable number of “copies” has been allocated to a patron for the lending period.
Patron	A user of the E-Library portal
Purchase	The process by which library patrons purchase a DRM license for a personal copy of an eBook. Also the action of a user navigating into the process for purchasing the eBooks listed in their Cart.
Store	An area of the portal that lists a subset of the library’s eBooks, that being eBooks for which users may purchase a license for a personal copy of the eBook.

2 Administration Requirements

This section outlines the main requirements that relate to administration and management of the E-Library system.

2.1 Types of User Accounts and Permissions

DP-2818 - The system must provide for the following types of user accounts:

ACCOUNT TYPE NAME	PERMISSIONS
Administrator	User can access any component or area of the system including accounts of other users
Librarian	User can access the catalog management features of the system
Patron	User can access the general library features, including browsing, searching, check out, check in, reserve, and purchase
Student	Same as a Patron, except may not access Purchase features

[ Must Have]

DP-2819 - The system must provide user management to manage the user role assignments. Each user can have multiple user roles assigned.

[ Must Have]

DP-2820 - It must be possible to

[ Must Have]

2.2 Administration Interfaces

DP-2822 - The system must provide user interfaces for the following roles/functions:

- System Administration – including database management, server management, backups, etc. User type: Administrator
- Catalog Management – all non-technical functionality related to managing eBooks in the library catalog. User types: Administrator, Librarian

[ Must Have]

3 User Requirements

This section outlines the main requirements that relate to the end users who borrow and purchase eBooks from the E-Library.

3.1 Online User Registration

DP-2825 - Users must be able to create Patron or Student accounts by registering online. A suitable registration page or pages should be provided.

[ Must Have]

DP-2826 - New users must go thru a verification process (TBD) to confirm their email address before their account is activated in the system.

[ Must Have]

3.2 User Login/out

DP-2828 - Once verified, users must be able to log in to the portal.

[ Must Have]

DP-2829 - Users must be able to change their password (but not their user name/ID)

[ Must Have]

DP-2830 - There must be a way for users to retrieve a lost password

[ Must Have]

DP-2831 - Users must be able to log out. There must be a session timeout mechanism that will automatically log the user out after a period of time (period TBD).

[ Must Have]

On logout, the contents of user's Select List and Cart are cleared. The contents of the Reserved List is preserved.

3.3 Catalog Search

DP-2833 - Users must be able to search for eBooks

[ Must Have]

The system should provide interfaces for both "simple" and "advanced" searches

- "simple" should be a search on any one of fields *Author*, *Title*, or *ISBN*.
- "advanced" should provide an easy way to construct complex searches on multiple fields with different logic (e.g. AND, OR, NOT)

3.4 Catalog Quick Search

The system should provide several “quick search” options:

- Newest eBooks – returns a listing of the 10- 50 (configurable) most recently added eBooks
- Top 20 Titles – returns a listing of the 20 most frequently borrowed eBooks
 - The actual number should be configurable by an administrator
 - The UI should provide a pick list of values: 10, 20, 25, 50, 100
- Latest Returns – returns a list of 10-50 (configurable) most recently checked-in eBooks
 - Either explicitly checked in by a patron, or lending period expired freeing the eBook for loan

DP-2835 - eBooks listed in this set must not have any reservations... must be available for immediate loan

[ Must Have]

3.5 Catalog Browsing

DP-2837 - Users must be able to browse the eBooks in the catalog

[ Must Have]

DP-2838 - Users must be able to select how they want to browse:

- Browse by Author
 - Must be able to select an alphabetical subset... e.g. author names beginning with A, or M for example
- Browse by Title
 - Must be able to select an alphabetical subset... e.g. author names beginning with A, or M for example
- Browse by genre (e.g. fiction, non-fiction, science fiction, etc.)

[ Must Have]

3.6 Advanced Catalog Browsing

Users should be able to browse by Publisher

Users should be able to browse by Book Award

Users should be able to browse according to a combination of data, such as by *Author + Genre*, *Title + Year of Publication*, *Author + Book Award*, etc.

3.7 Create Select List

The Select List is similar to a shopping cart except that the checkout processes a loan of the eBooks in the list rather than a purchase.

DP-2841 -

- Each user must be able to save a list of eBooks they want to borrow – their “Select List”
- The Select List is only for the current session and is cleared when the session terminates
- Each eBook added to the Select List remains in the list for 20 minutes. During this time, the number of

copies available for loan is reduced by 1 and the number available is shown to other users.

- If the time expires and the eBook is removed from the Select List, then the number of copies available for loan is increased by 1 and the number available is shown to other users.
- The number of eBooks user may add to their Select List is limited to the checkout limit defined in the system configuration minus the number of eBooks patron has currently checked out.
 - If user currently has the maximum number checked out, then all *Add to Select List* links should be disabled for that user.
- If all copies allowable under the eBook's DRM are currently on loan to other users, then the eBook cannot be added to any user's Select List (the UI widget is disabled) and the UI must inform the user that no copy is currently available for loan.

[ Must Have]

3.8 Check Out eBooks

User should be able to navigate to Check Out any time via a readily visible link or button

DP-2843 - The checkout page must display the eBooks in the user's Select List

[ Must Have]

DP-2844 - The user must be able to remove eBooks from the Select List at this point

[ Must Have]

Via an appropriate UI widget, user should be able to execute check out which processes on all the eBooks left on the Select List.

DP-2845 - When checkout is complete, user must be presented with a page of the checked out titles, each title having a DOWNLOAD widget. Clicking the widget downloads a copy of the eBook with appropriate DRM applied.

[ Must Have]

Each checked out eBook should remain listed on the user's Downloads page until the loan period expires.

3.9 Explicit eBook "Return"

DP-2847 - Users must be able to "return" any eBook on their Downloads page that has not yet been downloaded via an appropriate "RETURN THIS EBOOK" widget.

[ Must Have]

DP-2848 - Executing the return must remove the eBook from the user's downloads page, decreases the count of eBooks the user currently has checked out (if that value is greater than zero), and increases by 1 the number of copies of the eBook available for loan.

[ Must Have]