Software Requirements Specifications
for
Project "BookExpress"

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Contents

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 Book Store

BLABLABLABLA Personal Identification Number (PIN) BLUB! light-emitting diode (LED)

1.2 Optional Requirements ("nice to have")

1.3 Non-Requirements ("need to have")

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

2.2   User Groups

2.3   Operating Conditions

Chapter 3

Product Overview

The products environmental diagram.
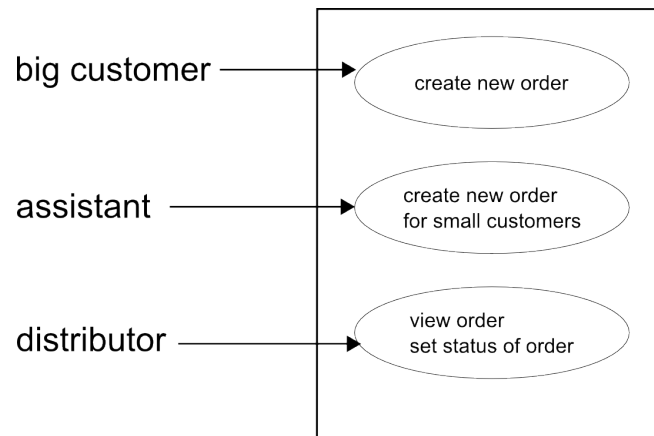
Figure 3.1: The environmental view of the product

Chapter 4

Product Functions

4.1 Internal

4.1.1 Employees of "BookExpress"

/PF/		
	Process	Register Publisher or Book Shop
	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
	Postcondition failure	Unsuccessful in creating an account
	Trigger	Menu option "register new client" (Software)
	Sequence	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

/PF/	**Process**	Update account 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	Menu option "Update client information" (Software)
	Sequence Edit specific data	
		System checks correctness of data (e.g. mail format etc.)
		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 Category**	Client places order (via telephone)
	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 Category**	Validate order
	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 Category**	Stock Update
	Actor(s)	System/BookExpress employee
	Description	The employee in charge of the stock checks the availability of all books and updates the stock accordingly.
	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 if a book is available in an sufficient amount
		Make a list of all books which need to be ordered
		Submit list to system

/PF/	**Process Category**	Forward order to Logistics
	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

/PF/	**Process**	Deliver order
	Actor(s)	System
	Category	
	Description	The order is send to the book store
	Goal	Deliver ordered books
	Preconditions	Order is valid
		Books are available in stock
	Postcondition success	Order is marked as sent
	Postcondition failure	Order could not be marked as sent
	Trigger	Forward order to Logistics
	Sequence	Check if books are in stock
		Receive book store information
		Sent order to book store
		Mark order as sent

/PF/	**Process**	Confirm delivery
	Actor(s)	Employee (Logistics)
	Category	
	Description	Logistics confirms the correct delivery of an order
	Goal	Delivery is successful
	Preconditions	Order is marked as sent
	Postcondition success	Order is marked as delivered
	Postcondition failure	Order could not be marked as delivered
	Trigger	Deliver order
	Sequence	Get delivery status
		Mark order as delivered if delivery status is "successfully delivered"

/PF/	Process	BookExpress Order
	Actor(s)	BookExpress employee
	Category	
	Description	The Employee orders a number of books from the publisher
	Goal	Order books from a publisher
	Preconditions	need for new books
	Postcondition success	Books are ordered and publisher gets an notification mail
	Postcondition failure	-
	Trigger	BookExpress employee initates an order
	Sequence	Select books from list or search TODO /PF/ Submit list to publisher

/PF/	Process	Create an invoice
	Actor(s)	System
	Category	
	Description	The system creates an invoice after TODO /PF/ order is valid
	Goal	Documenting order and deliver it with invoice
	Preconditions	Order is valid
	Postcondition success	Invoice successfully created
	Postcondition failure	Invoice could not be created
		Check information about order
	Trigger	Order is valid TODO /PF/
	Sequence	Create an entry in database
		List the ordered books with price
		List tax to invoice

/PF/	**Process**	Send invoice
	Actor(s)	System
	Category	
	Description	The invoice is send to the book store via mail
	Goal	Inform the book shop
	Preconditions	Successful created invoice
	Postcondition success	Book store receives a notification mail
	Postcondition failure	-
	Trigger	Creation of an invoice
	Sequence	Get invoice
		Send invoice to book store

/PF/	**Process**	Backup
	Actor(s)	System
	Category	
	Description	A backup of the complete databases must be done. This should happen periodically and save all data on a server.
	Goal	In case of a crash, every data must be saves as a preventative backup
	Preconditions	Server for the backup
	Postcondition success	Successful backup in periodical intervals
	Postcondition failure	A notification will be send to the administrator of the system
	Trigger	Configured time to start a backup
	Sequence	Start Backup
		Place backup on the backup server

4.2 External

4.2.1 Book Stores and Publishers

/PF/   **Process**   Login
                 Actor(s)   Book store/publisher
                 Category
                 Description   The user logs on with his PIN and password
                 Goal   Provide a fully functional system to the user
                 Preconditions   Existing account
                 Postcondition success   Successful login
                 Postcondition failure   Unsuccessful login caused by a wrong PIN or password
                 Trigger   Menu Option "Login"
                 Sequence   Enter PIN
                                     Enter password
                                       Validity of data is checked by the System
                                       Login successful or display an error message in case of unsuccessful login

/PF/   **Process**   Update account information
                 Actor(s)   Book store/publisher
                 Category
                 Description   The user is able to edit/update its account information (e.g. address, correspondent etc.)
                 Goal   User is able to update changes
                 Preconditions   User is logged on
                 Postcondition success   Updating the account succeeded
                 Postcondition failure   Updating the account failed
                 Trigger   Menu option "edit
                 Sequence   Edit specific data
                                       System checks correctness of data (e.g. email format etc.)
                                       Submit edited data to the server

/PF/	**Process**	Logout
	Actor(s)	Book store/publisher
	Category	
	Description	User logs out
	Goal	User is logged out
	Preconditions	User is logged in
	Postcondition success	Successful logout
	Postcondition failure	Unsuccessful logout caused by an abort of the user
	Trigger	Menu option "Logout"
	Sequence	User confirms to log out
		The system terminates the current session

4.2.2 Book Stores ("Clients")

/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
		Display items and options
	Postcondition failure	Book could not be found
		Display notification
	Trigger	Menu option "find books" (Software)
	Sequence	Enter ISBN/title/author/genre in search bar
		Hit the "Search"-Button
		Choose book from list to add it to the order

/PF/	**Process Category**	Book Store Order
	Actor(s)	Book Store Employee
	Description	The Book Store orders a book from BookExpress. This can either happen through a constant connection where every order is individually processed or the store can choose to collect orders internally and send them as one big order every day.
	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**	Change order
	Actor(s)	Book store
	Category	
	Description	As long as the order is not validated, the user can change information
	Goal	User can correct an order
	Preconditions	Order exists and user is logged in
	Postcondition success	Order information successfully changed
	Postcondition failure	Order information could not be changed because the order is already being validated
	Trigger	Menu option "Change order"
	Sequence	Select order to be changed
		System checks validity status of the order
		If not validated, user can change order information
		Submit changes to the System
		User receives a confirmation mail

/PF/	**Process**	Cancel Order
	Actor(s)	Book Store Employee
	Category	
	Description	The employee at the book store can cancel the order if it hasn't been shipped yet
	Goal	Current orders can be cancelled
	Preconditions	Order exists
	Postcondition success	Order successfully cancelled. Book Store receives a confirmation mail
	Postcondition failure	Book Store receives a problem report
	Trigger	Menu option "cancel order"
	Sequence	Select order to cancel
		Check whether order isn't shipped yet
		Cancel order

/PF/	**Process**	Tracking System
	Actor(s)	Book Store Employee
	Category	
	Description	The employee at the book store can look up at which stage his order is right now, e.g. processing or shipping to BookExpress/the book store.
	Goal	Look up order information/status
	Preconditions	Order exists
	Postcondition success	Employee receives information/status of order
	Postcondition failure	-
	Trigger	Menu option "tracking system"
	Sequence	Select order to track

4.2.3 Publishers

/PF/	**Process**	Inventory maintenance
	Actor(s)	Publisher
	Category	
	Description	Publishers can update their inventory list (i.e. the list of available books) either via mail or using the direct connection over the web-based interface.
	Goal	Updated inventory list
	Preconditions	Publisher exists
	Postcondition success	Send success mail to publisher
	Postcondition failure	Send problem report to publisher
	Trigger	Menu option "inventory maintenance" (Software) or via mail
	Sequence	Edit inventory list (i.e with TODO book search) Submit list to server

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