***GamesLibrary***

URS

**Logo, company name

Description automatically generated**

**Date:** 23/02/2023

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**Version:** Version 1.0

**Status:** Open

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# Agreements with clients

Although I'm working on this project by myself, there are still some rules and requirements that I have to follow. Specifically, I have to use C# as the programming language and make sure the app can work on both a website and a Windows Form app. Also, I'm expected to learn new stuff during the project, so I have to make sure the app can be extended and recreated. Besides that the tutor expect that I work with database SQL.

It's important that the app is designed in a way that makes it easy to change or add new things later on. This means I need to follow good programming practices, write down why I made certain choices, and use the right design patterns. If I do all of this, the app will be ready to handle whatever changes come its way.

# Functional Requirements

## 2.1 Core Requirements

* FR-01: User Management
  + FR-01-A: User should be able to register new account
  + FR-01-B: User should be able to login with their account
  + FR-01-C: User should be able to remember account.
* FR-02: Product Management
  + FR-02-A: The website should have a product catalog.
  + FR-02-B: Products must be displayed with Images, Title, and prices
  + FR-02-C: Products must be searchable and filterable by category, price and other criteria
* FR-03: Checkout Process
  + FR-03-A: Users must be able to review their shopping cart and update quantities or remove items
  + FR-03-B: Users must be able to enter shipping and billing information
  + FR-03-C: The website must integrate with a payment gateway to process transactions
  + FR-03-D: Users must receive a confirmation email after completing a purchase.

* FR-04: Administration
  + FR-04-A: The windows form application must have an administrative interface for managing products, orders, and costumers.
  + FR-04-B: Administrators must be able to view and edit orders, products, and costumer information.
  + FR-04-C: Administrators must be able to generate reports on sales and inventory.
  + FR-04-D: Administrators must be able to search by category, price, and other criteria.
* FR-05: Security
  + FR-05-A: Storing data in SQL provides increased privacy and security, as not everyone has unfettered access to the data.

## 2.2 Major Requirements

* FR-06: User experience
  + FR-06-A: The website must be user-friendly and easy to navigate.
  + FR-06-B: The website must be responsive.
  + FR-06-C: The website must calculate shipping costs and taxes accurately.
  + FR-06-D: The website must send confirmation emails to users after their orders have been placed.
* FR-07: Product management
  + FR-07-A: The website must have a large diverse product catalog
  + FR-07-B: The website must provide detailed product information, including images, descriptions, and pricing.
  + FR-07-C: The website must allow users to easily search and filter products.
* FR-08: Checkout Process
  + FR-08-A: The website must have a smooth and secure checkout process.
  + FR-08-B: The website must calculate shipping costs and taxes accurately.
  + FR-08-C: The website must send confirmation emails to users after their orders have been placed.
* FR-09: Costumer Service
  + FR-09-A: The website must have a FAQs page and other resources to help users solve common problems.
* FR-10: Marketing and Sales
  + The website must have effective marketing strategies, such as email campaigns and social media advertising.

## 2.3 Minor Requirements

* FR-11: User Experience
  + FR-11-A: The website must have clear and concise navigation labels.
  + FR-11-B: The website must have a visible search bar in the header of each page.
* FR-12: Product Management
  + FR-12-A: The website must display product availability information, including out-of-stock and backorder status.
  + FR-12-B: The website must display the most popular games first.
* FR-13: Checkout Process
  + The website must display estimated delivery dates during the checkout process.
* FR-14: Costumer Service
  + The website must have a contact form for users to reach costumer support.
  + The website must have a password reset feature for users who forget their login credentials.
* FR-15: Marketing and Sales
  + FR-15-A: The website must display related products in promotional emails.
  + FR-15-B: The website must allow users to share products on social media.
  + FR-15-C: The website must display recommended products on the order page.

## 2.4 MoSCoW

|  |  |  |  |
| --- | --- | --- | --- |
| Must | Should | Could | Won’t |
| FR-01, FR-02, FR-03, FR-04, FR-05, FR-07, | FR-06, FR-08, FR-12, | FR-09, FR-13, FR-14, | FR-10, FR-11, FR-15, |

# Use Cases

**Use Case - FR-01-A: User management’**

**Actor: Website User**

**Description: User register**

**Main Success Scenario:**

1. System Displays the log in page with option to click on register.
2. System displays the register page.
3. The website displays a registration form that prompts the user to enter their personal information, such as their name, email address, and password.
4. The user fills in the required fields and submits the form.
5. The website verifies the user's information and creates a new account.
6. The website automatically logs the user into their new account and displays a welcome message.
7. The user can now access their account and any other features that require authentication, such as paying shopping cart.

**Extensions:**

**4a.** If the user enters invalid information, the website displays an error message and prompts the user to correct the information.

1. System notifies the user that they put in wrong information.
2. Return to MSS step 3.

**4b.** If the user already has an account with the website, the website displays a message informing the user that theyalready have an account and prompts them to log in instead.

1. System notifies the user that they put in existing information.
2. Return to MSS step 3.

**Use Case – FR-01-B/C:** User management

**Actor:** Website User

**Description:** The user wants to login to get more options of the website.

**Main Success Scenario:**

* 1. System displays the log in page.
  2. User provides their log in credentials.
  3. User option to remember account.
  4. System redirects user to the home page.

**Extensions:**

**2a.** User has not filled out all fields or has provided the wrong log in credentials.

1. System notifies the user that they cannot gain access.
2. Return to MSS step 2.

**Use Case - FR-02:** Product management   
**Actor:** Website User  
**Description:** The use case describes how a website user can search and filter products within the product catalog.   
**Main Success Scenario:**

1. The user navigates to the product catalog page.
2. The user enters a keyword or selects a filter option to narrow down their search.
3. The system displays a list of products that match the search or filter criteria.
4. The user can view the product details such as the image, title, price.
5. The user can click on a product to view its full details.
6. The user can adjust their search and filter criteria to refine the product list.
7. The user can add a product to their shopping cart if desired.

**Extensions:**

**2a.** If no products match the search or filter criteria, the system displays a message indicating that no product were found.

1. Website user fills in search query.
2. System warns the user with “no product were found” message.
3. Return to MSS step 2.

**Use Case - FR-03-A:** Checkout process   
**Actor:** Website User  
**Description:** The user wants to review his shopping cart.   
**Main Success Scenario:**

1. The user clicks on the shopping cart logo.
2. The system displays the user’s shopping cart, including all items and quantities.
3. The user reviews the items in their shopping cart and decides to update the quantity or remove items as necessary.
4. The system updates the shopping cart and displays a confirmation message.

**Extensions:**

**2a.** If the user wants to remove an item from their shopping cart, they click the remove button next to the item.

1. Website user clicks on the remove logo.
2. System warns the user to confirm the remove.
3. Item is removed from shopping cart, return to MSS step 2.

**2b.** If the user wants to update the quantity of an item, they adjust the quantity field but the arrow buttons.

1. Website user clicks on the upper arrow.
2. Quantity of product goes up by 1.
3. Website user clicks on the lower arrow.
4. Quantity of product goes down by 1.
5. Return to MSS step 2.

**4a.** If the user wants to continue shopping, click the continue shopping text to return to the website’s product pages.

1. Website user decides to continue shopping.
2. User clicks on “Continue Shopping” text.
3. User got redirected to home page.

**Use Case - FR-03-B/C/D:** Checkout process   
**Actor:** Logged in User  
**Description:** To purchase an item from the website and receive a confirmation email  
**Preconditions:** User is logged in.  
**Main Success Scenario:**

1. User clicks on the shopping cart icon to review their shopping cart.
2. System displays the items in the shopping cart and provides an option to update quantities or remove items.
3. User updates the quantities or removes items if necessary.
4. User clicks on the checkout button.
5. System prompts the user to enter their shipping and billing information.
6. User enters the shipping and billing information and confirms the details.
7. System redirects the user to the payment gateway page.
8. User selects a payment method and enters the payment details.
9. System processes the payment and redirects the user back to the website.
10. System displays a confirmation message and sends a confirmation email to the user.
11. User receives the confirmation email.

**Extensions:**

**4a.** User is not logged in: System prompts the user to log in or register before proceeding.

1. User clicks on checkout button.
2. User is not logged in.
3. System shows login page
4. User fills in details.
5. Return to MSS step 5.

**8a.** Payment is declined: System prompts the user to select a different payment method or contact costumer support for assistance.

1. User clicks on confirm button to send details.
2. System detects problems.
3. System displays a message.
4. User can try again, return to MSS step 8.

**Use Case - FR-04-A/B/C:** Administration

**Actor:** Administrator

**Description:** The administrator wants to manage the products that are available on the website.

**Main Success Scenario:**

1. The administrator navigates to the product management section of windows form.
2. The windows form displays a list of all the products currently available on the website.
3. The administrator can choose to add a new product, edit an existing product, or delete a product.
4. If the administrator choose to add a new product, the website displays a product creation form that prompts the administrator to enter the products name, description, price, and other relevant details.
5. If the administrator choose to edit an existing product, the windows form displays a notification to fill in all the details.
6. If the administrator chooses to delete a product, the website prompts the administrator to confirm the deletion before removing the product from the website.
7. After making changes to the products, the administrator saves the changes.
8. The windows form updates the product listings on the website to reflect the changes made by the administrator.

**Extensions:**

**4a:** If the administrator enters invalid information while creating or editing a product, the windows form displays an error message and prompts the administrator to correct the information.

1. System notifies the user that they cannot gain access.
2. Return to MSS step 4.

**5a:** If the administrator wants to view more information about a specific product, they  
click on the product’s name and corresponding button to access a detailed product page.

1. Administrator clicks on product and clicks on button.
2. System shows detailed page.

**Use Case - FR-04-D:** Administration

**Actor:** Administrator

**Description:** The administrator wants to search products in windows form.

**Main Success Scenario:**

1. The user types in a search query into the search bar.
2. The windows form displays a list of items that match the user’s search query.
3. The user can select an item and click on the corresponding button to access a detailed page.

**Extensions:**

**1a.** If user enters an invalid search term or misspells a word, the windows form displays a message informing the user that their search did not match any results.

1. Administrator enters invalid search term.
2. System notifies that their search did not match any result.
3. Return to MSS step 1.

**3a.** If user doesn’t select an item of the list while pressing the button, windows form displays a message informing the user that there is no product selected.

1. Administrator clicks on button without selecting item.
2. System notifies user that there is no product selected.
3. Return to MSS step 3.

**Use Case - FR-07:** Product management

**Actor:** Website User

**Description:** The user wants to search and view product information for a specific item on the website.

**Main Success Scenario:**

1. The user navigates to the website and enters their search criteria into the search or filter feature.
2. The website displays a list of products that match the user’s search criteria.
3. The user clicks on the desired product to see more detailed information.
4. System shows detailed page including, images, descriptions, pricing, and a lot of other different information.
5. The user can add products to their cart.

**Extensions:**

**2a.** If the user's search terms or filters do not match any products, the website displays a message indicating that no results were found.

1. Website user fills in search query.
2. System warns the user with “no product were found” message.
3. Return to MSS step 2.