Software Requirements Specifications

Online Music Store

A web based application for project management and collaborative work

Texas State University

CS 4398/5394

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Contents

1. Introduction

1.1 Document Purpose :

The purpose of the document is to illustrate the requirements and specifications for Online music store. The document gives the detailed description of functional and non-functional requirements proposed by the client.

1.2 Product Scope:

This website will show the landing page, product model and product list. An user can create their account in this online store by entering their details, so that, their information can be saved whenever they want to make purchase from this store. This online store also provides shopping cart functionality. An user can add products to their cart to make purchases later. The products in the cart should be saved and an user will be able to add/remove products from his/her cart. And an user should be able to checkout their order. If a customer wants to make one time purchase, he/she can login as a guest.

1.3 Intended Audience and Document Overview:

The requirements document is intended for end-users and programmers of this software system.

2. Statement of functional requirements

2.1 Product Perspective:

This project is a self-contained web application that stores information in the database, it does not interface with other products. The only requirement is the user has access to a web browser which is included in most operating systems today.

2.2 System Interfaces:

As previously stated in section 2.1, this is a self-contained system that relies on very little in the way of interfaces. As it is a web application the users will connect to a server. The interfaces that will be required to be installed on the server computer are as follows:

- A network interface to provide an internet connection.
- A database containing the user's data
- The data for all the music albums.

2.3 Product Functions:

User:

2.3.1. Register:

A user can create a new account with personal information. The User Account System will store the following information: First Name, Last name, Shipping Address, Billing Address, Email,

Cell-Phone number, Credit Card Information, Purchase History, and Items in the User's Cart.

2.3.2. Login:

This function will allow the user to enter the login id and the password to access their account.

2.3.3. Logout:

It allows the users to exit the account for security purposes.

2.3.4. Update Profile

This feature gives the user the ability to add or modify information entered by the user at the time of registration. The users edited profile information will be updated into the database. Information like First name and Last name, Shipping address, Billing Address, Credit/Debit card details, Email Address, Cell-Phone, Date of Birth can be updated.

2.3.5. AddtoCart

The add to cart function gives the user the option of adding items of choice from the store to the Cart.

2.3.6. Edit Cart

This allows the users to make changes to the cart. A user can add items to the cart or delete items from the cart.

2.3.7. CheckOut

The checkout function allows the user to purchase items in the cart.

2.3.8. GuestCheckout

This function will allow user to purchase items as a guest, without creating an account.

2.3.9. View Cart

The View Cart function allows users to view the products in the cart.

2.4 User Characteristics

As the UI is pretty much intuitive, any user with moderate computer literacy is able to use it. An intended user will be familiar with using other web applications. This product is designed for the individuals to purchase the music albums. Also, the user will be completely aware of the basic network related issues; e.g. internet connection down, internet not getting connected to the system etc. and is supposed to contact the respective system admin of their company.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Register

Description: Refer section 2.3.1.
Inputs: password, email, name, shipping/billing address, cellphone no., date of birth, card details
Password: The password must be at least 8 characters in length and should be combination of uppercase letters, lowercase letters and numbers.
Email: The general format of an email address is name@domain
Name: The name cannot contain numeric and special characters.
Shipping/Billing Address: The shipping address should be in the format of local street address, apartment number, city, state and zipcode.
Cell-phone no: Cell-phone must contain 10 digits.
Date of birth: The format of date of birth should be mm-dd-yyyy.
Credit card details: Credit card number should be of 16 digits and the user should select whether it is a master card or visa card. The format for expiration date should be mm-yy. Also the CVV number should be 3 digits.
Source: User.
Output: New user is successfully registered.
Destination: The database.
Requires: User should not exist in the database.
Pre-Condition: The registration option is available.
Post-Condition: An account for the User is created.

3.1.2 Login

Description: Refer 2.3.2.
Inputs: Username and Password.
Username: The user must enter valid email address.
Password: The password should match the password stored in the database for that account.
Source: User.
Output: The user gets successfully logged in.
Destination: The website.
Requires: The Login information is correct.
Pre-Condition: The login option is available.
Post-Condition: The user is logged in.

3.1.3 Logout

Description: Refer 2.3.3.
Inputs: Logout Option.
Source: User.
Output: The user will be logged out from the website.

Destination: The website.
Requires: The user should be logged in.
Pre-Condition: The logout option is available.
Post-Condition: User is logged out of the session.

3.1.4 Update profile

Description: Refer section 2.3.4.
Inputs: Updated user data.
Email: The general format of an email address is name@domain.
Name: The name cannot contain numeric and special characters.
Shipping/Billing Address: The shipping address should be in the format of local street address, apartment number, city, state and zipcode.
Cell-phone no: Cell-phone must contain 10 digits.
Date of birth: The format of date of birth should be mm-dd-yyyy.
Credit card details: Credit card number should be of 16 digits and the user should select whethe it is a master card or visa card. The format for expiration date should be mm-yy and CVV number should be three digits.
Source: User.
Output: User profile is update with modified information provided.
Destination: The database.
Requires: The details entered to be correct.
Pre-Condition: The profile update option is available.
Post-Condition: The updated profile is displayed.

3.1.5 Add to cart

Description: Refer section 2.3.5.
Inputs: User adds the selection to the cart.
Source: User
Output: The selected item is added to the cart.
Destination: The cart.
Requires: Requires user to add a product.
Pre-Condition: Add to the cart option is available.
Post-Condition: The products are added to the cart.

3.1.6 Edit cart

Description: Refer section 2.3.6
Inputs: cart.
Source: User.
Output: The modified cart is displayed with updated balance.
Destination: cart
Requires: The cart should not be empty, and user should modify items existing in the cart.

Pre-Condition: Edit cart option is available.
Post-Condition: The updated cart is displayed.

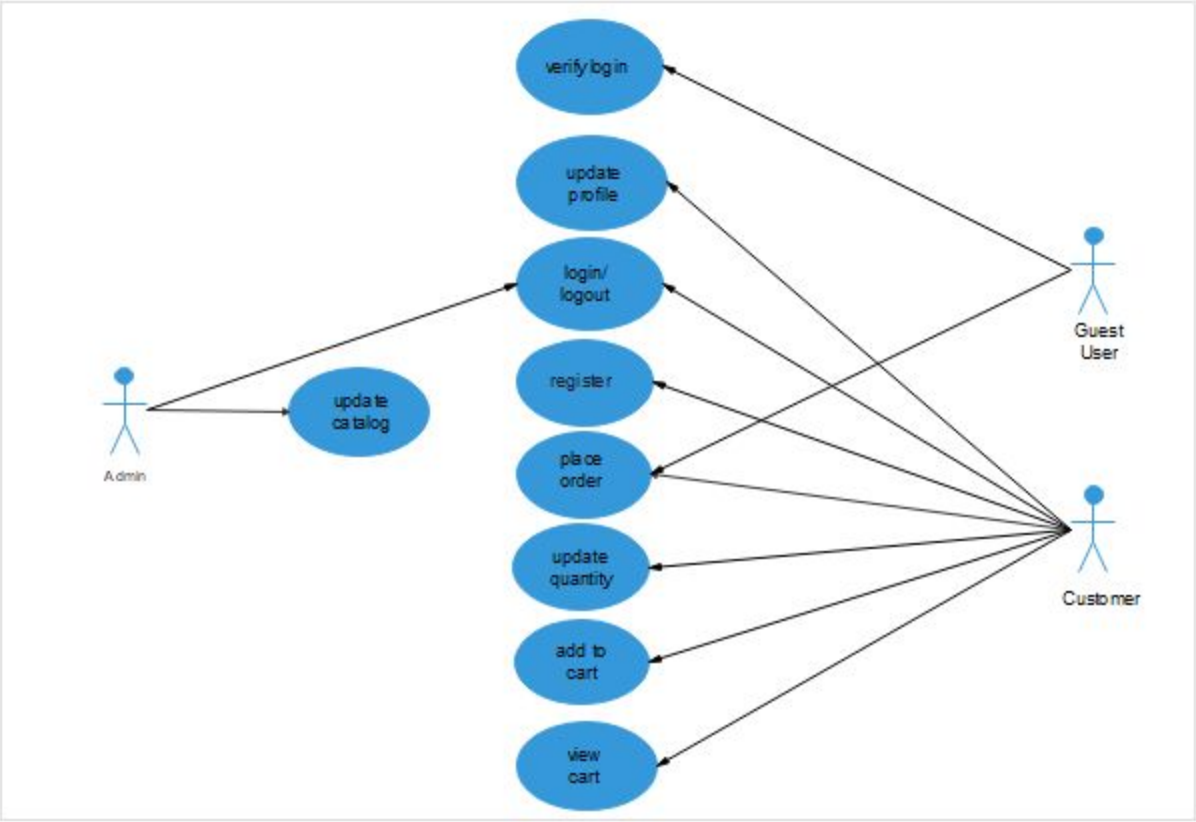
3.1.7 Checkout

Description: Refer section 2.3.7.
Inputs: The selected products that are available in the cart and payment methods are used as inputs by this feature. Card information includes following data:
Delivery: At the time of checkout, user can choose home delivery option.
Store Pick up: At the time of checkout, user can choose to pick up the item.
Card number: Card number is a 16 digit number. It cannot contain alphabets and special characters.
Name on card: The name of the user. It cannot contain special characters and numbers.
Expiration date: The expiration date cannot contain alphabets and it should be in the mm/yyyy format.
CVV number: Three-digit number.
Shipping address: The shipping address should be in the format local street address, apartment number, city, state and zipcode. Source: The system interfaces with external credit card systems.
Output: The final price, transaction number, date, shipping status of the order is displayed.
Destination: The database.
Requires: The user to enter valid card details and shipping address.
Pre-Condition: The checkout option is available.
Post-Condition: The order confirmation details will be provided.

3.1.8. View Cart:

Description: Refer 2.3.9.
Inputs: Item selected by the user.
Source: The picture, price, ratings and reviews of the product are provided by the database.
Output: The picture, price, ratings and reviews of the product are displayed to the user.
Destination: User's screen in the cart section.
Requires: The user to select the item.
Precondition: The item exists in the database.
Post Condition: The item is displayed

3.2 Use Case Diagram:



3.3 Logical Database Requirements :

This section specifies the logical requirements for any information that is to be placed into a database. In order to store the information related to users, products, and transactions, the following requirements need be satisfied:

1. Store the information related to this application

2. Query the required data efficiently

3. Able to map 1 : 1 or 1 : m or m : m relationships

4. Able to query the data from multiple tables

5. Aggregations should be optimal

6. The database should be secured Considering all the requirements, MySQL database is a good option.

4. Non-Functional Requirements

1. Effectiveness: The system should enable the team members to select the right tasks assigned by the admin.

2. Robustness: The application should not affect the data transaction in case of failure of the system, the internet connection. When the user enters inappropriate data, the page should not break.

3. Reliability: The admin should be able to assign the tasks to an intended user.

4. Security: The application shall be secured, and should not allow unauthenticated users to login by any means.

5. References

1. IEEE 830- 1998 standard – IEEE Recommended Practice for Software Requirements Specifications – Used to write and organize the contents of this document.

2. Amazon.com, inc by Jeff Bezos, www.amazon.com, July 6, 1994.