Software Requirements Specification

for

CRAFT HIVE

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1.   Introduction

1.1   Purpose

The project is aimed to help small scale craft to gain an income by selling their product. Small scale craft maker's doesn't get enough reach on SNS platforms , though they post it on social media if they aren't among the top their works are not recognized and it is a waste of time and money for them. This application helps small scale makers to get enough reach through advertisements. Application also has an option for customized products. This Project aims to create a web based application that helps small scale craft workers and help them increase their sales .Here in our application the buyers can buy , pay and review the products they bought .

1.2   Document Conventions

This document follows IEEE format. Bold-faced text has been used to emphasize section and sub-section headings.

1.3   Product Scope

Craft hive is a craft item shop web application is intended to provide complete solutions for seller as well as customers through a single get way using the internet. It will enable vendors to setup online shops, buyer to browse through the shop 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 shops and maintain various lists of shop category. A payment gateway service also provided for the application. The buyer can also request for customized product. The application also have a chat platform between buyer and vendor to make customized craft product. The buyer have to pay an advance amount for customized product to cover the vendor's loss if the buyer cancels the product in the future. This system allows the buyer's to maintain their cart for add or remove the product over the internet.

1.4   References

https://www.hobbycraft.co.uk/easter/easter-crafts/easter-card-making/
https://www.tutorialspoint.com/software_testing_dictionary/software_requirement_specification.htm

2. Overall Description

2.1 Product Perspective

This project is aimed to help small scale craft makers .Though many social networking platforms like instagram , facebook etc are already available for craft makers to sell their product but it's only useful to those in the top and many of the small scale craft workers aren't recognized there. This application is focused on small scale craft makers to help their product reach a wider range of people.

2.2 Product Functions

- Administrator
  The administrator is the super user and has complete control over the activities that can be performed. The application notifies the administrator of all shop creation requests, the administrator can then approve or reject them.
- Seller
  Any user can submit a request through the application to sell products. When the request is approved by the administrator , and from there on is given the role of a seller/shop owner. The seller can sell products and can also manage the items the sell i.e they can update the items by either adding ,deleting or increasing the price of the product.The seller can view the reviews given by the buyers ,they can also chat with the buyer in the case of customized product.
- Buyer
  The buyer can browse through the website and choose the products to place in a virtual shopping cart and wishlist. Both the shopping cart details can be viewed and items can be added and deleted from it by them.They can also modify the personal information such as phone number , address . They can see the status of the order and can cancel order before the order is shipped.

2.3 User Classes and Characteristics

- There is an Administrator and two types of users in this system.
- Administrator are the ones who administrate the entire system.
- Two types of users are seller and buyer , seller sells the product and buyer buys those products.
- The users should be familiar with online shopping related terminology, online transcations etc.

2.4   Operating Environment

Hardware Requirements
- RAM :4 GB and above
- Processor:Pentium Processor and above

Software Requirements
- Front end: HTML 5.0 ,CSS, JavaScript
- Back end: MySQL or PostgreSQL.

2.5   Design and Implementation Constraints

- The main constraint would be checking the genuineness of the buyer which is not always possible, there can be risks involved.
- The website should be accessible from different types of client devices such as desktops, laptops, tablets, and smartphones.
- The website should be compatible with different operating systems and web browsers, and should adapt to different screen sizes and resolutions.
- The website should be compatible with different operating systems such as Windows, macOS, and Linux.
- The website should work with different versions of the operating system, and should be tested to ensure compatibility and stability.

2.6   Assumptions and Dependencies

- No Multilingual Support
- A Vendor can edit only their own product edits

3.External Interface Requirements

3.1. User Interfaces:

- The website should have a user-friendly interface that allows users to easily navigate and browse through products, add items to their shopping cart, and checkout securely.
- The website should support different types of users, such as buyers, sellers, and administrators, each with their own unique interfaces and functionalities.
- A logged in user can also view the items in the cart and buy them. There are pages which displays the details accordingly.

3.2. Hardware Interfaces:

- The website should be hosted on a server that meets the requirements for performance, reliability, and security.

- The server hardware should have sufficient processing power, memory, storage, and bandwidth to handle the expected traffic and load.
- The website should be accessible from different types of client devices such as desktops, laptops, tablets, and smartphones.
- The website should be compatible with different operating systems and web browsers, and should adapt to different screen sizes and resolutions.

3.3. Software Interfaces:

- The website should be compatible with different operating systems such as Windows, macOS, andLinux.
- The website should work with different versions of the operating system, and should be tested to ensure compatibility and stability.
- The website should use a database management system (DBMS) to store and manage data, such as MySQL or PostgreSQL.
- The DBMS should be configured to optimize performance, security, and data integrity.
- The website should integrate with a payment gateway software that allows for secure and efficient processing of payments from different payment methods.

3.4. Communication Interfaces:

- The website should use the hypertext transfer protocol (HTTP) for communication between the client and the server.
- The website should use the internet protocol (IP) for communication between the client and the server.
- The website should provide email notifications to users, such as order confirmation, shipping status, and account-related notifications.
- The email notifications should be secure, reliable, and comply with data protection regulations, such as GDPR and CAN-SPAM Act.

4. System Features

4.1. Register and log in

4.1.1 Description and Priority

This feature allows the users to create an account in the system. To be able to buy any craft item or to buy a customized product he/she must have an account and must be logged into it. This feature enlists the user's details in the database. Thus, it has a higher priority. Also, the seller has also been provided a separate login so they could register into the database providing his information as a new seller, provide information about his products and add product details so that customers could have a detailed understanding about the product.

4.1.2 Stimulus/Response Sequences

Customer can access the login by clicking onto the login button or by clicking on the button or link to initiate registration process. The system then prompts the user to fill out his/her first name, last name, shipping address, email address, and their password. Here the users can identify themselves as a buyer or seller. User successfully initiates the login procedures. Afterwards the system validates the user's data and creates a new account for the user. Once a customer registers, he/she clicks on the log in button to initiate the login process. The system prompts the customer for his/her email and password and verifies the information. After verification the system direct towards site home page to the Customer.

4.1.3 Functional Requirements

REQ-1: Button to register or log in must be available

REQ-2: A table in the database for all users.

4.2. Add to Cart and View Cart

4.2.1 Description and Priority

This feature enables a user to browse through different products, crafts in the home page and add any product to the cart as he/she wishes. The user can detail the specifications he/she wants to add to the customary products in the cart. On tailing 'View Cart' the user must be able to see all the items in his/her cart.

4.2.2 Stimulus/Response Sequences

If the product is not available, then a message informing the unavailability must be displayed or else the item is to be added into the user's cart.

4.2.3 Functional Requirements

REQ-1: A button for adding to cart.

REQ-2: A button for viewing items in cart.

REQ-3: A table in the database must be created having all the products available and each product's details must be present.

REQ-4: A table for items added to cart must also be available

4.3. Confirm Order

4.3.1 Description and Priority

This feature allows users to confirm the orders placed by them. Thus he/she could further move to detail payment for his order.

4.3.2 Stimulus/Response Sequences

Customer clicks the button or link to initiate the confirmation process. Customer confirms the order. System stores order confirmation and order details and prints the bill. Followed with payment confirmation.

4.3.3 Functional Requirements

REQ-1: A template/window dealing with the items ordered must be created.

REQ-2: The table regarding selection of products must be updated simultaneously as soon as the user processes a request.

REQ-3: A table dealing with all the orders by different customers must be maintained.

4.4. Add and Update Products

4.4.1 Description and Priority

This feature is available for the administrator.The administrator can add products and update details of the product in the database.

The administrator collects information of products from sellers, update details, outlines fascinating works and designs to be showcased for the customers.

4.4.2 Stimulus/Response Sequences

Administrator clicks the button to initiate Add Product process. The system prompts the administrator to fill out product details. System validates the new product information and adds it to the database. Administrator clicks the button to initiate Update Product process. The system prompts the administrator to fill out product ID. The corresponding product details are displayed. The admin can update any value except the ID of the product. System validates the new product information and updates it into the database.

4.4.3 Functional Requirements

REQ-1: A separate log in for the administrator must be created.

REQ-2: An administrator cannot buy a product.

4.5. View Order Details

4.5.1 Description and Priority

This feature is available for the administrator. The administrator can view the order details of all users. Users could inspect their order history at the bought items and specify any clarifications regarding his or her purchase.

4.5.2 Stimulus/Response Sequences

Administrator clicks the button to initiate View Order Table process. Details of each customer and his/her order details are printed. User clicks the button to initiate order details. Description of bought products are presented as a list.

4.5.3 Functional Requirements

 REQ-1: A separate log in for the administrator must be created.

 REQ-2: An administrator cannot buy a product.

4.6. Product Customization

4.6.1 Description and Priority

This feature allows users to follow up information regarding the product. Users could buy customized products according to his/her ideas. Here users can communicate with the seller or artist to customize their products according to one's need. The users can directly move towards the payment page once customary product details are provided.

4.6.2 Stimulus/Response Sequences

User clicks the button to initiate customize product. Details of artists are provided along with a chat bot to process the request and for requesting the customization, clarify any doubts regarding the purchase.

4.6.3 Functional Requirements

 REQ-1: A separate log in for the administrator must be created.

 REQ-2: An administrator cannot buy a product.

 REQ-3: A user can cart their designs and initiate payment.

4.7. Payment

4.7.1 Description and Priority

The user is given options with various modes of payment (online payment through credit/debit cards, via net or mobile banking or cash on delivery) out of which he chooses one. The chose mode of transaction is carried out therefore by proper verification and authentication of bank details.

4.7.2 Stimulus/Response Sequences

The user can initiate payment by clicking the button, then the page redirects to the payment interface where he/she can fill out the payment details and initiate buying.

4.7.3 Functional Requirements

 REQ-1: Payment details should be provided.

REQ-2: Transaction data to be stored in a database table.

REQ-3: Modes of payment must be verified accordingly for customer protection.

4.8. Reviews and ratings

4.8.1 Description and Priority

Users can give review about the product quality material quality and build quality. These reviews can be viewed by other users. And the seller can rectify the product error and improve it's quality.

4.8.2 Stimulus/Response Sequences

And the response of the command can be given by the users

4.8.3 Functional Requirements

REQ-1: Star buttons can be given

REQ-2: Row for comments

5. Other Nonfunctional Requirements

5.1. Performance Requirements

Maximum possible quick response to the orders is required, also should provide fast updation of records. The changes if any made should be reflected automatically in the next screens. 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.

5.1.1 Website speed

5.1.2 Security

5.1.3 Customer support

5.2. Safety Requirements

The application is password protected and also any updation of new product entries and order processing is done by only privileged users. Make sure that the website is secure and uses SSL encryption to protect personal and financial information.

5.2.1 Payment security: Ensure that the payment process is secure and encrypted. Use trusted payment gateways, which have their own security measures in place.

5.2.2 Strong passwords: Use strong passwords and change them regularly to prevent unauthorized access to your account.

5.2.3 Privacy policy: Make sure that the online shop has a clear and transparent privacy policy, which outlines how they collect, store, and use your personal information.

5.3. Software Quality Attributes

The necessary qualities of software products are

5.3.1 Security:

The application is password protected and also any updation of new product entries and order processing is done by only privileged users.

5.3.2 Maintainability:

The application is to be designed so that it is easily maintained. Also it should allow incorporating new requirements in any module of system.

5.3.3 Reliability:

The application will be able to handle two orders. When a user confirms his/her order the database will be updated immediately and the next user will not face problems in ordering.

5.3.4 Portability

The application will be easily portable on any window based system.

5.4. Business Rules

Only the admin can add products in the database.

For Sellers:

The seller can only add product to the database which is approved by the admin.

5.4.1: Provide clear and accurate product description**s:** The product descriptions should include all the relevant information about the product, such as features, dimensions, colors, etc.

5.4.2: Display high-quality product images: High-quality product images help customers get a better understanding of the product and make an informed purchase decision.

5.4.3: Set competitive prices: Price your products competitively to attract more customers. Consider the cost of production, shipping, and other fees when setting prices.

5.4.4: Offer secure payment options: Provide secure payment options to ensure customer's payment details are protected. Use trusted payment gateways and provide encryption technology for secure transactions.

5.4.5: Provide excellent customer service: Respond to customer queries and complaints promptly, offer returns and refunds, and strive to provide an overall positive shopping experience.

For Buyers:

The buyers could only buy or search the approved products.

5.4.6: Read product descriptions carefully: Read the product descriptions carefully to understand the product's features, dimensions, and other details before making a purchase.

5.4.7: Check product reviews: Check product reviews from other customers to get an idea of the product's quality and reliability.

5.4.8: Compare prices: Compare prices of the same product on different online stores to get the best deal.

5.4.9: Check shipping and delivery details: Check the shipping and delivery details to ensure that the product will arrive within the desired timeframe.

5.4.10: Protect your payment information**:** Ensure that you are using a secure payment gateway and protect your payment information by not sharing it with anyone.

Appendix A: Glossary

SNS - Social Networking Service
IEEE - Institute Of Electrical And Electronics Engineers
HTML - Hypertext Markup Language
CSS - Cascading Style Sheets
SQL - Structured Query Language
DBMS - Database Management System
GDPR - General Data Protection Regulation
CAN - SPAM Act - Act created by United States in 2003 to establish a national standard for sending commercial emails and regulating spam emails.
REQ - Requirement