Software Requirements Document:

Software: "Book Store 4.0"

1 Introduction

1.1 Purpose

The creation of an online shop, to digitize the sales process. It enables the possibility that people can buy books online.

1.2 Scope

The software product will be an online platform. This online platform provides the book store's customers the chance browse the book store's available books online and to buy them.

1.3 Definitions, acronyms, and abbreviations

ISBN: International Standard Book Number

BBS: best book shop (the system that has to be implemented)

1.4 References

Letter from the customer (Tutorial 2)

Letter from the customer (Tutorial 3)

1.5 Overview

This SRS is categorized in three chapters. The first chapter gives an introduction, which defines the purpose of the system and the scope of the software product. Furthermore, the introduction defines abbreviations and lists relevant definitions. The second chapter of this SRS is a non-formalised overview of the software at hand. It corcerns itself with a rough description of the software product that will be delivered to the customer. The third chapter lists the specific requirements according to the IEEE-Standard and gives an illustration of the system with the help of a use-case diagram and a sequence diagram.

2 Overall description

2.1 Product perspective

The book store owner wants a simple online system. There is no demarcation between the BBS and existing products on the market.

2.2 Product functions

The product helps the book store's customers to buy books online within the whole purchase. The system lists all books from the inventory online. The system provides a shopping cart, so that the system does not forget the buyer's selection. The system is able to take transactions and to deal with them, so that the payment will be processed online. The system provides a billing function to the user. The system also updates the inventory after each successful transaction.

2.3 User characteristics

Users are ordinary people with balanced computer skills. The system will be used by customers and an administrator who knows well about the system.

2.4 Constraints

The developer is prohibited from the usage of real customer data. Thus, he has to use test data.

2.5 Assumptions and dependencies

The book shop already got a website, but the website is not equipped with the possibility to browse the available books online or to buy them online.
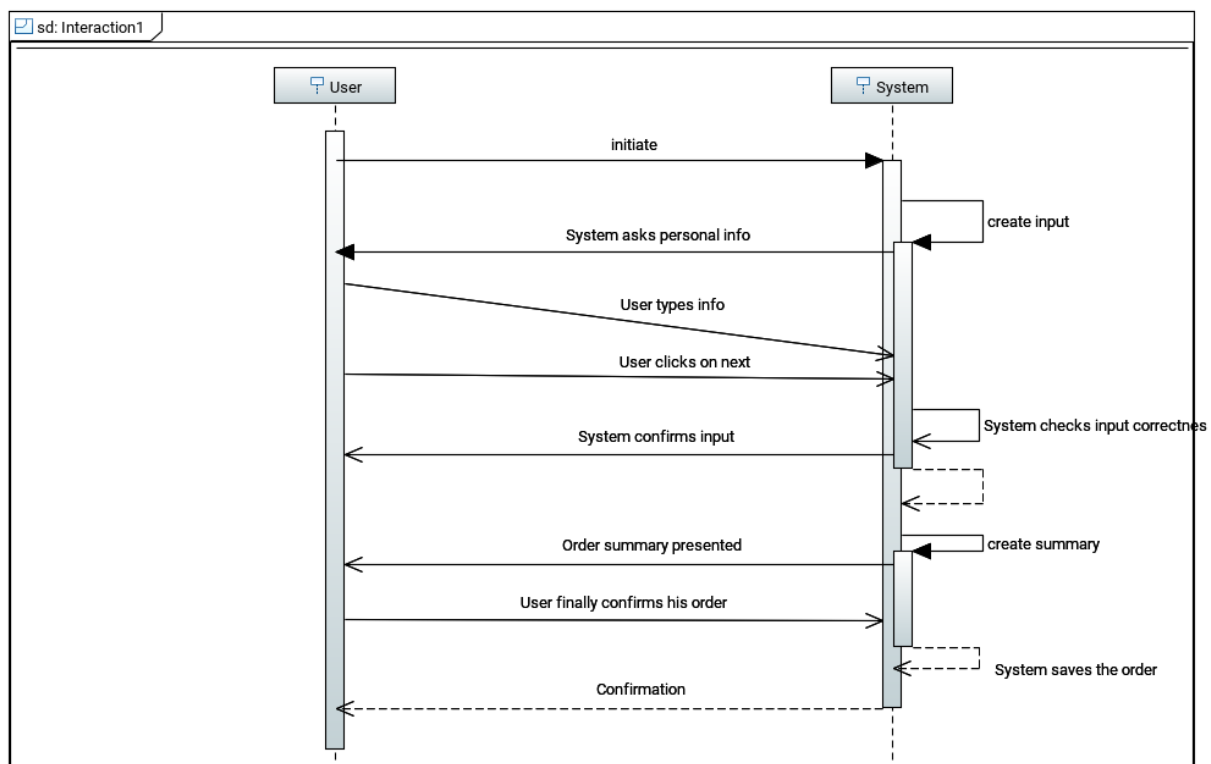
2.6 Apportioning of requirements

The whole system will not be associated with the delivery of the books by drones.

The next version shall be equipped with a login function for the customers.

3 Specific requirements

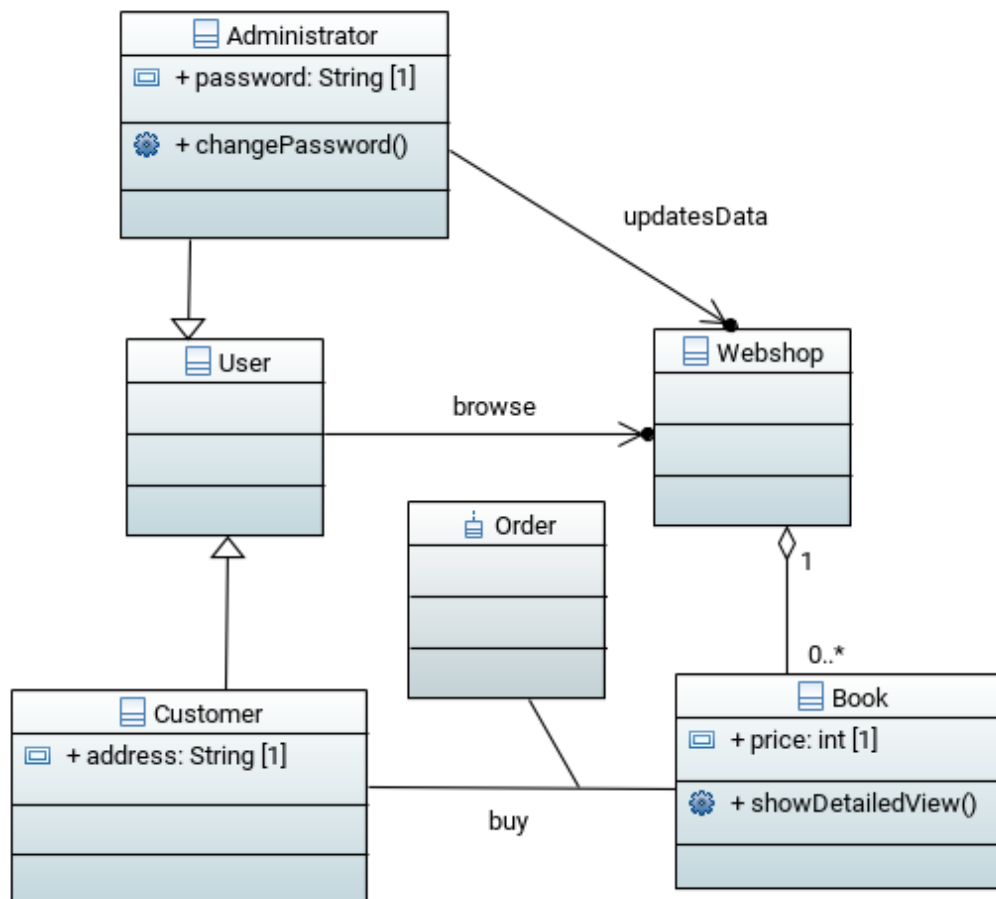## 3.1 External interfaces

- Sequence Diagram

The sequence diagram describes the purchase process with the newly created software. In this process, the user firstly has to enter his personal information, e.g. his name and the location to which the books are meant to be delivered. The user enters his personal information and the system replies with a confirming dialogue. The system then checks the input for any syntactical errors. If no errors occur, the system asks for confirmation before the

process continues. The user continues in the process by pressing the next-button. Afterwards, the system presents the user a summary of his order and his input, linked up with a buy-button. The user clicks on the buy-button and confirms his order. The system confirms the order and the user gets feedback from the system.

- Use Case Diagrams

The use case diagram describes the usage of the system by the user. The user firstly visits the website. Then he has the option to either search for his books or scroll down the list and take a closer look at one item. In the detailed view, the user has the option to add the item into the shopping cart. The user is optionally able to edit his shopping cart by adding more items into it or by removing items out of it. When the user has added every item that he wants to buy into the shopping cart, he can begin to order his selection (refer to sequence diagram).

Administrator
- + password: String [1]
- + changePassword()

User

Webshop

Order

Customer
- + address: String [1]

Book
- + price: int [1]
- + showDetailedView()

updatesData

browse

buy

1

0..*

- Class Diagram

The class diagram located above depicts the interaction between parts of the systems and its users, respectively. Moreover, it coarsely visualises the intended structure of the final product. The web shop comprises a collection of books. Each book has a detailed view, which can be triggered. As of yet, two types of users have been identified: the regular customer and the administrator. Both are able to browse through the current inventory, either for making a purchase or performing maintenance. A customer is able to buy books by placing orders. Moreover, a customer possesses an address, to which the ordered book will be delivered. Access tot he administrator's permissions is blocked by a password. This password can be changed by him, whenever he is logged it. Despite this ability, an administrator can perform maintenance work on the inventory, mainly consisting of updating data, such as the current amount of books, which are possessed by the book store, or by removing books from the database entirely.

3.2 Functions

R1: NeedsMainView

Function: The system shall have a main view

Description: Since the system is build up on a website, a homepage or main view is necessary in order to enable the user to interact with it.

Source: Initial email-text from customer.

Dependency: -

R2: ListingInMainView

Function: The main view shall provide a list of items on a website.

Description: The user is able to scroll through that list of items and browse them. An item in the main view consists of relevant information for the book. Relevant information is: ISBN, title, author, available amount, price, picture. Items in the list shall be clickable. If the user clicks on an item then a detailed overview of that item appears.

Source: Initial email-text from customer.

Dependency: R1

R3: ShoppingInMainView

Function: The main view shall provide a shopping cart for the items

Description: If the user clicks on the shopping cart button, then a pop-up will appear. This pop-up consists of a text and an OK-Button. If the shopping cart is not empty, the text is replaced by a scrollable listing. Each entry of the listing consists of two related elements: The first element is an item that the user has added into the shopping cart. The other element is a remove-Button. Both are clickable. A click on the first element leads to the detailed view of the item. A click on the second element removes the item from the shopping cart. A click on the OK-Button closes the pop-up. If the shopping cart is empty, the pop-up's text conveys this information to the user.

Source: Initial email-text from customer.

Dependency: R1

R4: DetailedViewInformation

Function: The detailed overview shall consist of an abstract of that item, a short biography of the author, the relevant information for that item, an Add-button and a Buy-Button.

Description: A click on the Add-button opens a pop-up. This Pop-up shall contain a text and an OK-Button. The text reads that the item has been successfully added into the shopping cart. A click on the OK-Button closes the pop-up. If the shopping cart is empty, then a click on the buy button is not possible. If the shopping cart is not empty, then the user can click on it. A click on the buy-button initiates the purchase process.

Source: Initial email-text from customer.

Dependency: R3

R5: LegalEnquiries

Function: The main view has a link to the imprint, privacy policy and the terms of use of the book store.

Description: -

Source: Initial email-text from customer.

Dependency: R1

R6: SearchFunctionInMainView

Function: The main view shall provide a search function within the website

Description: A user can use the search function to browse the items according to one or more of the following criteria: ISBN, Title, and Author

Source: Initial email-text from customer.

Dependency: R1

R7: BuyButtonInMainView

Function: The main view shall have a Buy-Button

Description: If the shopping cart is empty, a click on the buy button is not possible. If the shopping cart is not empty, the user can click on it. A click on the buy button initiates the purchase process.

Source: Initial email-text from customer.

Dependency: R1

3.3 Performance requirements

R8: PerformanceAddingItems

Function: The time for adding an item into the shopping cart by clicking on the respective button shall take at most 5 seconds

Description: -

Source: Initial email-text from customer.

Dependency: -

R9: PerformanceQueryResult

Function: Results for each query shall be given after at most 5 seconds

Description: -

Source: Initial email-text from customer

Dependency: -

3.4 Logical database requirements

R10: DatabaseNeeded

Function: The system shall have a database

Description: -

Source: R7

Dependency: -

R11: SavesOrdersInDatabase

Function: The system saves the order with the books that are inserted into the shopping cart and the respective address of the customer

Description: -

Source: R7

Dependency: R2

3.5 Design constraints

No design constraints are given

3.6 Software system attributes

- Reliability

  R12: ReliabilityBuyButtonPurchaseProcess

  Function: 99% of all clicks on the Buy-Button initiate the purchase process

  Description:

  Source: Initial email-text from customer.

  Dependency: -

- Availability

  R13: AvailabilityOfSystem

Function: The system shall have an availability of 99,99% over the course of the year

Description:

Source: Initial email-text from customer.

Dependency: -

- Security
- Maintainability
- Portability

3.7 Organizing the specific requirements

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3.8 Additional comments

4 Project Time Schedule

The book store owner wants a simple online system. There is no demarcation between the BBS and existing products on the market.

Week/Final Date	Event/Tasks
25.5.- 1.5.	Write SRS, decide on Chef
2.5.	**Release SRS**
2.5.- 8.5.	distribute tasks, decide on design
9.5.- 15.5.	start building, finalize SW Specification
16.5.- 22.5.	initial database set up, communication with software
22.5.	**Milestone 1: First Draft, a number of implementations are functional**
23.5.- 29.5.	Buy Button implemented
30.5.- 5.6.	Search Function implemented
6.6.- 12.6.	Shopping Visualization functional
12.6.	**Milestone 2: Prototype is working, software is able to meet the primary expectations**
13.6.- 19.6.	Database and software functionalities fully integrated
20.6.- 26.6.	First Customer Tests
27.6.- 3.7.	1st Revision
4.7.- 10.7.	Second Customer Tests
11.7.- 17.7.	2nd Revision, Optimization
17.7.	**Milestone 3: All functionalities are implemented and successfully tested.**
18.7.- 24.7.	Prepare presentation and usage examples
25.7.	**Final Presentation**