

Software Requirements Specification

for

Online Shopping Management

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Chapter 1

Introduction

The Software Requirements Specification is designed to document and describe the agreement between the customer and the developer regarding the specification of the software product requested [5]. Its primary purpose is to provide a clear and descriptive “statement of user requirements” [5] that can be used as a reference in further development of the software system. This document is broken into a number of sections used to logically separate the software requirements into easily referenced parts.

This Software Requirements Specification aims to describe the Functionality, External Interfaces, Attributes and Design Constraints [4] imposed on Implementation of the software system described throughout the rest of the document. Throughout the description of the software system, the language and terminology used should be unambiguous and consistent throughout the document.

1.1 Purpose

This document is meant to delineate the features of our Online Shopping Management, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other.

The Online Shopping Management for fashion and lifestyle store web application is intended to provide complete solutions for vendors as well as customers through a single get way using the internet. It will enable vendors to showcase their products, customer to browse through the products and purchase them online without having to visit the shop physically. The administration module will enable a system administrator to approve and reject requests for new products and maintain various lists of category.

1.2 Scope

The software system being produced is called Online Shopping Management. It is being produced for a customer interested in selling various products via the Internet. This system is designed to “provide automation support” [2] for the process of placing items for sale on the Internet and facilitating the actual sale. This system is largely cross-platform and is available to anyone using the internet. The system will be run on a central server with each user having a remote user interface through a web browser to interact with it.

The system will allow any user to create an account to become a customer. The customer, through the process of account creation, will have the option to become a member of the site. The system will allow customers to browse, search, select, and add products to a shopping cart. Then, provided they have items in their shopping cart, check out items in shopping cart and decrements the stock that the inventory the system maintains. The system also allows a manager to manage the inventory with full create, retrieve, update and delete (CRUD) functionality with regards to products in the system. It will also allow, on an inventory wide basis, customers and managers to interact with a promotion system that handles percentage-off promotions that can be applied

to member's orders. This interaction includes the creation (by managers) and the application to orders (by customers) of the promotions. The system has full email capabilities; the automated email functionality will be used to send promotions to members of the system as well as provide the managers with low-stock notifications.

The system will have numerous constraints on what it can do. The system will not have full credit-card processing capabilities. It will not allow managers to be customers. The manager will be a hard-coded user and only a single manager will exist. The system will not allow multiple promotions to be added to a single shopping cart.

1.3 Definitions, Acronyms, and Abbreviations

- Checkout: The process a Customer goes through to purchase an Item
- SRS: Software Requirement Specification
- GUI: Graphical User Interface
- Stackholder: The person who will participate in system Ex. Customer, Administrator, Visitor etc.
- Item: An individual entity in the inventory which has several descriptive attributes
- Inventory: An object that holds items available for purchase by the Customer

1.4 References

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1.5 Overview

This system provides an easy solution for customers to buy the product without going to the shop and also to shop owner to sale the product. This proposed system can be used by any naïve users and it does not require any educational level, experience or technical expertise in computer field but it will be of good use if user has the good knowledge of how to operate a computer.

Chapter 2

Overall Description

The Online Shopping Management application enables vendors to set up online shops, customers to browse through the shops and maintain lists of product categories. Also the developer is designing an online shopping site to manage the items in the shop and also help customers to purchase them online without visiting the shop physically. The online shopping system will use the internet as the sole method for selling goods to its consumers.

2.1 Product Perspective

This is an online shopping website which supports a number of functions for both the consumer and store's management. The website must be available to anyone using the internet and as such must work correctly in both Internet Explorer and Mozilla Firefox. As stated by the customer, 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.

2.1.1 System Interfaces

Various interfaces for the product could be:

- Login Page
- Registration Form
- There will be a screen displaying information about product that the shop having.
- If the customers select the buy button then another screen of shopping cart will be opened.
- After ordering for the product, the system will send one copy of the bill to the customer's Email address

2.1.2 Hardware Interfaces

Hardware requirements for insurance on internet will be same for both parties which are as follows: Processor: Dual Core RAM: 2 GB Hard Disk: 320 GB NIC: For each party.

2.1.3 Software Interfaces

HTML, jsp, php, JavaScript many other for editing purposes.

Coding done in java servlet so required JDK and above to run java programs.

Operating system (such as window 10).

2.1.4 Communications Interfaces

The two parties should be connected by LAN or WAN for the communication purpose.

2.2 User Characteristics

The typical system 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.

2.3 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 a password recovery feature nor 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 system may not behave correctly when used with Internet browsers other than Firefox and Internet Explorer.

2.4 Assumptions and Dependencies

Client: We have assumed that the user is capable of operating the 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 website. Provider: We have assumed that the system 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 manager account's username and password maybe hard coded.
- The manager cannot be a customer.
- Any user can edit their account information.

2.5 Apportioning of Requirements

As stated by the customer, security is not a concern of this project. As such, it is beyond the scope of this system to encrypt personal user data, prevent unauthorized login attempts, or any other concern of this nature. Additionally, the system is not responsible for the following:

- Verifying the email address provided by a user
- Storing additional information about a product beyond simply title and price

- Providing individual product pages (one page for every item in the inventory)
- Allowing the manager to update login credentials or other information about the manager

Additionally, the system may need to later be extended to provide additional functions. One such example is added support for visually impaired users. In many cases a screenreading program is used and ensuring that page-layout reads from top-left to bottom-right in a logical manner would be required.

Chapter 3

Specific Requirements

3.1 External interfaces

Product Page Features List

- Product title
- Good quality of images with zoom in functionality
- Pricing information with potential sales or discounts
- A field to change purchase quantities
- Product variables (if necessary)
- Add to cart button
- Trust signal around “Add to Cart” button
- Add to Wish List and Compare button on each product page
- Social share buttons for each ecommerce product
- Product description
- Consumer reviews on products
- Related products

3.2 Functions

Home, Header and Footer Features List

- Top level domain with HTTPs
- Business logo
- User-friendly navigation
- Wishlist
- Customer login

- Store finder
- Language options
- Shopping cart
- Search bar
- Phone number
- Highlighted UVP(unique Value Products)
- Risk reducers
- Loyalty program
- CTA(Call to action) to push people to product collections and important sales pages
- Featured products or Best selling products or New arrivals
- Personalised items
- Text content
- FAQ, returns and exchanges, store locator, shipping information, order tracking etc.
- Contact us
- Newsletter signup
- Payment system icons
- Social Media links
- Link to about pages
- Terms and Conditions, Privacy Policy, Sitemap
- Live Chat

Product Category Page Features List

- Consistent image size
- Breadcrumb navigation
- Show the number of products displaying in the page
- Product filtering and sorting
- Page description field

Customer Checkout, Shopping Cart and Wishlist

- Accept all payment methods
- Cart details
- Final price
- Shipping method (offer low shipping cost)
- Billing address and shipping address
- Security seals

- Include an area to punch in promo codes
- Have an option to change the quantity or remove items
- Allow items to be saved for later

Ecommerce Blog Features List

- Sidebar: blog search, categories, popular posts
- Social share buttons

Back-end Features List

- Dashboard/reporting tools
- Administrator management
- Customer management
- Store management
- Content management
- Order and shipping management
- Payment, taxes and location management
- SEO management
- Email marketing integration
- Discount and promotion management
- Root file upload
- Tracking code integration
- Responsive design
- Browser compatibility
- Fast loading
- For digital downloads, explain how they receive products
- Multilevel security
- Automatic site backup

3.3 Performance Requirements

In order to maintain an acceptable speed at maximum number of uploads allowed from a particular customer as any number of users can access to the system at any time. Also the connections to the servers will be based on the attributes of the user like his location and server will be working 24X7 times.

3.4 Logical Database Requirements

At present, Current mainstream databases include Oracle, MYSQL, Access etc. The reason to choose MYSQL due to comparison with other databases, which is more lightweight than Oracle, and more advanced in performance of query speed and support schema than SQL SERVER. With rapid increase of data, users and number of visitor, the system of Online Shopping is confronting higher demand in technology and platform. In order to have better management of data, this system uses MYSQL database system, which is mainly used to storing all kinds of related information of the commodities, the system mainly establishes the table of commodities, orders, users, and messages.

3.5 Design Constraints

Users can access the website from any devices with a stable internet connection. The platforms include browsers on computer, laptop, mobile etc.

3.6 Software System Attributes

The following attributes specify any additional quality characteristics for the product that will be important to either the customers or the developers.

3.6.1 Reliability

The customers can easily buy their desired product from a trustworthy vendor from the website without stepping out of their houses.

3.6.2 Availability

The website can be accessed from any devices with a proper internet connection. It will be available 24/7 from every browsers.

3.6.3 Security

Pages of the website must be access in the way they were intended to be accessed. Included files shall not be accessed outside of their parent file. Administrator can only perform administrative task on pages they are privileged to access. Customers will not be allowed to access the administrator pages.

3.6.4 Maintainability

Page loads should be returned and formatted in a timely fashion depending on the request being made.

Administrators will have the ability to edit the aspects of the order forms, product descriptions, prices and website directly

3.7 Organizing the Specific Requirements

The specific requirements are a list of necessary functions, capabilities, or characteristics related to your website and the plans for creating it. There are several types of requirements that may be defined during the process

that come together to focus and prioritize the project plan. To make sustainable site, these specific requirements are needed to be organised .

3.7.1 System Mode

System mode means running apex code by ignoring user's permissions. For example, if logged in user does not have permission to one object but they will be able to access that object. In system mode, Apex code has access to all objects and fields permissions, field-level security, sharing rules aren't applied for the current user. This is to ensure that code won't fail to run because of hidden fields or objects for a user. In Salesforce , all apex code runs in system mode. It ignores user's permissions. Only exception is anonymous blocks like developer console and standard controllers. Even `runAs()` method doesn't enforce user permissions or field-level permissions, it only enforces record sharing.

3.7.2 User Class

Before developing user scenarios complete with mock interfaces and app flows, app creators must define user classes. User class definition is a fundamental part of UX design. User classes define the various groups of people intended to use an app, starting with the 'Super Admin' on down to the 'End User'. App specification documents must detail the shared characteristics of these user classes.

3.7.3 Objects

Using the Object Spy to identify web objects available on the device screen. By default the object is identified by XPath. Additional ways to identify an object are by the following object properties: CSS Selector, HTML id, name, class, tag, text and webView. The following test objects are available when testing Web applications:

- A check box on a web page.
- A combo box on a web page.
- A list box on a web page.
- A table on a web page.
- A table cell on a web page.
- A text box on a web page.

3.7.4 Feature

The list of the features are :

- User friendly
- Mobile Friendly
- High resolution photos and videos
- User generated reviews
- Special Offers
- Wish list
- Find-in-store
- Related items

- Frequently asked questions (FAQ)
- Social proof
- Security features
- Advanced payment options
- Detailed shipping information
- Multi touch point contact pages
- Return policy

3.7.5 Stimulus

Most people will get the money deposited directly into their bank accounts if they filed a 2018 or 2019 tax return. People who get Social Security benefits will get their money the same way they get their Social Security payments. If someone doesn't have a bank account, you can still get your payment through direct deposit using a prepaid debit card, payment apps like CashApp, Venmo, or PayPal, or opening an online bank account. If s/he cannot use these options, you'll get your payment as a paper check.

3.7.6 Response

Website response time is how long it takes for your web server to connect and send data packets to an end-user browser. Response time is the total amount of time it takes to respond to a request for service. Ignoring transmission time for a moment, the response time is the sum of the service time and wait time. The service time is the time it takes to do the work you requested. There are tons of factors that influence how long each page on your site takes to load, so there are many different steps you can take to increase your speed and improve user experience.

- Minimize HTTP requests
- Minify and combine files
- Use asynchronous loading for CSS and JavaScript files
- Defer JavaScript loading
- Minimize time to first byte
- Reduce server response time
- Choose the right hosting option for your needs
- Run a compression audit
- Enable compression
- Enable browser caching
- Reduce image sizes
- Use a CDN
- Use external hosting platforms
- Optimize CSS delivery
- Prioritize above-the-fold content (lazy loading)
- Reduce the number of plugins you use on your site

- Reduce redirects
- Reduce external scripts
- Monitor your speed over time
- Monitor mobile page speed

3.7.7 Functional Hierarchy

A hierarchical organization also imposes a useful discipline on your own analytical approach to your content, because hierarchies are practical only with well-organized material. The simplest form of hierarchical site structure is a star, or hub-and-spoke, set of pages arrayed off a central home page. One of the first things a potential client or customer will do is check out your business's website. Without a functional website, you could be losing out on potential leads and even leaving a negative impression of your brand. An easy way to get started is through a full-solution, e-commerce platform like Shopify or Squarespace. Your team can easily update online inventory and list new products. Plus, because the system is interconnected, sales, logistics and marketing are all kept apprised on what's working well. On the design front, e-commerce platforms offer several templates that match the needs of nearly any business type.

Here lots of items featured on their homepage. Note how they break items into specific categories but also offer highlighted deals of the day on their homepage. Each image is professional and shows the product clearly, but descriptions are initially brief, with more detail on the product page.

Chapter 4

Change Management Process

Human strategic resource is the main element for change within a company, whether changing size, changing shape or changing direction. We will not be able to handle any change without them and move forward with your business. We need to consider where the change is going to be applied, and what the change looks like before going into the change management process. A change plan will be created for the implementation of the change and following sequences of the changes is determined. The team will then continue implementing the new requirements. Then testing will be done on the new programmed system. In our system, development is essential. We strongly believe in reviewing every move before any adjustments are made. This will encourage the individuals who help manage it to make the most seamless transition possible at every step of the way for the organization itself. Few steps will be followed :

- Acknowledge and understand the need for change. The first step in any change is acknowledging and understanding the need for change.
- Communicate the need and involve people in developing the change.
- Develop change plans.
- Implement change plans.
- Evaluate progress and celebrate success.

Appendices

Appendix A

Glossary

Affiliate – an individual or business who promotes the products or services of another for a commission. Ecommerce sites run affiliate programmes to encourage other website owners to refer traffic, paying a commission on each sale through a given affiliate link.

Blog – an essential for any ecommerce business, a blog is simply an online log of content relevant to your market. These should be bolted on to your ecommerce site, and most platforms you choose to run your site will have an in-built blogging function, so you can attract both traffic and links to your store.

CMS – Content Management System, a back-end interface that makes editing content more user-friendly, e.g. WordPress.

Conversion Rate – The percentage of visitors to a given page that convert into customers.

CTA – Call To Action, the heading or phrase on your page encouraging the visitor to take action and click your buy button. CTAs have a proven impact on conversion rates.

Dropshipping – A type of ecommerce arrangement where the manufacturer or distributor ships directly to your customers, often in generic packaging. This means you don't hold stock, but expect to pay a greater cost per item sold.

Domain Name – the web address of your online store, for example www.myshop.com.

Ecommerce – online retail, the process of selling products online and on mobile through shops, 3rd party marketplaces like Amazon and Ebay, and other channels.

Fulfilment – A third-party service which looks after warehousing, stock management and delivery. Usually charged at a set per item price, outsourcing fulfilment can save significantly on the costs of processing stock.

Google Analytics – the industry standard for analytics, Google Analytics is a free tool you can link up with your website, enabling you to track traffic through your site and their interactions with you funnels and goals. Google Analytics provides invaluable insights about your website, which can be used as a basis for identify growth hacks.

Inventory – inventory is the stock in your business. As your store progresses, you will need to regularly check inventory levels, to ensure you are keeping an eye on shrinkage and minimum order levels, and that you are not promoting products you don't have in stock.

Landing Page – a landing page is a page your customers will land on, either from paid traffic or search traffic, designed to maximise the chances of conversion on a desired action. In some cases, a landing page will be used to capture email addresses, or will simply pitch a product directly to the website visitor.

Logistics – logistics is the process of getting your stock in and out, turning around the stuff you buy into the stuff you sell to your customers. Logistics proves an increasing challenge as your business scales, and many ecommerce businesses choose to outsource their logistics function.

Margin – margin is the profit percentage of a sale, after the cost of goods and expenses have been factored in.

Margin percentage is an essential metric in establishing the level of profitability in a given sale or product line.

Multi-Channel Ecommerce – multi-channel ecommerce is the process of selling goods and services across multiple different channels and devices, including online and on mobile.

Outsource – hiring third party providers to handle elements or functions of your business on your behalf, outsourcing is commonplace in ecommerce, on everything from web design to logistics and fulfilment.

Payment Gateway – the payment processor used to handle transactions on your ecommerce store, your payment gateway can be either on-site or off-site, depending on what works best for your model.

SEO – Search engine optimisation, the process of setting out your website and building links in a Google-friendly way, to ensure your website is given the best possible ranking within relevant SERPs.

SERP – Search engine results page, the page that is generated by searching for a given phrase on Google. SEO is all about moving up the SERPs, so your website is clickable from position number 1 of page 1, or as close to that as possible.

Social Signals – Social signals are a ranking factor in Google, drawn from social networks like Twitter, Facebook and Google Plus. Similar to links, they allow Google to determine which websites people are more likely to be interested in looking at, as one element of the wider ranking equation.

Social Media – Facebook, Twitter, Google Plus, Instagram, Pinterest and others, social media is a collecting of platforms where businesses can tap into targeted audiences through advertising, or through a comprehensive social media strategy.

Traffic – the levels of visitors coming to your site from a number of sources, traffic is the ‘input’ side of the ecommerce equation. More traffic generally results in more business, equivalent to footfall in the ‘real world’ environment.

Usability – the ease and efficiency with which your customers can use and interact with your website, central to the quality of their experience and your conversion rate. Usability now also extends to mobile and tablet devices, and the experience your ecommerce store offers across these channels.

Wholesale – the stage in the supply chain before retail, wholesale deals in bulk volumes. You may be buying stock wholesale, or selling wholesale to another trade party.

WordPress – WordPress is a free, open source blogging platform, used as a basis for creating ecommerce stores and a series of other websites. WordPress ties up with WooCommerce and others to provide ecommerce functionality through the WordPress platform.