

Software Requirements Specifications
for
Project “BookExpress”

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Document History

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Chapter 1

Product Purpose

To handle the addition of new books and the distribution in a better way, "BookExpress" asked us to develop an IT solution to optimize the idle time and labour usage by getting rid of the current, deprecated system. Furthermore one important goal of the software solution is to be very user friendly and easy to use; also there should be remote access implemented, so several customers can access the software at once and distribution partners can access and keep their book stock up to date.

1.1 Obligatory Requirements (“must have”)

1.1.1 Communication with Publishers

The direct connection between the **publishers** and BookExpress shall be implemented by providing a web interface for the publishers.

- As each publisher also has a PIN, it will be used as the account name for the interface.
- The web interface has to provide the following features for the publisher: maintain the book database (add books, remove books, edit book data), edit their personal data, view statistics on how often which books are bought
- The interface has to be comfortably accessible from mobile devices as well, the data that is transmitted should be minimal

1.1.2 Communication with Customers

The direct connection between the **customers** and BookExpress shall also be implemented by providing a web interface for the customers.

- As each customer already has a unique identifier, the PIN, we will use it as an account name for the login.
- The web interface has to provide the following features: view catalogue and stock, submit orders, view the current state of their orders and cancel them (if they haven't been shipped yet)
- The system has to assign a unique ID to each order, ideally incorporating the PIN of the customer
- The interface has to be comfortably accessible from mobile devices as well, the data that is transmitted should be minimal

1.1.3 Internal Administration

The employees of BookExpress shall be provided a web interface as well.

- Each employee will get a unique user ID to log into the web interface. Ideally, this will be formatted along the lines of surname.name or something similar.
- The web interface must provide the following features for the employees: processing, editing and cancellation of submitted orders, directly contact the customers and publishers as well as the truck fleet and the warehouse
- Furthermore, the underlying system shall generate logfiles with login times, error codes and statistics (e.g. which books are ordered the most and by whom) for the publishers and the accounting and IT department / tech support.
- The interface has to be comfortably accessible from mobile devices as well, the data that is transmitted should be minimal

1.1.4 Support

- The system should be as automatic as possible - we need a good, user-oriented manual.
- Additionally, a context-sensitive help tool has to be implemented in the interface itself.
- Moreover, As we want to make sure that the system is as reliable as possible, we will need a dedicated support team that is available 24/7 and can be dispatched in less than 2 hours to fix critical issues.

1.2 Optional Requirements (“nice to have”)

- Book Stores should be able to save recurring orders
- Book Stores should be notified when the delivery of their order is imminent

1.3 Non-Requirements (“need not have”)

- The software should not allow final customers to buy books. It is only intended for retailers.
- Moreover, invoices are generated elsewhere, as well as financial reports, so the system should not interfere with that.

Chapter 2

Product Environment

The Product takes the orders from the book stores and files them into the system, so that they can be prepared for shipping. For different sized book stores there should be several account types with separate functionality and different options for packaging and ordering. The targeting groups of the software solution are the book store owners(our consumers), the assistants of "BookExpress" and the distribution partners.

2.1 Application Area

The new IT system should replace the old system and provide administrative and commercial functions to relieve the employees of unnecessarily complex administrative tasks. Certain processes can be handled without any interaction at all, e.g. if a book runs low in stock, the system will automatically order new copies from the publisher.

2.2 User Groups

- BookExpress commercial employees
- BookExpress IT employees
- Publishers
- Book Stores

2.3 Operating Conditions

Chapter 3

Product Overview

The products environmental diagram.

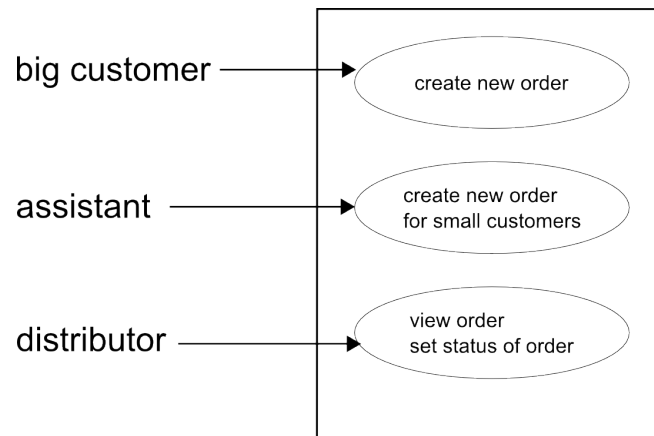


Figure 3.1: The environmental view of the product

Chapter 4

Product Functions

4.1 Internal

4.1.1 Employees of “BookExpress”

/PF10/	Process	Register Publisher or Book Shop (client)
	Actor(s)	BookExpress employee
	Category	
	Description	A Book Express employee creates an account for a book shop or publisher after both business partners have signed a contract handling the business relations.
	Goal	The contract partner should have an account to log into the Software. After registration through the Book Express employee, the contract partner will be send a verification and its account information via email.
	Preconditions	Contract signed
	Postcondition success	Successfully created account
/PF20/	Postcondition failure	Unsuccessful in creating an account
	Trigger Sequence	Menu option "register new client" (Software) Input relevant data and contractor details into the managements system Save the signed contract on the server Register a new client by creating a new ClientID in the database Send verification and account information to the contractor
	Process	Edit client information
	Actor(s)	BookExpress employee
	Category	
	Description	The clients data is outdated and needs to be updated
	Goal	Client data is updated
	Preconditions	Client exists in database
	Postcondition success	Client data is updated and a notification mail is sent to the client.
	Postcondition failure	Client data is not updated but rolled back to the previous state. Notification with problem report is shown to the employee.
	Trigger Sequence	Menu option "edit client data" (Software) Menu option "edit client data" Edit specific data Submit edited data to the server

/PF/	Process	Delete client
	Actor(s)	BookExpress Employee
	Category	
	Description	Client gets deleted due to resignation of the contract
	Goal	Delete client from the system
	Preconditions	Client exists in database
		Contract is being resigned by one of the contractors
	Postcondition success	Client is deleted from the system
	Postcondition failure	Client could not be deleted because of existing orders
	Trigger	Menu option "delete client" (Software)
	Sequence	Choose client
Check if client is deletable (i.e. no existing orders)		
Send notification mail to client		
Delete client		
/PF/	Process	Client places order (via telephone)
	Category	
	Actor(s)	BookExpress employee, client
	Description	A client orders book via telephone
	Goal	Order is placed in an order queue
	Preconditions	Client exists in database
		Client is authorized
	Postcondition success	Order is placed in an order queue
	Postcondition failure	-
	Trigger	Client initiates order process by calling an BookExpress employee BookExpress employee triggers manual order process
	Sequence	BookExpress employee selects client in Software
BookExpress employee enters ordered book into the system		
Order is placed in order queue		
Order notification containing detailed report is sent to client		

/PF/	Process	Validate order
	Category	
	Actor(s)	System
	Description	Order is checked for validation
	Goal	The software checks every order for validation and confirms it to the client. BookExpress knows about every orders validation status.
	Preconditions	Order is in order queue
	Postcondition success	Client receives a confirmation email
	Postcondition failure	Client receives a problem report about invalid order
	Trigger	Order was placed and exists in order queue
	Sequence	System gathers details and checks whether order is valid or not System sends mail to client
/PF/	Process	Check stock
	Category	
	Actor(s)	System/BookExpress employee
	Description	The system checks whether the amount of books, which the client orders, is available or nearly out of stock.
	Goal	Check succeeds
	Preconditions	Order is placed or BookExpress employee initiates check
	Postcondition success	Books which are nearly out of stock get displayed as a list
	Postcondition failure	-
	Trigger	Stock check is initiated
	Sequence	Check

/PF/	Process	Forward order to Logistics
	Category	
	Actor(s)	System
	Description	A validated order gets forwarded to Logistics
	Goal	Logistics proceeds processing the order
	Preconditions	Order is valid
	Postcondition success	Logistics processes delivery
	Postcondition failure	Order could not be forwarded to Logistics
	Trigger	Order is validated
	Sequence	Send order information/details to Logistics

4.2 External

4.2.1 Book Stores ("Clients")

/PF/	Process	Client places order (via web interface)
	Category	
	Actor(s)	Client
	Description	Client places an order via the web interface of BookExpress
	Goal	Order is placed
	Preconditions	Client is successfully logged into the web interface Connection to BookExpress server is established
	Postcondition success	Order is delivered to BookExpress and added to the order queue
	Postcondition failure	Order is saved as draft and client gets a notification
	Trigger	Menu Option "create new order" (Web interface)
	Sequence	Client adds books to order (via book search or ISBN) Client specifies amount for every book Client submits order to server Order is in the order queue

/PF/	Process	Search for a book
	Category	
	Actor(s)	Client
	Description	Client searches for a book to add it to his order
	Goal	Searching for a book succeeded
	Preconditions	Client is logged into the system
	Postcondition success	Book is being found
	Postcondition failure	Display items and options Book could not be found
	Trigger	Display notification
	Sequence	Menu option "find books" (Software) Enter ISBN/title/author/genre in search bar Hit the "Search"-Button Choose book from list to add it to the order

4.2.2 Publishers

Chapter 5

Product Data

5.1 Customer Data

5.1.1 Book Stores

5.1.2 Publishers

5.2 Order Data

5.3 Internal Data

Chapter 6

Product Performance

Chapter 7

Quality Requirements

Quality	very good	good	normal	irrelevant
Functionality	X			
Reliability	X			
Usability			X	
Efficiency		X		
Modifiability			X	
Portability				X

Chapter 8

User Interface

8.1 Client Application (for clerks)

8.2 Web Interface (for customers)

Chapter 9

Non-Functional Requirements

Chapter 10

Technical Product Environment

10.1 Software

10.2 Hardware

10.3 Orgware

10.4 Interfaces (product)

Chapter 11

Special Requirements for the Development Environment

11.1 Software

11.2 Hardware

11.3 Orgware

11.4 Interfaces (development)

Chapter 12

Subproducts and Subsystems

12.1 Server

12.2 Web Interface / Web Service

12.3 Client Application

Chapter 13

Additional Specifications and Stipulations

Chapter 14

Appendices