Software Requirements Specification

for

Elite Shoppy

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1.   Introduction

1.1   Purpose

The purpose of this SRS is to collect and analyze all assorted ideas that have come up to define the system, its requirements with respect to consumers. Also, we shall predict and sort out how we hope this product will be used in order to gain a better understanding of the project, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops.

In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software development life cycle (SDLC) processes.

1.2   Document Conventions

This document follows and meets standards set by IEEE for writing and publishing an SRS.

1.3   Intended Audience and Reading Suggestions

This SRS is intended to be studied and comprehended by system designers, developers, project managers, testers, system owners and system administrators. The SRS describes all aspects of the platform as a product in detail. It also includes brief user guides for various features and functions. Care has been taken to incorporate all characteristics of the system in this document, with utmost accuracy. It follows a chronological order and is meant to be read in the same order.

1.4   Product Scope

The software system being produced is called Elite Shoppy. It is being produced for any person interested in selling products to a wider audience without having to go through the frills of selling on a traditional e-commerce platform, or promoting the products on social media platforms. Anyone can view these products and buy them. 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 and register as a customer/seller. The system will allow customers to view, browse, search and add products to the shopping cart. If the customer wishes to buy the products he can checkout. The system also allows the seller to manage the inventory with full create, retrieve, update and delete functionality with regards to products that the seller has added. With this platform, we aim at promoting local sellers to sell their products at the national level.

1.5   References

This document has been published in accordance with IEEE Recommended Practice for Software Requirements Specifications (Online ISBN: 0-7381-4723-0), which has also been used as a reference for drafting this SRS.

2. Overall Description

2.1 Product Perspective

A lot of people use social media as a medium to market their products, which is an incorrect and inefficient use of the existing platforms. Having said this, we thought of building a dedicated product to serve such sellers as well as enabling our customers to enjoy the shopping experience in a truly immersive way. Our product will be a completely new and self-contained product and will serve as a completely new platform for people who take help of social media to propagate their business sales. It will open up larger markets for such sellers, also helping them to increase their profits. The customers also get a benefit with access to products from markets all over the country.

2.2 Product Functions

Our product will provide a new and effective platform for people who advertise their products on social media platforms to get new customers and boost sales.
The platform will perform the following major functions:
- Provide comprehensive product details.
- Detailed product Categorizations
- Maintain data associated with inventory (collection of products)
- Maintain records for sellers
- Maintain customer profile
- Provide personalized profile for a customer
- Allow potential customers and sellers to securely login and logout of the system.
- Provide search functionality
- Email & SMS confirmation
- Provide functionality of a shopping cart
- Checkout
- Allow multiple payment methods
- Detailed invoice for customer.
- Offer online promotions and rewards.
- Allow cancellation of order
- Provide Customer Support.

2.3 User Classes and Characteristics

A typical "system" user can be any person who wishes to list products for sale, to a wide audience, and also people who wish to view and buy these products. We may distinguish the above user classes as a "seller" and a "customer" respectively. All the user classes must have basic understanding of a computer and a browser environment, along with a general idea of the steps involved in an online shopping environment.

2.4 Operating Environment

This E-commerce platform requires a computer/mobile with a web browser and internet connectivity to function as intended. Since this is a website, which will be accessed in a browser, it will be operating system independent.

2.5   Design and Implementation Constraints

Development of the system has to be done keeping in mind the fact that the product has to be deployed for users with all the documented functionalities and no security exceptions within a span of 4 months. Resources at hand are limited due to cost constraints.

2.6   User Documentation

An FAQ(Frequently Asked Questions) section will cater to most of the user related questions.
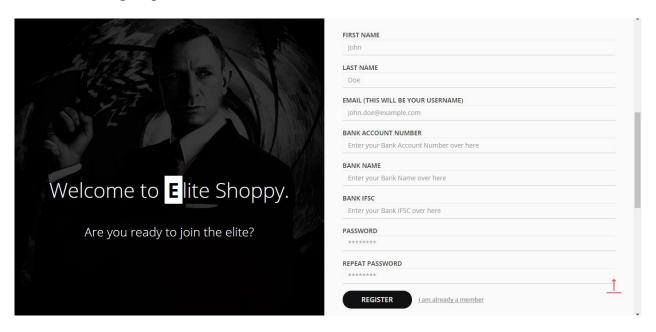
2.7   Assumptions and Dependencies

- Since the platform is only accessible through the internet, it is assumed that the end user has a connection to the internet. It is also assumed that the user has access to a web browser, which is able to display the website.
- We assume that system users adhere to the system's minimum software and hardware requirements.
- It is assumed that any user who registers as a seller on our platform has a RazorPay account set up beforehand. Also, it is assumed that the RazorPay key that is required to be submitted while seller registration is a valid key and is owned by the seller. Any error in the declaration of RazorPay key will result in erroneous transfer of payments.
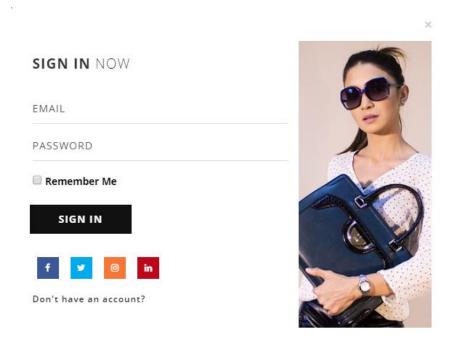
3.   External Interface Requirements

3.1   User Interfaces
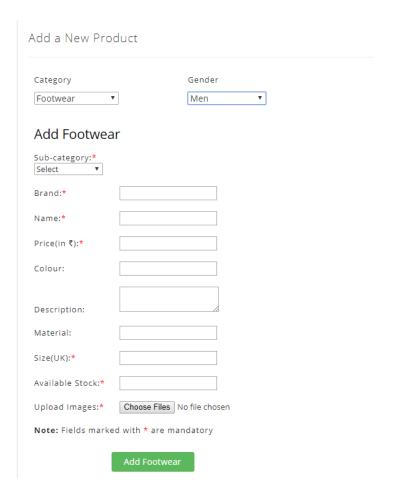
3.1.1   Seller Sign Up
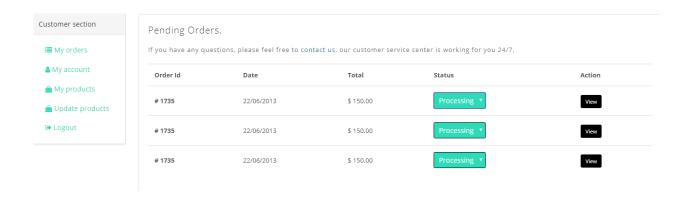
3.1.2 Seller Sign In
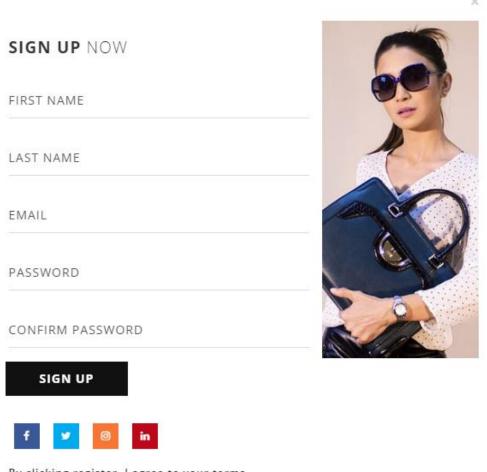
3.1.3 Seller Add Product

3.1.4   Seller Order Dashboard

Customer section	Pending Orders.				
My orders	If you have any questions, please feel free to contact us, our customer service center is working for you 24/7.				
My account	Order Id	Date	Total	Status	Action
My products	# 1735	22/06/2013	$ 150.00	Processing ▾	View
Update products	# 1735	22/06/2013	$ 150.00	Processing ▾	View
Logout	# 1735	22/06/2013	$ 150.00	Processing ▾	View

3.1.5   Customer Sign Up

SIGN UP NOW

FIRST NAME

LAST NAME

EMAIL

PASSWORD

CONFIRM PASSWORD

SIGN UP

By clicking register, I agree to your terms

3.1.6 Customer Sign In
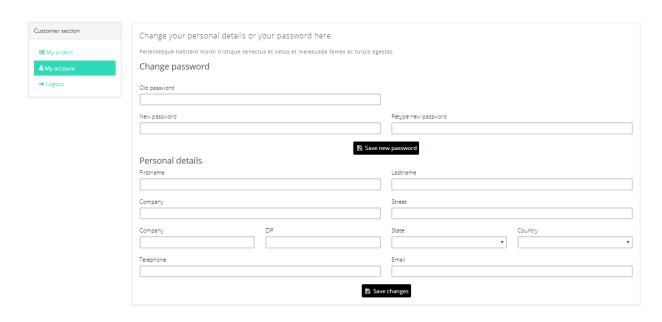
3.1.7 Customer Shopping Cart

Shopping Cart

		PRICE	QUANTITY		TOTAL
	Fancy Handbag Faux leather material burgundy colored satchel Do not expose to extreme heat	$12.99	2	Remove	$25.98
	Backpack travel hiking Bags Material - PU leather Golden Sequin Detail, 2 in 1 combo, 1 Handbag, 1 Clutch with wrist strap	$45.99	1	Remove	$45.99

SUBTOTAL	$71.97
TAX (5%)	$3.60
SHIPPING	$15.00
GRAND TOTAL	$90.57

‹ Continue shopping   Proceed to Checkout ›

3.1.8   Customer Profile
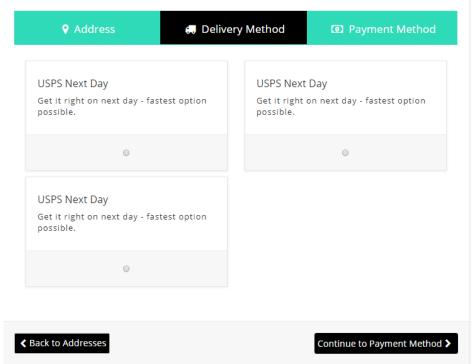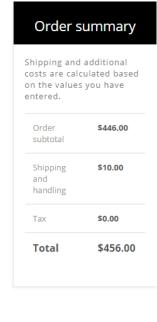
3.1.9   Customer Address Form
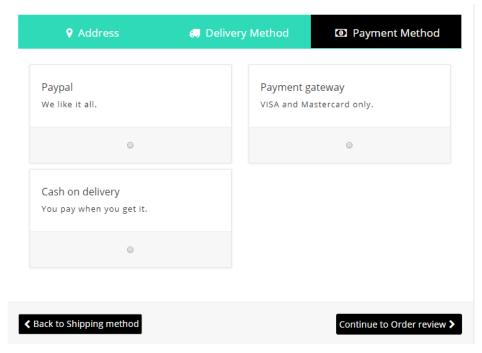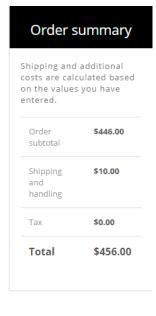
3.1.10 Customer Delivery Method Selection

3.1.11 Customer Payment Selection

3.2 Hardware Interfaces

Since the system runs over the World Wide Web, all the hardware required to connect to the internet will be the hardware interface for the system. For example, Modem, Ethernet cross-cable, etc. Any computer or mobile device with an internet connection and a web browser capable of displaying the website is supported by our system. Files need to be hosted on a high quality server. If cost restraints permit, then a dedicated server should be the way to go, because e-commerce sites experience high traffic from all around the world and it is mandatory that everyone gets access to the system, irrespective of the load that the server is currently carrying.

3.3 Software Interfaces
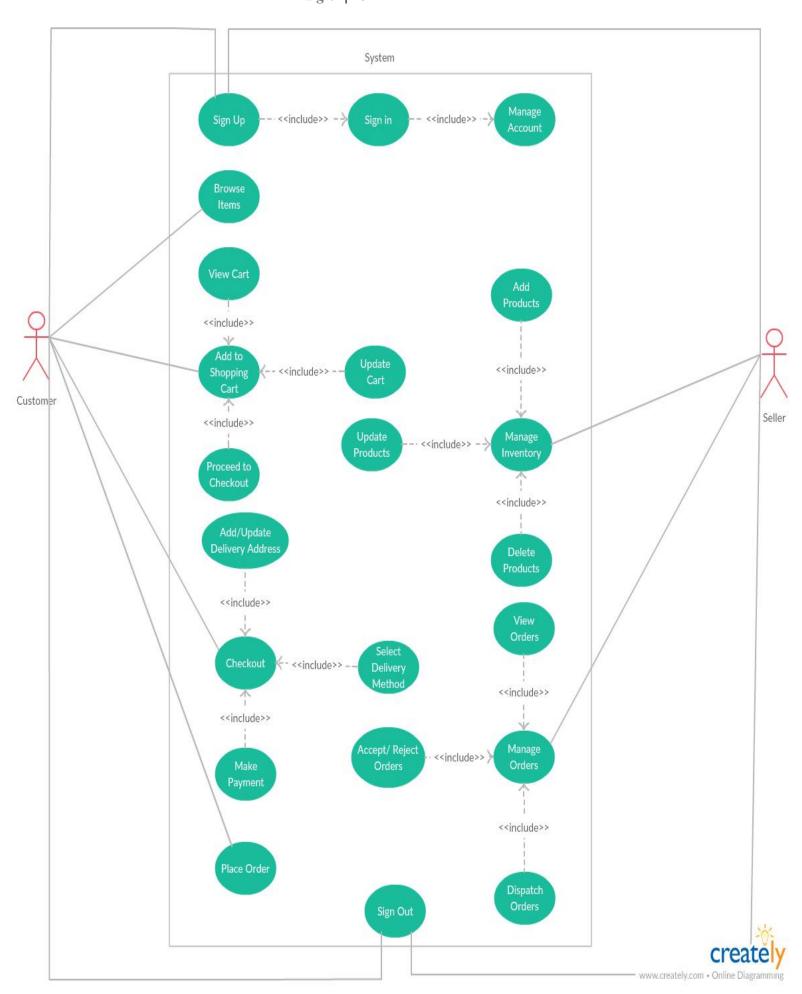
1. The E-Commerce system shall communicate with messaging services like msg91 to provide updates to the customers about their orders.
2. The E-Commerce system shall communicate with the content manager to get the product specifications, offerings and promotions.
3. The E-Commerce system shall communicate with RazorPay system to identify the available payment methods, validate the payments and process it.
4. The E-Commerce system shall communicate with the sellers for order management.
5. The E-Commerce system shall communicate with the shipping system for tracking orders and updating the shipping methods.
6. The E-Commerce system shall communicate with the external Tax system to calculate tax.

3.4 Communications Interfaces

The E-commerce system shall use the HTTP protocol for communication over the internet and the intranet communication will be through TCP/IP protocol suite. All communications between the server and client machine will be encrypted to ensure integrity and privacy of data. Secure Socket Layer (SSL) shall be used, which will ensure that all communications take place securely over HTTPS.

4. System Features

This subsection contains the requirements for each of the system features for the online store. These requirements are organized by the features discussed in the functions in the product overview. Features from the overview are also refined into use case diagrams

4.1   Provide comprehensive product details.
4.1.1   The system shall display detailed information of the selected products.
4.1.2   The system shall provide browsing options to see product details.

4.2   Detailed product Categorizations
4.2.1   The system shall display detailed product categorization to the user.

4.3   Maintain data associated with inventory (collection of products)
4.3.1   A product has a category, name, description, price.
4.3.2   Inventory keeps track of stock/quantity for each product.

4.4   Maintain records for sellers
4.4.1   A seller should be a registered user to display his products for sale.
4.4.2   A seller should login to the admin panel in order to
4.4.3   Update stock/inventory.
4.4.4   View/Accept/Reject orders.
4.4.5   Add/Remove products for sale.

4.5   Maintain customer profile
4.5.1   Anyone may visit the website and become a registered user.
4.5.2   A customer should be a registered user to place an order.
4.5.3   A customer has a user name, password, email and postal address.
4.5.4   A customer can update his profile information.

4.6   Provide personalized profile for a customer
4.6.1   System will display both the active and completed order history in the customer profile.
4.6.2   System will display detailed information about the orders.

4.7   Allow potential customers and sellers to securely login and logout of the system.

4.8   Provide search functionality
4.8.1   System will enable user to enter the search text on the screen.
4.8.2   System will display all the matching products based on the search.
4.8.3   System will display only 10 matching products based on the search.
4.8.4   System will enable user to navigate between the search results.
4.8.5   System will notify the user when no matching product is found.

4.9   Email & SMS confirmation
4.9.1   System will maintain customer email information and mobile as a required part of customer profile.
4.9.2   System will send an order confirmation to the user through email and SMS.

4.10   Provide functionality of a shopping cart
4.10.1 System will allow user to add/remove products in the shopping cart.
4.10.2 Display the products added into the shopping cart by visitor.
4.10.3 Maximum limit for purchase of any available product is dynamically updated.

4.11   Checkout

4.11.1 Checkout is only available to customers who are logged in
4.11.2 Display final list of products ordered
4.11.3 Display total amount payable by the customer
4.11.4 Log/Record the transaction

4.12 Allow multiple payment methods
4.12.1 System will display the available payment methods.
4.12.2 System will allow the user to select the payment method.

4.13 Detailed invoice for customer.
4.13.1 The system shall display detailed invoice for current order once it is confirmed.
4.13.2 The system shall optionally allow user to print the invoice.

4.14 Offer online promotions and rewards.
4.14.1 The system shall display all the available promotions to the user.

4.15 Allow cancellation of order
4.15.1 System will display orders that are eligible for cancellation.
4.15.2 Orders that are yet to be dispatched are eligible for cancellation.
4.15.3 System will notify the user about any changes made to the order.

4.16 Provide Customer Support.
4.16.1 The system shall provide online help, FAQ's customer support, and sitemap options for customer support.
4.16.2 The system shall allow user to select the support type he wants.
4.16.3 The system shall allow user to enter the customer and product information for the support.
4.16.4 The system shall display the customer support contact numbers on the screen.
4.16.5 The system shall allow user to enter the contact number for support personnel to call.
4.16.6 The system shall display the online help upon request.
4.16.7 The system shall display the FAQ's upon request.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

This section lists the performance requirements expected from the online shopping-cart application.
- It is important that a large number of users be able to access the system at the same time. Server should be able to handle this load and maintain an acceptable speed of operation.
- The customers shall be able to add an item to the cart in fewer than 10 seconds.
- The users shall be able to view information about an item in fewer than 10 seconds.
- The users shall be able to checkout the items in the shopping cart within 15 seconds after completing the checkout procedure.
- The navigation between pages shall take fewer than 5 seconds.

5.2 Safety Requirements

- If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.
- Information transmission should be securely transmitted to server without any changes in information.

5.3 Security Requirements

- Security of the communication between the system and server.
- The messages should be encrypted for log-in communications, so others cannot get user-name and password from those messages.
- Security of creating account for users of the system
    - If a user tries to log in to the web portal with a non-existing account then the user will not be logged in.
    - If a user wants to create an account and the desired user name is occupied, the user should be asked to choose a different user name.
    - A hashed form of the password submitted by the user is stored in the database and every time a user tries to login, the password is hashed and compared with the hash of the password in the database. User is logged in only on providing the correct combination of email-id and password.
- The system will never display a customer's credit card number after retrieving it from the database. It will always be shown with just the last 4 digits of the credit card number.
- Purchases will be handled through a secure server to ensure the protection of user's credit card details and personal information.

5.4 Software Quality Attributes

The system is designed with usability as the first priority. The website will be presented and organized in a manner that is both visually appealing and easy for the user to navigate.

1. Customers:
- **Integrity**
    - It is essential to preserve data integrity, thereby making the display of correct and intact data to the users of the system very important.
    - The online shopping cart will provide a user specific interface.
- **Availability**
    - It should be ensured that the system is available at the disposal of the end user at all points of time, irrespective of traffic conditions.
- **Security**
    - Users will be able to access only their own personal information.
    - Financial transactions will be handled through a secure server to ensure the privacy of user's bank/card details and personal information.
- **Response Time**
    - Response time taken by the server to cater to the client should be within acceptable limits, even under high traffic conditions.
- **Reliability**
    - System should be reliable with respect to display of information regarding products (for customers), orders (for sellers) and the transactions performed while placing an order.

- The foundation of a reliable system is the backup of the database, which is continuously maintained and updated at fixed yet frequent intervals of time, to reflect the most recent changes.

2. Developers:
- **Maintainability**
    - Platform should be developed in a way which enables developers to carry out future updates, addition of functionalities and bug fixes in a very simple way, without struggling to understand the architecture of the platform.
- **Testability**
    - Before being thrown open for users to use our platform, the system needs to be examined thoroughly for any faults in business logic, security shortcomings or bugs that prevent the system to function as intended.
    - System should be coded in a way which is easy to comprehend by the testers.
    - Debugging, in case any errors are recognized, should be a simple task as well.
- **Code reusability**
    - While performing the addition of system fragments and functionalities, we find that parts of system code that needs to be written by the developer has already been written, executed and tested. This task becomes comparatively effectively effortless if the code has been written in a clean and comprehensible manner.

Overall, the layout and UI of the website will be simple enough to let the users figure out the sitemap of the website in no time and navigate through various sections and pages of the website with ease.

5.5 Business Rules

Customers will be only allowed to perform buying related functions and sellers are only supposed to manage inventory and orders. No users shall have direct access to the entire database.

6. Other Requirements

E-Commerce system should display the disclaimers, copyright, word mark, trademark and product warranties, exchange and return policies for all the products listed. There are no legal requirements.

Appendix A: Glossary

F
FAQ   Frequently Asked Questions

H
HTTP   Hyper Text Transfer Protocol
HTTPS   HyperText Transfer Protocol Secure

I
IEEE   Institute of Electrical and Electronics Engineers

S
SDLC   Software Development Life Cycle
SRS   Software Requirements Specification
SSL   Secure Socket Layer

U
UI   User Interface

Appendix B: Analysis Models

Entity-Relationship Diagram: