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# **Software Requirements Specification**

**for**

**Online Nilkhet**

**Prepared by Group 4**

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## Table of Contents

<b>Table of Contents .....</b>	<b>ii</b>
<b>Revision History .....</b>	<b>ii</b>
<b>1. Introduction.....</b>	<b>1</b>
1.1 Purpose.....	1
1.2 Document Conventions.....	1
1.3 Intended Audience and Reading Suggestions.....	1
1.4 Project Scope .....	1
1.5 References.....	2
<b>2. Overall Description.....</b>	<b>2</b>
2.1 Product Perspective.....	2
2.2 Product Functions .....	3
2.3 User Classes and Characteristics .....	3
2.4 Operating Environment.....	4
2.5 Constraints .....	4
2.6 User Documentation .....	4
2.7 Assumptions and Dependencies .....	5
<b>3. External Interface Requirements .....</b>	<b>5</b>
3.1 User Interfaces .....	5
3.2 Hardware Interfaces .....	5
3.3 Software Interfaces .....	6
3.4 Communications Interfaces .....	6
<b>4. System Features .....</b>	<b>6</b>
<b>5. Other Nonfunctional Requirements.....</b>	<b>10</b>
5.1 Performance Requirements.....	10
5.2 Safety Requirements .....	10
5.3 Security Requirements .....	10
5.4 Software Quality Attributes .....	11
5.5 Business Rules .....	11
<b>6. Other Requirements .....</b>	<b>11</b>

## Revision History

Name	Date	Reason For Changes	Version
Online Nilkhet	20 <sup>th</sup> September, 2018	Release a better beta version	1.1
Online Nilkhet	TBA	Release with full phase and bug fix.	1.2

## **1. Introduction**

### **1.1 Purpose**

The purpose of this document is to give a detailed description of the requirements for the “Online Nilkhet” web project. It will illustrate the purpose and complete declaration for the development of system. It will also explain system constraints, interface and interactions with other external applications. This document is primarily intended to be proposed to a customer for its approval and a reference for developing the first version of the system for the development team.

### **1.2 Document Conventions**

This document follows IEEE Standard. Bold-faced text has been used to emphasize section and sub-section headings. Highlighting is to point out words in the glossary and italicized text is used to label and recognize diagrams.

### **1.3 Intended Audience and Reading Suggestions**

This document is to be read by the development team, the project managers, marketing staff, testers and documentation writers. Our stakeholders, company manufacturing associated hardware, company providing embedded operating system and distributors who markets the finished product, may review the document to learn about the project and to understand the requirements. The SRS has been organized approximately in order of increasing specificity. The developers and project managers need to become intimately familiar with the SRS. In the next section, system features with their functional requirements are presented to highlight the major services provided by the intended product. Then the external interface requirements highlighting the logical characteristics of each interface between the software product and the users are discussed. Finally, this specification is concluded with the reference documents on which this document is based on.

### **1.4 Project Scope**

The final project would be for local Area not for international selling or purpose. Nilkhet actually is a place for book selling. All kinds of books are available here in retail shop. So we are introduced in a new way for selling that will be sell in online. There are so many online portals for selling books but they are selling books of particular renowned seller. But we are creating a platform for giving the opportunity to every seller from Nilkhet. And we ensure that all kind of books will be available. As per our observation and filed analytics from all over Bangladesh, students and teachers are used to come here to buy books, our goal is to make their life easier through our website or online services. Simply they can choose books from the website and can buy books through cash on delivery or online payment method. We are providing seller a chance to bid the price what another seller given. That would be very helpful for customer that they will get actual price through our online portal. All the facilities like used books and also we are giving the facilities to give back their books to particular seller and customer will get 50% cash back. We are introduced hotline system for any kind of difficulties or problem. The function

would be very simple for choosing the product by customer. Method is “Add to Cart <> Checkout <> Input Delivery Details <> Submit Order <> Bid the seller <> Purchase Confirm <> Ready to Deliver”. The business earning will be based on commission from seller. The delivery method will be managed by other transportation companies. The project we will release in three phase.

- **Phase One**

Initially we are just launch our project in universities for ensure the GMV and response from audience how they take the online portal and what is the response rate from students and teachers.

- **Phase Two**

Phase two will be launched only in Dhaka City to ensure the response rate from customer in Dhaka city. How people take this website, is they facing problem for getting books by seller.

- **Phase Three**

Based on the result of phase three we launched our project all over the Bangladesh and then so on the business will be run in a regular systematic way.

## 1.5 References

This document builds on following references:

- Krazytech Software Requirements Specification. [1]
- IEE Software Requirements Specification. [2]
- Roger S. Pressman Software Engineering. [3]
- Laravel connection with Database. [4]
- Link Building. [5]

## 2. Overall Description

There are many online book selling stores like **shoparu.com**, **boibazar.com**, **rokomari.com**. We are developing a different platform using HTML, PHP Laravel & SQL Server. Online Book selling store is an online web application where the customer can purchase books online. Through a web browser the customers can search for a book by its title or author, later can add to the shopping cart and finally purchase using credit card transaction. The user can login using his account details or new customers can set up an account very quickly. They should give the details of their name, contact number and shipping address. The books are divided into many categories based on subject Like Software, Database, English, Architecture etc.

### 2.1 Product Perspective

Online Nilkhet is an online bookselling website that supports a number of functions for the consumer, vendors and administrator. This system will consist of only one part that is web portal. As further up gradation we will develop a mobile application as well.

The website must be available to anyone use this software and must work correctly in Internet Explorer, Mozilla Firefox and Google Chrome. As stated by the customer and vendor there are

no hardware or software requirements beyond these including, but not limited to, memory or specific software packages that need to be utilized nor software packages that need not be utilized.

For this system we need somewhere to store the data. For that, a database will be used. The web portal will communicate with the database, however in slightly different ways. The web application will only use the database to get data while the web portal will also add and modify data. All of the database communication will go over the Internet.

## 2.2 Product Function

Online Nilkhet will provide a number of functions; each is listed below:

- Maintain data associated with the inventory (a collection of books)
- A book has a title, author and price
- The inventory also keep the track of the stock/quantity of each book
- Maintain records for many customers
- A customer can be either a member or non-member.
- A customer has a username (unique across all users), password (no restrictions), email address (no restrictions), and postal address (unverified.)
- Anyone may sign up for a customer account.
- Allow any customer to become a member.
- Show a listing of available books
- Books are to be displayed in ascending alphabetical order by title.
- Each book will list the following from left to right
  - Bookname
  - Publisher
  - Price
- Allow customers and vendors are to log in and out of the system.
- Users (both customers and the vendors) will be logged out if inactive for 30 minutes.
- Shopping cart
- Anyone is able to add one or more books to the shopping cart.
- The shopping cart does not need to allow multiple copies of any book.
- Checkout
- Checkout is only available to logged-in customers. A user that is not logged in as a customer is given a chance to log in.
- Allow vendors to update stock quantities
- Allow vendors to change any book's price.
- Allow vendors to view transaction logs.

## 2.3 User Class and User Characteristics

There are three types of users that interact with the system: users of the customers, vendors and administrators. Each of these three types of users has use of the system so each of them has their own requirements.

The typical online nilkhet user is simply anyone that has access to the Internet and a web browser. It is assumed that the user is familiar enough with a computer to operate the browser,

keyboard and mouse and is capable of browsing to, from and within simple websites.

The customers can only use the application to find a book. This means that the user have to be able to search for books, choose a book from that search and then navigate to it. And at last they ordered their chosen books.

The vendors will also use the web application. They can update their books, price and also check their transaction logs.

The administrators only interact with the web portal. They are managing the overall system so there is no incorrect information within it. The administrator can manage the information for all selling book as well as the options for both customers and the vendors.

## **2.4 Operating Environment**

As long as this application runs on the browser it does not need any installation or to be combatable with an any operating systems like Windows, Linux, or any other OS. The Online Nilkhet is a website in all famous browsers, for example we are taking Google Chrome, Internet Explorer and Mozilla Firefox. Most of the features will be complete with the Google Chrome higher version.

The hardware configuration including Hard Disk: 500 GB, Monitor: 15” Color monitor, Keyboard 122 keys, Mouse and Printer etc. The basic input devices are keyboard, mouse and output devices are monitor, printer.

## **2.5 Constraints**

As stated by the customer, security is not a concern for this system. The database may store passwords in plain text and there doesn't need to be lockout after numerous invalid login attempts. As such, the system may not work correctly in cases when security is a concern. These cases include those listed above in addition to lack of an encrypted connection when sending credit card information and forcing users to use “strong” passwords. A strong password is a password that meets a number of conditions that are set in place so that user's passwords cannot be easily guessed by an attacker. Generally, these rules include ensuring that the password contains a sufficient number of characters and contains not only lowercase letters but also capitals, numbers, and in some cases, symbols. The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.

The web portal application will be constrained by the capacity of the database. Since the database is shared between both application and it may be forced to queue incoming requests and therefor increase the time it takes to fetch data.

The system may not behave correctly when used with Internet browsers other than Firefox and Internet Explorer.

## **2.6 User Documentation**

Along with the software product, a user manual would be written to help people understand the working methodology and usage of the developed prototype system. It would be written for nontechnical individuals and the level of content or terminology would differ considerably from, for example, a System Administration Guide, which is more detailed and complex. The user

manual would follow common user documentation styles capturing purpose and scope of the product along with key system features and operations; step-by-step instructions for using the system including conventions, messaging structures, quick references, tips for errors and malfunctions; pointers to reference documents; and glossary of terms.

This application will be delivered with this documentation:

- Online help: menu in the website that holds the application tells the customer how to use the software to get the maximum benefit from it.
- Report for the project manager and software customer explaining all the issues that concerned with this software.

## 2.7 Assumption and Dependencies

### **Client:**

We have assumed that all of the computer systems in the Engineering building labs are in proper working condition and that the user is capable of operating these system's basic functions including but not limited to being able to power on the system, login and open either Internet Explorer or Mozilla Firefox, and navigate the browser to the address of this Online Nilkhet website.

### **Provider:**

We have assumed that the Online Nilkhet will be running on a properly working web server and database system with an Internet connection that allows this system to perform all communications with clients.

### **Assumptions:**

- The administrator username and password maybe hard coded.
- The administrators cannot be a customer.
- Any user can edit their account information

## 3. External Interface Requirements

### 3.1 User Interfaces

This section describes the logical characteristics of each interface between the intended software product and the users. User can easily search their desired product. The category section showed to user every category, user can select only one category at a time. Clicking on Login or Create Account button user can login though their id and password or create a new account for this site. The user can easily choose one to another options.

### 3.2 Hardware Interfaces

For user It can usable through android phone or any computer that have windows or mac or Linux operating system with internet connection.

### 3.3 Software Interfaces

Any web browser user or administrator uses this website. Backend database managed by administrator in MYSQL.

### 3.4 Communications Interface

UDP/TCP client-server module will provide the communication between our hardware device and web application. Data will be sent to server using UDP module and response data is received by TCP module.

## 4. System Feature

### 1.1.1. Software

#### 1.1.1.1. Mozilla Firefox and Google Chrome

### 1.1.2. Hardware

#### 1.1.2.1. Computer System Side

### 1.2.1. Software

Web-based application

Database information storage system

## 2. Data Structure

Book has these attributes:

Unique ID (auto-increment starting at 1)

2.1.2. Title

2.1.3. Author

2.1.4. Price

2.1.5. Reorder Threshold

2.1.6. Stop-order Boolean value

2.1.7. Stock

Customer has these attributes:

2.2.1. Unique Username

2.2.2. Password

2.2.3. Name



2.2.4. Email Address

2.2.5. Postal Address

2.2.6. Member/Not Member Boolean value

Manager has these attributes:

2.3.1. Username

2.3.2. Password

2.3.3. Email address

Order log entries have these attributes:

2.4.1. Unique ID

2.4.2. Time transaction took place

2.4.3. Date transaction took place

2.4.4. Username of customer

### 3. System

Browse Inventory

3.1.1. Organization

- Items Listed on single page
- Items shown in tabular format
- Each Item listing contains
  - Title
  - Name of Author
  - Price
  - Listing sorted by Ascending item Title
  - No individual Item pages

3.1.2. Interaction

- Each Item has checkbox to mark selection
- Single button to add all selected items to Shopping Cart
- Search Inventory
- Search available only by Title of book

3.2.1. Search is exact-match only

➤ Create, Update and Delete Functionality

3.3.1. Only administrator are allowed to modify inventory

3.3.2. Administrator has an interface to:

- Create a book entry
- Update a book entry
- Update the stock/quantity of a particular book
- Create a new promotion
- Review current inventory

3.3.3. Administrator may delete items from the inventory

➤ Shopping Cart

3.4.1. Logged In

- Can add items to cart
  - If Item is not in stock, message displayed informing user to try again later
  - Customer can only purchase one of each item (no quantities associated with orders)
- If shopping cart not empty, a user may begin Checkout procedure
- User must successfully use shopping cart before beginning this procedure

3.5.1. User Levels

- Administrative
- Customer
- Vendor

3.5.2. Account Creation

- Everyone is allowed to create an account
- Required Information

Account Modification:

- Users are able to modify any aspect of their account after creation (“it would be nice but not needed”)
- Login and Logout
- There is no lost-password recovery
- Logging in allows one to logout

- Logging in allows checkout
- There is a 30-minute session time out after which a logged in user will be logged out automatically.

#### 3.6.1. Specifications

- Applies to entire order
- Percentage-off type promotion (x% off entire order)
- Expiration occurs at manager specified date
- Multiple coupons cannot be applied to same order
- Non-member users cannot apply promotions to order

#### 3.6.2. Creation

- Promotion created by manager
- Each promotion has a unique identifying number
- Email containing promotion sent to all member users of the Online Nilkhet system.
- Deletion
- Promotions are auto-deleted when the expiration date has passed
- Automated Reorder

#### 3.7.1. Specifications

- Administrator sets reorder threshold on a per-item basis
- If item reaches the reorder threshold, an email is sent informing the manager of the item's status and the system automatically reorders the item
- If the item has a stop-order applied to it, it will not automatically reorder until the manager removes it.
- A manager may increase the stock of an item using the manager's account
- Order Logging

Required Information: A manager can view all past transactions from all users.

## 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

- **Response Time**

In some case response time is needed so in our project we will handle the response time. So in that case we try to manage the notification system in finish the task through the computer.

- **Workload**

In workload process, through our Database we try to initiated the transactions but overall working process is in a batch system which means step by step in a batch way. Sometimes a pick workload can be possible scalability means it requires additional hardware, bandwidth and others.

- **Scalability**

Scalability is that simply define to increase the workload in the system. In future our target is to cover the whole country. In order to manage data we need strong database management system which we will try to add on further up gradation. We know that in some cases it is hard to manage additional requirements but we will try our level best to manage that section feasibly.

- **Platform**

A platform consideration that can define as how software or hardware utilizes. It is not as the designer always gets the specific design and customer requires specifics items so that can be happened in other reason. In our project the product is book where we are like a communicator between the customers and Nilkhet book vendors and our objective is to connect the customer and the vendor through our platform just like as a via system. Sometimes it can be not important but as a whole process it can be understand in capable the terms of performance. Our project we can handle it as much as viable way.

### 5.2 Safety Requirements

Safety is the most important things in our project as there are possibilities of document manipulation or misplacement; in this case we will back up all the documents and codes. In other cases like up gradation the system needed as per customer requires in any time so in that case the backup files that can be mostly helpful for the developers. Besides we are ensuring the data security and others as well.

### 5.3 Security Requirements

As per certain feature of the system, users must authenticate by name and password so that system can allow in. If users fail to login that must be notified and let the user try again to login. In our project the system allows to save information to the backup files. DB also restricted if unknown users can access to the account.

## **5.4 Software Quality Attributes**

Software quality ensures the suitability of the product. What will be the effect and what is the overall outcome that is matter in our project. We are trying to ensure qualities the requirements of the customer demand. Our software quality included security, scalability, performance and reliability. An attributes requires non-functional activities. The architecture means the solution is being designed carefully so that the developers can manage them in a sensible way. We also create documentation of our project. Actually the objective of the system that manages to fill up customer demands.

## **5.5 Business Rules**

Our main objective is to create a platform for both the customer and the book vendor to ensure the swift service. We are creating our platform to make profit out of it. In order to make profit from it we are focusing on the maximum customer satisfaction and lessen the complexity for both the customer and the vendor. To maintain the profit we are following the business plan that fits for this region. Besides we are maintaining the requirements, the security and the scalability as viable.

## **6. Other Requirements**

- User has to valid email Id or phone number.
- For better performance we can record customer call to us.
- We can use customer data for analytics.
- For submitting any order customer must have to fulfill all requirements.
- The database will have a functional audit trail.
- The system will limit access to authorized users.
- The system is required to support multiple terminals simultaneously.
- The system should handle reasonable number of users without break or inconsistency.