**Texas State On-line Bookstore Website**

**(BookFinder)**

**Software Requirements Specification**

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**1.INTRODUCTION**

**1.1 Purpose**

The purpose of this Software Requirement Specifications (SRS) document is to provide a detailed overview of our software product i.e. **BookFinder**, and goals. The audience of this SRS will be the Software customers to accurately describe what they wish to obtain, Software suppliers to understand exactly what the customer wants, and the technical professionals developing the software.

**1.2 Scope**

The scope of this project is to create and implement a website for the Texas State University Bookstore named BookFinder. The website will be used primarily by Texas State students and allow users to create and maintain individual accounts, search the Texas State Bookstore database for textbooks, and purchase books online with credit cards. It is easier, quicker, and more convenient to purchase Books from BookFinder.

**1.3 Definitions, Acronyms and Abbreviations**

The various Definitions, Acronyms and Abbreviations used in the document are:

|  |  |
| --- | --- |
| **BookFinder** | Name of the website |

**1.4 References**

Material used as reference for creating the SRS document are:

[1] IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements and Specifications.

<https://standards.ieee.org/findstds/standard/830-1998.html>

[2] R.S Pressman, Software Engineering-A Practitioner’s approach, R.S Pressman and Associates, Inc., 1996.

**1.5 Overview**

The remaining sections of the SRS document is organized as follows:

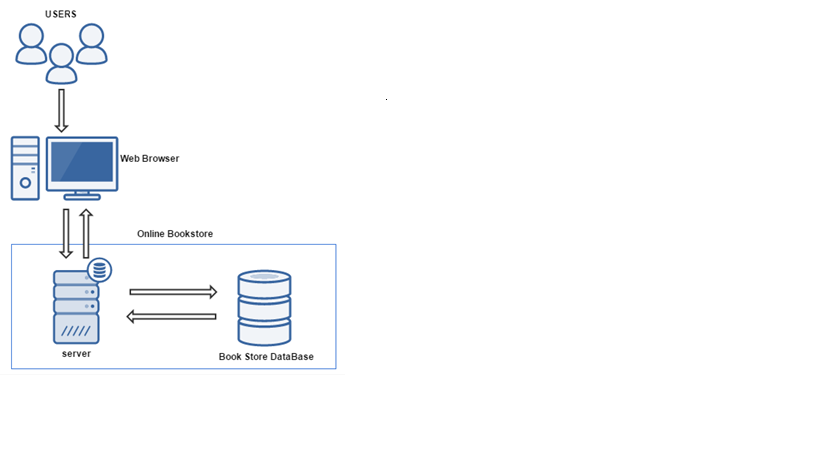
* **Section 2** introducesOverall description of the project.
* **Section 3** cites functional and non-functional requirements.

**2.OVERALL DESCRIPTION**

**2.1 Product Perspective**

BookFinder is an independent and totally self-contained web application.

* The BookFinder will interact with the Bookstore’s database, which stores the quantity of books available for sale and their details in the database.

****

**2.2 Product Functions**

The following list of function descriptions explains the major features of the BookFinder.

**2.2.1 Account Registration**

**2.2.1.1 Description: The registration function shall allow users to create accounts.** To set up an account the users should provide their name, mailing address, billing address, credit card type (Visa, MasterCard), credit card number, expiration date, username, and password.

***Rationale:*** This allows users to create a secured account with username and password. This also offers convenience so the user only has to enter the information listed above once and then it is stored in the account.

**2.2.2 Account Login**

**2.2.2.1 Description: The account login function shall allow account members to enter their username and password.** Once the username and password are verified, users will be able to access account history, purchase books on-line, and update their account information.

***Rationale:*** This provides security to the account member by setting up an account that is password protected.

**2.2.3 Search**

**2.2.3.1 Description: The search function shall offer users the ability to search for books by title, author, subject, course number, professor, or ISBN number.** Once the book is located in the database, a picture of the front cover will display along with title, author, price, availability and condition of book.

***Rationale:*** This offers easy access to find a book if you do not know the title and gives purchasing information.

**2.2.4 Add to Shopping Cart**

**2.2.4.1 Description: The add to shopping cart function shall allow users to temporarily save books in a placeholder that are being considered for purchase until finished shopping.** This function utilizes the balance calculator function to display total price of the books in the cart. A page should display with the items in the shopping cart along with the total amount.

***Rationale:*** This offers easy access to find a book if you do not know the title and gives purchasing information.

**2.2.5 Balance Calculator**

**2.2.5.1 Description: The balance calculator function shall calculate the total balance of the books in the shopping cart and give that information to the checkout function.** A page should display with the items in the shopping cart along with the total.

***Rationale***: This enables users to know how much they are spending at any point in their shopping process.

**2.2.6 Delete from Shopping Cart**

**2.2.6.1 Description: The delete from shopping cart function shall remove any unwanted books from the cart.**

***Rationale***: This allows users to change their orders easily and not be forced to purchase books that are no longer of interest.

**2.2.7 Checkout**

**2.2.7.1 Description: The checkout function shall allow account members to purchase books on-line securely.** After the books, have been purchased with the credit card on file, a confirmation number will appear to confirm the transaction is completed.

***Rationale***: This offers easy purchasing and added assurance with the confirmation number.

**2.2.8 Contact Us**

**2.2.8.1 Description: The contact us function shall display the store address, store telephone number, store email address, and directions on how to get to the store.** A page should display with text of the information listed above along with graphics for the map.

***Rationale***: This helps the user gain trust in the bookstore by showing that it is easy to have person-to-person contact with a **TSU Bookstore** employee.

**2.2.9 Update Account Information**

**2.2.9.1 Description: The update account information function shall give account member access to edit their information.** They can modify name, mailing address, billing address, credit card type (Visa, MasterCard), credit card number, expiration date, username and password.

***Rationale***: This offers convenience to the account members by allowing changes to account information immediately.

**2.2.10 View Purchase History**

**2.2.10.1 Description: The view account purchase history function shall allow account members to see previous purchases made under the account.** The information that is required is date of purchase, credit card type, credit card number, expiration date, title of books, prices of books, and total amount of purchase.

***Rationale***: This offers convenience to the account members by allowing them to easily view purchase history.

**2.2.11 Help**

**2.2.11.1 Description: The help function shall give the user an overview of how to use the different functions listed above.**

***Rationale***: This allows the user to get answers to immediate questions on using the website.

**2.2.12 Account Logout**

**2.2.12.1 Description: The account logout function shall allow account members to exit their account for security purposes.**

***Rationale***: This allows account members to exit their accounts.

**2.3 User Characteristics**

Users must know how to navigate in a website and should possess a minimal educational level which conforms to Texas Stateentrance standards.

**2.4 Constraints**

The constraints on the services and functions of the system are as follows:

* Product cannot consist of more than 1GB.
* Database searches can take no longer than 10 seconds.

**2.5 Assumptions and Dependencies**

As the BookFinder website is only accessible through the Internet, it is necessary to have an Internet connection. It is assumed that the user has a web browser which is able to display the website. (i.e. Internet Explorer, Google Chrome or any compatible browser).

**2.6 Apportioning of requirements**

There are no requirements that may be delayed until future versions of the system.

**3.SPECIFIC REQUIREMENTS**

**3.1 External Interfaces**

BookFinderis an independent product so it has no external interfaces.

**3.2 Functional Requirements**

**3.2.1 Account Registration**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.1.1 |
| **Inputs:** | Name, mailing address, billing address, credit card number, expiration date, username and password. |
| **Source:** | All inputs are provided by user. |
| **Outputs:** | A new account is created with the inputs. |
| **Destination:** | The outputs are stored in database. |
| **Requires:** | User to fill out form completely while inside secure website. |
| **Pre-condition:** | The user is inside the website and not an account holder. |
| **Post-condition:** | The user is an account holder who has a valid username and password to login with, as well as personal information(inputs) in database. |
| **Side-effects:** | None. |

**3.2.2 Account Login**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.2.1 |
| **Inputs:** | Username, Password. |
| **Source:** | All inputs are provided by the user. |
| **Outputs:** | Successful login or failure. |
| **Destination:** | The outputs are displayed to the screen. |
| **Requires:** | User to fill out login information inside secure website. |
| **Pre-condition:** | The user is inside the website and has a valid username and password. |
| **Post-condition:** | The user is inside the website and has access to account history, purchase books on-line, and update account information. |
| **Side-effects:** | None. |

**3.2.3 Search**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.3.1 |
| **Inputs:** | Title, ISBN number.  Optional: Author, Subject, Course Number, Professor. |
| **Source:** | All inputs are provided by user. |
| **Outputs:** | Availability of book i.e found or not found. |
| **Destination:** | The outputs are displayed to the screen. |
| **Requires:** | The user must fill in at least one text box of the search form. |
| **Pre-condition:** | The user is inside the website and knows at least one input to search for the book. |
| **Post-condition:** | The user finds the book information he is searching for. |
| **Side-effects:** | None. |

**3.2.4 Add to Shopping cart**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.4.1 |
| **Inputs:** | Book, Price. |
| **Source:** | All inputs are provided by database. |
| **Outputs:** | Added successfully to the cart. |
| **Destination:** | The outputs are displayed on the screen. |
| **Requires:** | Users to press add to cart button. |
| **Pre-condition:** | The user is inside the website and logged in. |
| **Post-condition:** | The user has a temporary storage of books while having the ability to continue shopping. |
| **Side-effects:** | None. |

**3.2.5 Balance Calculator**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.5.1 |
| **Inputs:** | Books, Prices, Total number of books. |
| **Source:** | The inputs are displayed by database. |
| **Outputs:** | Shows the total price. |
| **Destination:** | The outputs are displayed on the screen. |
| **Requires:** | The add to shopping cart function to be utilized. |
| **Pre-condition:** | The user is inside the website. |
| **Post-condition:** | The user is displayed with the items in the shopping cart along with the total cost. |
| **Side-effects:** | None. |

**3.2.6 Delete from Shopping Cart**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.6.1 |
| **Inputs:** | Book, Price. |
| **Source:** | All inputs are provided by database. |
| **Outputs:** | Displays successfully deleted or not. |
| **Destination:** | The outputs are displayed on the screen. |
| **Requires:** | User to press delete from shopping cart button. |
| **Pre-condition:** | The user is inside the website and has items in shopping cart. |
| **Post-condition:** | The user is inside the website and has deleted an item from shopping cart. |
| **Side-effects:** | None. |

**3.2.7 Checkout**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.7.1 |
| **Inputs:** | Books, Prices, Total number of books in shopping cart, Total price of books. |
| **Source:** | All inputs are provided by database. |
| **Outputs:** | Shows payment is successful or unsuccessful. |
| **Destination:** | The outputs are displayed on the screen. |
| **Requires:** | User to press the checkout button and already have items in shopping cart. |
| **Pre-condition:** | The user is inside the secure website and has logged in under username and password. |
| **Post-condition:** | The user has made a purchase and has a confirmation number for order. |
| **Side-effects:** | None. |

**3.2.8 Contact Us.**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.8.1 |
| **Inputs:** | None. |
| **Source:** | None. |
| **Outputs:** | Displays the address, Telephone number, Email address, Directions on how to get to the store, Map. |
| **Destination:** | The inputs are displayed on the screen. |
| **Requires:** | User to be inside the contact us webpage. |
| **Pre-condition:** | The user is inside the website. |
| **Post-condition:** | The user is given ways to contact store. |
| **Side-effects:** | None. |

**3.2.9 Update Account Information**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.9.1 |
| **Inputs:** | Name, Mailing address, Billing address, Credit card type, number, Expiration date, and/or password. |
| **Source:** | All inputs are provided by the user. |
| **Outputs:** | Details are updated in the database. |
| **Destination:** | The outputs are displayed on the screen. |
| **Requires:** | User to modify form inside secure website and user to already have an account. |
| **Pre-condition:** | The user is inside the website and is an account holder and logged in. |
| **Post-condition:** | The user has modified account information. |
| **Side-effects:** | None. |

**3.2.10 View Purchase History**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.10.1 |
| **Inputs:** | None. |
| **Source:** | None. |
| **Outputs:** | Retrieves information about the previous purchases from the database. |
| **Destination:** | The outputs are displayed on the screen. |
| **Requires:** | User to have made prior purchases or display nothing. |
| **Pre-condition:** | The user is inside the website and an account holder and logged in. |
| **Post-condition:** | The user has viewed account purchase history. |
| **Side-effects:** | None. |

**3.2.11 Help**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.11.1 |
| **Inputs:** | Query name. |
| **Source:** | The input is provided by user. |
| **Outputs:** | Overview of different functions. |
| **Destination:** | The output is displayed on the screen. |
| **Requires:** | User to enter a word into the search box. |
| **Pre-condition:** | The user is inside the website. |
| **Post-condition:** | The user has gained knowledge on how to use function she/he inquired on. |
| **Side-effects:** | None. |

**3.2.12 Logout**

|  |  |
| --- | --- |
| **Description:** | Refer to 2.2.12.1 |
| **Inputs:** | None. |
| **Source:** | None. |
| **Outputs:** | None. |
| **Destination:** | None. |
| **Requires:** | User to be logged in under username and password. |
| **Pre-condition:** | The user is inside the website and is logged in. |
| **Post-condition:** | The user is logged out. |
| **Side-effects:** | None. |

**3.3 Performance Requirements**

The performance requirements are as follows:

* System login/logout shall take less than 5 seconds.
* 100 simultaneous users are supported at a time by the System.

**3.4 Logical Database Requirements**

There are various functions in the website that require the interface of a database.

**3.4.1 Data Entities and their Relationships**

The data entities and the relationships table describe the attributes of the types of data that shall be sent to the database.

**Users**

|  |  |
| --- | --- |
| **Column Name** | **Column Lengths** |
| User Name | 6 alphanumeric |
| Password | 9 digits |
| Name (last name, middle initial, first) | 30 characters |
| Address (street number, street name, apt, city, state and zip code) | 40 alphanumeric |

**Books**

|  |  |
| --- | --- |
| **Column Name** | **Column Lengths** |
| ISBN number | 10 digits |
| Title of book | 40 characters |
| Author of book | 30 characters |
| Number on hand | 4 digits |
| Subject | 20 characters |
| Course number | 6 alphanumeric |
| Professor | 20 characters |

**Credit Card Information**

|  |  |
| --- | --- |
| **Column Name** | **Column Lengths** |
| User name | 6 alphanumeric |
| Credit card name | 20 characters |
| Credit card number | 16 digits |
| Credit card expiration date | 4 digits |

**Account Purchase History**

|  |  |
| --- | --- |
| **Column Name** | **Column Lengths** |
| User name | 6 alphanumeric |
| Title of book(s) | 40 characters |
| Price of book(s) | 5 digits |
| Total amount of purchase | 5 digits |
| Quantity | 2 digits |
| Confirmation number | 6 digits |
| Date of purchase | 4 digits |
| Credit Card name | 20 characters |

**3.5 Design Constraints**

TheBookFinder shall conform to the following design constraints:

* Able to support PC, Mac platforms.
* System supports all modern web browsers.

**3.6 Software System Attributes**

**3.6.1 Availability**

The BookFinder will be unavailable to from 10:00 pm – Midnight due to scheduled maintenance.

**3.6.2 Security**

Users information should be encrypted.