Document Purpose

The purpose of this document is to describe business requirements of an Application completely, accurately and unambiguously in Technology-independent manner. All attempts have been made in using mostly business terminology and business language while describing the requirements in this document.

# Functional Requirements

The set of requirements define the functions of the Online Bookstore system. This describes the set of inputs, the behavior, and outputs expected in the system.

The core functionalities expected in the system are Managing Users, Managing Inventory, Taking Orders and Fulfilling Orders, The key requirements required to accomplish each of these functionalities are described in the sections below.

## Manage Users

The set of requirements define the functions of the User Management capability of the Online Bookstore system. Managing Users includes Accounts creation, maintenance, closing and deletion.

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| --- | --- | --- | --- | --- | --- |
| ID | Name | Description | Priority | Status | Connected Requirements |
| **FR001** | Add Users | It must be possible to add new users to the client repository. | Medium | Validated | **FR002** |
| **FR002** | Manage User Accounts | The system is required to store and maintain a list of client accounts in a repository. | Medium | Validated |  |
| **FR003** | Remove User | It is required that users within the repository may be deleted if required. If the user has existing transactions against their account, the delete is a logical delete only. | Medium | Validated | **FR002** |
| **FR004** | Report on User Account | A report is required covering all details of a user's account including current open transactions, transaction history and activity. |  | Proposed | **FR002** |
| **FR005** | Secure Access | All user access is to be secure and encrypted. | Medium | Proposed | **FR002** |
| **FR006** | Store User Details | User details must be persisted to a relational database. | Medium | Validated | FR001, **FR003, FR004** |
| **FR007** | Validate User | The system must provide for secure access and user validation via pin and password. The Pin is to be provided by system. The user may change their password according to a set of defined rules. | Medium | Proposed | **FR005** |

## Manage Inventory

The set of requirements define the functions of the Inventory Management capability of the Online Bookstore system. Managing Inventory includes Adding books to database, receiving books, maintaining stock levels, managing books, etc.

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| --- | --- | --- | --- | --- | --- |
| ID | Name | Description | Priority | Status | Connected Requirements |
| **FR008** | Add Books | A facility will be required to receive and add books to the stock lists. | Medium | Proposed | **FR013** |
| **FR009** | List Stock Levels | A facility will exist to list current stock levels and to manually update stock quantities if physical checking reveals inconsistencies. | Medium | Proposed | **FR010** |
| **FR010** | Manage Inventory | The system MUST include a complete inventory management facility to store and track stock of books for the on-line bookstore. | Medium | Proposed |  |
| **FR011** | Order Books | A book order facility will be required to allow on-line ordering from major stockist's. | Medium | Proposed | **FR010** |
| **FR012** | Receive Books | A facility to receive and add books to the inventory is also required. Books will be received in batch shipments from the usual suppliers and manually recorded in the system. | Medium | Proposed | **FR010** |
| **FR013** | Store and Manage Books | A book storage and management facility will be required. |  | Proposed |  |
| **FR014** | Update Inventory | In processing the orders the inventory needs to be updated to show what books have been subtracted from the stock. |  | Proposed | FR021 |

## Take Orders

The set of requirements define the functions of the Order Taking capability of the Online Bookstore system. This includes Providing online interface, shopping basket and payment gateway

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| --- | --- | --- | --- | --- | --- |
| ID | Name | Description | Priority | Status | Connected Requirements |
| **FR015** | Process Credit Card Payment | All payments will be via credit card. All major credit card types will be accepted and approval time shall be less than 2 minutes except where fraud checks fail. | Medium | Proposed | FR016 |
| **FR016** | Provide Online Sales | A new on-line book ordering system is required. This will allow web users to browse and purchase books from the current inventory. Pre-orders will not be required.  |  | Proposed |  |
| **FR017** | ShoppingBasket | A shopping Basket facility is required. | Medium | Proposed | FR016 |

## Fulfill Orders

The set of requirements define the functions of the Fulfilling Orders capability of the Online Bookstore system. This includes Processing Order, Shipping Order, Packaging Order, and managing deliveries.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | Name | Description | Priority | Status | Connected Requirements |
| **FR018** | List Current Orders | The system must provide a listing of the current orders that have been recently added. | Medium | Proposed | FR021 |
| **FR019** | Manage Deliveries | A new system for managing Deliveries is required. This will allow orders placed to be delivered to the online users. | Medium | Proposed |  |
| **FR020** | Package Order | Each order needs to packaged appropriately for shipping to the customer. |  | Proposed | FR021 |
| **FR021** | Process Order | Processing all the orders is required. This will ensure that for an order the books are retrieved, packaged and the Inventory is updated. |  | Proposed | FR019 |
| **FR022** | Retrieve Books | In processing the orders it is required that the correct set of books in the order need to be retrieved. | Medium | Proposed | FR021 |
| **FR023** | Ship Order | All orders need to be shipped to the customer address. | Medium | Proposed | FR019 |

# Non-Functional Requirements Model

This section of the document covers the non-functional requirements related to the Online Bookstore System. This includes Extensibility, Legal And Regulatory requirements, Performance requirements, Reliability requirements and Security requirements

## Extensibility

The Extensibility requirements section of the document highlights the need for the system to be scalable and extendible.

### Other product types options can be added easily.

The system should be able to adapt to future requirements with respect to new product types. If new types of products become available then they should be able to be added to the system easily.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ001

**Signed-Off**: True

Part-of: System must be easily extendible

### System must be able to cope with regular retail sales

The system needs to be designed to cope with the distribution process for regular retail sales outlets.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ002

**Signed-Off**: False

**Part-of:** System must be easily extendible

### System must be easily extendible

System must be easily extendible to cope with new functionality such as new products and different data conveyed to end users.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ003

**Signed-Off**: True

## Legal and Regulatory

This section lists the legal and regulatory requirements to which the online bookstore system should comply to.

### Non storage of customer credit card details

There is a legal requirement that customer credit card details including the credit card number must not be stored online.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ005

**Signed-Off**: False

### Orders and dispatch information must be kept for seven years.

There is a legal requirement that customer order and dispatch information must be kept for seven years. There should be a facility to archive these orders and ensure that they are not deleted before seven years from the creation date.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ006

**Signed-Off**: False

## Performance

This section indicates the key Performance metrics like data access speed, history retrieval capability, etc

### Access to the secure site must be no longer than 2 sec delay.

Access to the secure site must be no longer than 2 sec delay. If any greater delay then there should be notification to the user that the process is underway.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ007

**Signed-Off**: False

Part-of: Data access Speed

### Data access Speed

There needs to be reasonable data access speed on the Client side as well as the staff user side of the application.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ008

**Signed-Off**: False

### Retrieval of historic information.

The system must be able to retrieve all historic information including deleted transactions and their attachments within the following ranges.

Importance High < 2 Minutes

Importance Medium < 15 Minutes

Importance Low < 120 Minutes

**Priority**: Medium

**Status**: Proposed

**ID**: REQ009

**Signed-Off**: True

Part-of: Data access Speed

## Reliability

This section addresses the reliability related expectations that the Online Bookstore system should meet including accuracy precision, recoverability, failure rate, etc

### 2000 hours mean time between failure.

The Mean time between failure (MTBF) defines the failure tolerance of the system and the number of hours that it is operational before a failure occurs.

**Priority**: Medium

**Status**: Approved

**ID**: REQ010

**Signed-Off**: False

### 99.999% accuracy.

The system accuracy defines that the system will perform as expected and in its key areas of functionality will produce the expected results.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ011

**Signed-Off**: True

**Text**: The system accuracy defines that the system will perform as expected and in its key areas of functionality will produce the expected results.

### 99.999% precision.

**Priority**: Medium

**Status**: Proposed

**ID**: REQ012

**Signed-Off**: False

**Text**: The precision

### Must be recoverable quickly.

In the event of software or hardware failure the system must be able to be recovered to full operating mode within the tolerances listed below. In the event of parts of the system failing the system must be able to be run in a safe mode.

**Priority**: Medium

**Status**: Proposed

**Signed-Off**: True

## Security

This section describes the key security aspects that the system must address including high security for online transactions, and maintaining confidential information security

### All transactions must be secure

All transactions must be stored securely.

**Priority**: Medium

**Status**: Proposed

**Signed-Off**: False

Part-of: Processed information must be kept secure

### Physical storage locations should be secure

Physical storage locations of the data for transactions must be secure.

**Priority**: Medium

**Status**: Proposed

**Signed-Off**: False

Part-of: Processed information must be kept secure

### Processed information must be kept secure

All information gained from the end users that is processed must be kept secure.

**Priority**: Medium

**Status**: Proposed

**Signed-Off**: True

### Wherever possible existing security definitions should be used

The organization has made significant investment into the setup of security privileges and groupings in other systems such Active Directory and where possible these should be used.

**Priority**: High

**Status**: Proposed

**Signed-Off**: True

Part-of: Processed information must be kept secure