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Software Requirements Specification

1. Introduction

The introduction of the Software Requirements Specification (SRS) provides a short summary of the entire SRS through the purpose, scope, and overview of the SRS. The aim of this document as a whole is to give insight into this project's requirements, goals, and the overall needs that must be met to deliver a successful product. It also provides the many capabilities that the client requested be achieved before delivery as well as features to be implemented for an improved user experience.

1.1 Purpose

The purpose of this document is to provide the developers and client with an accurate representation of what the final product is supposed to do. By documenting the requirements, both parties reduce confusion in communication and can create a checklist of features that either need to be completed or are finished. When the client receives the product, they can view this document to determine if all of the listed requirements where in fact met. This document will also help the developers in designing the product based on the needs of the client and provide a constant reminder of what steps must be taken in the project's lifecycle.

1.2 Scope

The scope of this document is anything and everything relating to the client's satisfaction with the final product. Primarily, focusing on the specific requirements for functionality discussed over the course of the project, as well as key components of the project that do not relate directly to functionality but to the overall usefulness of the product.

1.3 Overview

The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's hardware, and the functional and data requirements of the product. General description of the project is discussed in Section 2 of this document. Section 3 gives the functional, data, and specific

requirements, as well as constraints and assumptions made while designing the project. Section 3 also discusses key components for the project's development.

2. Overall Description

This document attempts to display the requirements that must be completed when designing this project in order to successfully fill our client's need to be able to sell their products over the internet in an efficient and profitable manner. It further lists and briefly describes the major modules of the project as well as the functionality each module should have in the final iteration. Following those modules are a list of other requirements to satisfy that support the product during its post-delivery lifecycle.

3. Specific Requirements

3.1 Functionality

3.1.1 Cart

3.1.1.1 The cart shall display information about all products within it

3.1.1.2 The cart shall allow the user to add products to it

3.1.1.3 The cart shall allow the user to remove products from it

3.1.1.4 The cart shall display the current total price of all items in it

3.1.1.5 The cart shall only allow the user to see its contents

3.1.1.6 The cart shall notify the user if it is empty

3.1.1.7 The cart shall allow the user to save the status of their cart and come back to it   later

3.1.1.8 The cart shall allow user to confirm the contents of their cart and check out

3.1.1.9 The cart shall allow the user to remove all items at once *

3.1.1.10 The cart shall allow the user to modify the quantity of the items in their cart

3.1.2 Orders

3.1.2.1 The application shall allow the user to place an order of desired items originating from the cart

3.1.2.2 The application shall allow the user to view the details of each order

3.1.2.3 The application shall allow the user to view the items in each order

3.1.2.4 The application shall allow the user to view the cost of a specific order

3.1.2.5 The application shall allow the user to view the shipping status of each order

3.1.2.6 The application shall assign a unique identifying order number for every order

3.1.2.7 The application shall allow the user to cancel an order *

3.1.2.8 The application shall keep track of all orders for a user

3.1.2.9 The application shall allow the user to search through past orders

3.1.2.10 The application shall assign a unique id for each order in the database

3.1.2.11 The application shall store order information to the database

3.1.2.12 The application shall create an order summary after paying for the order

3.1.3 User

3.1.3.1 The application shall allow the user to login to their store account which is accessed with their unique name and their password *

3.1.3.2 The application shall keep all of the user's information in a database, allowing the user to avoid reentering their information each time they use the site.

3.1.3.3 The application shall allow the user to view their personal information

3.1.3.4 The application shall allow the user to update their personal information

3.1.3.5 The application shall display a menu of options for the user to choose from

3.1.3.6 The application shall allow the user to navigate to their cart from the menu

3.1.3.7 The application shall allow the user to view all the items available in the store

3.1.3.8 The application shall allow the user to add money to their balance

3.1.3.9 The application shall allow the user to purchase items from the store using their cart to indicate desired items

3.1.4 Item

3.1.4.1 The application shall have a store consisting of all the items available for purchase

3.1.4.2 The application shall display various information about the item which includes its title, description, cost, id, and quantity in stock.

3.1.4.3 The application shall allow the user to add items from the store to their cart

3.1.4.4 Each item will have a unique id for referencing the item

3.1.5 Transaction Processor

3.1.5.1 The application shall process transactions for a user after confirming an order

3.1.5.2 The application shall prevent the transaction from occurring if the user does not have enough funds in their balance.

3.1.5.3 The application shall prompt the user to add more funds if their order costs more than their available funds

3.1.5.4 The application shall generate a unique identifying number for every transaction performed on the store

3.1.5.5 The application shall store valid and completed transactions in a database with references to the unique order id number and user name

3.2 User Experience

    3.2.1 Graphical User Interface

        3.2.1.1 When implemented, the system shall provide a user interface which provides an easy to navigate store, complete with images for each product, a series of menu toolbars and buttons, and a search bar

3.3 Reliability & Availability

    3.3.1 Storage of Data

        3.3.1.1 The system will provide a server side database where user data, order history, and transactions are stored for administrative logging

        3.3.1.2 These records will be kept updated regularly as more data is received

        3.3.1.3 The use of the database will allow for user verification and to account for inventory management, and provide historical data of all transactions reducing future conflicts in both customer support, management, and logistics

        3.3.1.4 The database shall also be kept on several other backup servers in order to prevent loss of critical data during unforeseen events

    3.3.2 Internet Connection

        3.3.2.1 The system will have a contractual agreement with an Internet Service Provider with an expected availability of 99% as increased downtime results in loss of sales

3.4 Performance

    3.4.1   The system shall be connected to a web server and all traffic will be navigated through these servers

    3.4.2   The initial connection time should be as short as possible, but ultimately depends on the user's internet service

3.4.3   The server side host will maintain up-to-date versions of both the product itself as well as the corresponding drivers, software, and programming language needed to run the product

3.4.4   Transactions made on the system should process and update records on the database with as little delay as possible

3.5 Security

3.5.1   User's information shall be confidential to everyone besides the user and approved administrators

3.5.2   Transactions shall be made using a secure socket connection

3.5.3   Suspicious transactions shall first require a verification code which is sent to the user's email

3.5.4   Password information will not be stored by server, only hash values will be kept in database records to provide login verification

3.5.5   Connection to the store will be done using a secure socket connection established prior to logging into the user account

3.5.6   Data stored in the database shall be encrypted

3.5.7   Credit Card information shall only be referenced by the last 4 digits of the credit card number after being initialized by the user