Final Report

Enterprise Systems Development Concepts

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1 System Overview

1.1 Project Introduction

In today's digital age, music is primarily consumed through digital streaming services and online downloads. However, some people still prefer the tactile experience of listening to music on cassette tapes. To cater to this niche market, we are developing a website that will sell cassette tapes.

1.2 System Specification

A website where customers can buy vinyl records, cassettes, find their favorite products, read news, blogs about singers appearing in products, order through the website or create your own customer cassette tape.
Guest are customers who do not need to log in to access the website they can view information about products, read news and search for products, guest can log in, register for an account including basic information. Guest can add products to the cart then continue to purchase to proceed to payment later, place an order without logging in, by check out they can filling in the required information form properly. After that they can pay to complete and the customer can create a cassette with the available designs in the store and the music can be selected to order.
Member Customer, who is guest but has successfully logged into the system: has the same function as a guest but they will have more personal information, password, and all of information can be changed. They can edited and can view purchase history.
Warehouse Staff: They Need to log in to the administrator system with the function of Warehouse Staff. They can add, delete and edit products in the system, check the amount of inventory to update and manage products.
Sale staff: They Need to log in to the administrator as a sale staff, they can manage orders placed on the system, check order status, approve or accept orders. They can cancel the order if necessary.
Administrator: They Need to log in to the system as an administrator, They can manage employees by managed employees account, including: creating new accounts, deleting accounts, editing information , add employee permission and track employee activities on the system. They can perform the functions of a warehouse staff or a sale staff. They can Managed voucher, blogs, including Add, delete or update. They Can view statistics data, number of products sold and number of orders.
Shipper: They need to log in to the system as a shipper, they can see the order information to be delivered, they can confirm that the order will be delivered and update the delivery status.

1.3 Scope of the project

Limits on objects and functions:

1. Our project just focus on some main function and object around it, in analyst phase, we show some detail function but in final products some detail will be missing.

2. Limits on technology: We using mainly C# and asp.net with some kind of language around it to support it.

1.4 Practical Implication

Providing access to rare or hard-to-find music can be one of the most significant practical implications of a website selling cassettes. While many music fans enjoy the convenience of streaming services and digital downloads, some prefer the unique sound qualities and album art of cassettes. Additionally, some music may only be available on cassette and may not have been released digitally or on CD.

1.5 Reporting Structure

1. System Overview

2. System Requirements Analysis and Design

3. System Implementation

4. Demo

5. Conclusion

2 System Requirements Analysis and Design

2.1 System requirements gathering

In order to gather system requirements, two methods were utilized: interviews and questionnaires.

2.2 System Functional Requirements

1. Login.
2. Registry.
3. Browse catalog.
4. Create customer cassette.
5. Managed cart.
6. Place an order.
7. Check out.
8. View Order.
9. Managed account.
10. Managed product.
11. Managed staff.
12. Managed voucher.
13. Managed blog.
14. View statistic data.
15. Managed order.

2.3 Non-functional requirements of the system

1. Easy-to-see interface, attracting viewers.
2. The system ensures reliability in securing user information.
3. The system works efficiently, without interruption when in use.
4. The system is maintainable and upgradeable.
5. The system makes it easy for users to manage.
6. The data in the system needs to be correct.
7. The system can support multiple languages.
8. The system needs to be suitable for Vietnamese culture.
9. The system can develop new features.

2.4 System Functionality Diagram

2.4.1 Use-case diagram

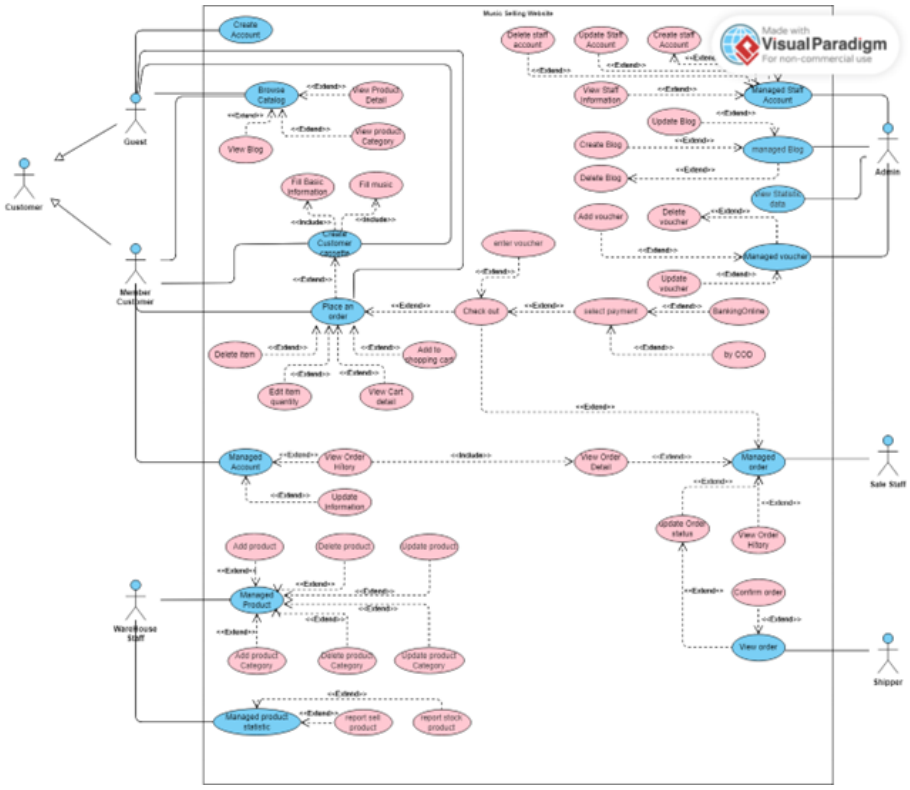


Figure 1: Use-case Diagram

2.4.2 Use-case Descriptions

Use case: Create Account	ID:UC01	Priority: Must have	
Actor: Customer			
Description: - System will provide a form to user entering their information - Systeam will create their account when all information correct.			
Trigger: Users using create account function			
Preconditions: - Customer not log in account to sign up account			
Normal Course: 1. User using sign up function 2. User entering their information 3.User complete the form to registry		Information for Steps: 1.1 System will show the registry form 2.1 System must review the information is correct or not 3.1 The system will save the data of user.	
Postconditions: System will show a notification that "you are succes" and user can login .			
Summary: Input	Source	Outputs	Destinations

Figure 2: Use-case 01.

Use case: Browse Catalog	ID: UC02	Priority: Must have	
Actor: All			
Description: - User can see the product list, view product detail, view product category, view blog			
Trigger: Khách hàng tiến hành vào website			
Preconditions: none			
Normal Course: 1. User entering the website 2. User click to blog to see the detail 3. User click to category to see the detail		Information for Steps: 1.1 System will show the product 2.1 System will show the detail of blog. 3.1 System will show the product is sorted by category	
Postconditions: Can see blog, product, category after entering to website and using function			
Summary: Input	Source	Outputs	Destinations

Figure 3: Use-case 02.

Use case: Create Customer cassette	ID:UC03	Priority: Medium	
Actor: Customer			
Description: customer want to create their own cassette with their own appreance and music			
Trigger: Customer using create cassette function			
Preconditions: None			
Normal Course: 1 Customer entering create casstte 2. Customer create cassette 3. Customer enter the music they want into cassette		Information for Steps: 1.1 The system will show the page of introduce about create cassett 2.1 The system will show label and color of cassette appearance to choose. 2.2 the system will show form to entering name 3.1 The system will show form to fill your music playlist or chosen availale playlist 3.2 If all the information is correct the customer can check out	
Postconditions: Can create cassette and order it.			
Summary: Input	Source	Outputs	Destinations

Figure 4: Use-case 03.

Use case: place an order	ID:UC04	Priority: Must have	
Actor: Customer			
Description: - When customer order product, the product will have in cart - In customer cart, customer can add product, update product and delete product. - Customer can check out after filling all information.			
Trigger: Khách hàng thêm sản phẩm vào giỏ hoặc vào mục giỏ hàng			
Preconditions: none			
Normal Course: 1. Customer add product to cart 2. Customer enter cart 3.Customer update, add or delete the product 4. Customer check out		Information for Steps: 1.1 System will automatically add product in to customer cart. 2.1 System will show the customer cart and product customer have place an order. 3.1 System will update realtime data, depend on customer using function. 4.1 System will show form to filling information include basic information, payment method and voucher. 4.2 After all information is correct the system will show success order.	
Postconditions: - Customer success add product to cart - Customer can view information in cart and update it - Customer can order successfully.			
Summary: Input	Source	Outputs	Destinations

Figure 5: Use-case 04.

Use case: Managed account	ID: UC05	Priority: must have	
Actor: Member Customer			
Description: Customer can view order history and update information.			
Trigger: Customer entering managed account place and using it function			
Preconditions:Customer already login.			
Normal Course: 1. Customer view Order history 2. Customer view detail order 3. Customer update information		Information for Steps: 1.1 System will show the data that of customer order history 2.1 System will show the data of customer detail order want to see. 3.1 System will show the customer information form to entering 3.2 If all the data correct, the system will update the data	
Postconditions: - Customer can view order history and detail order clearly. - Customer can succest update information			
Summary: Input	Source	Outputs	Destinations

Figure 6: Use-case 05.

Use case: Managed product	ID: UC06	Priority: must have	
Actor: Warehouse Staff			
Description: Warehouse staff can managed product and product category			
Trigger: Warehouse staff using their function			
Preconditions: A staff but login success with warehouse staff account.			
Normal Course: 1. Warehouse staff want to managed a product 2 Warehouse staff managed product category		Information for Steps: 1,1 System will update data depend on function of staff using 2.1 System will update data on function of staff using	
Postconditions: Using function successfully			
Summary: Input	Source	Outputs	Destinations

Figure 7: Use-case 06.

Use case: Managed product statistic	ID: UC07	Priority: must have	
Actor: Warehouse Staff			
Description: Warehouse staff want to report a statistical data to admin			
Trigger: Warehouse staff using their function			
Preconditions: A staff but login success with warehouse staff account.			
Normal Course: 1. Warehouse staff using report sell product function 2. Warehouse staff using report stock product function		Information for Steps: 1.1 System will send a report sell product to admin 2.1 System will send a report stock product function	
Postconditions: Using function successfully			
Summary: Input	Source	Outputs	Destinations

Figure 8: Use-case 07.

Use case: Managed Staff Account	ID: UC08	Priority: must have	
Actor: Admin			
Description:Admin can control staff account by create staff role, create account, update account and delete staff account			
Trigger: Admin using their function			
Preconditions: User login success with admin account.			
Normal Course: 1 Admin want to create staff role 2. Admin want to create, update, delete staff account		Information for Steps: 1.1 System will show staff role form to create 1.2 If all the information is correct, staff role will be created. 2.1 Depend on which function admin using system will update real-time.	
Postconditions:Admin can success create staff role and create, update, delete staff account			
Summary: Input	Source	Outputs	Destinations

Figure 9: Use-case 08.

Use case: Managed Blog	ID: UC09	Priority: Medium	
Actor: Admin			
Description :Admin can create a brand new blog for customer or update and delete it.			
Trigger: Admin using their function			
Preconditions: User login success with admin account.			
Normal Course: 1 Admin want to create blog 2. Admin want to update or delete blog		Information for Steps: 1.1 System will show create blog form to filling 1.2 If all the information is correct, a blog will be published 2.1 All of blog will be show and system will update real-time on which function admin using.	
Postconditions: Can create update and delete blog successful.			
Summary: Input	Source	Outputs	Destinations

Figure 10: Use-case 09.

Use case: Managed voucher	ID: UC10	Priority: medium	
Actor: Admin			
Description:Admin can create voucher for customer using it			
Trigger: Admin managed voucher			
Preconditions: User login success with admin account.			
Normal Course: 1. Admin add voucher 2. Admin want to delete or update voucher		Information for Steps: 1.1 System will show a form to entering 1.2 If the information is correct the voucher will be added. 2.1 All of Vouhcer will be show and system will update real-time on which function admin using.	
Postconditions: Can create update and delete vouhcer successful.			
Summary: Input	Source	Outputs	Destinations

Figure 11: Use-case 10.

Use case: Managed order	ID: UC11	Priority:	
Actor: Sale staff			
Description: Staff can view all order of customer and modify it.			
Trigger: Sale staff using it function			
Preconditions: A Staff login success with sale staff account			
Normal Course: 1. A staff want to managed order 2 A staff want to update status order 3. A staff want to view order detail		Information for Steps: 1.1 system will show all of managed order 2.1 System willl show the update status order type to select. 3.1 System will show order detail in order staff has choose.	
Postconditions: Using function successfully			
Summary: Input	Source	Outputs	Destinations

Figure 12: Use-case 11.

Use case: View order	ID: UC12	Priority: Must Have	
Actor: Shiper			
Description: Shiper can see information of order they need to deliver and update status of it			
Trigger: Shipper using it funciton			
Preconditions: A staff login success with shipper account			
Normal Course: 1. Shipper view all of order need to delivery 2. Shipper want to confirm order or update order status		Information for Steps: 1.1 System will show all of order need to delivery 2.1 System will show the status or order 2.2 Depend on which function shipper using, system will update real-time.	
Postconditions: - Can view all of order need to delivery. - Can update status of order.			
Summary: Input	Source	Outputs	Destinations

Figure 13: Use-case 12.

3 System Implementation

3.1 HTML

HTML is the backbone of any web page, and is used to create the structure and content of the page. It is widely supported by all modern browsers, and provides a standard way of describing the content of a web page.

3.2 CSS

CSS is used to style and format the HTML content on a web page. It allows you to control the layout, color, font, and other visual aspects of your website, and is essential for creating a visually appealing and user-friendly website.

3.3 JavaScript

JavaScript is a powerful programming language that is used to add interactivity and dynamic functionality to your website. It can be used to create animations, respond to user input, and manipulate the content of the page in real-time.

3.4 jQurey

jQuery is a popular JavaScript library that simplifies the process of writing JavaScript code. It provides a range of pre-built functions and tools for common tasks, such as event handling, animation, and DOM manipulation.

3.5 Bootstrap

Bootstrap is a popular front-end framework that provides a range of pre-built HTML, CSS, and JavaScript components for building responsive, mobile-friendly websites. It is easy to use and customize, and provides a solid foundation for building modern, professional-looking websites.

3.6 ASP .NET

ASP.NET is a popular web application framework developed by Microsoft, which provides developers with a robust set of tools for building dynamic web applications. It is known for its scalability, security, and ease of use.

3.7 C#

C# is a modern, object-oriented programming language developed by Microsoft, which is widely used for building Windows applications, web applications, and games. It is a powerful language that is easy to learn and use, and provides developers with a range of features and tools for building high-quality software.

3.8 MSSQL

MSSQL is a powerful, enterprise-level relational database management system developed by Microsoft, which is widely used for storing and managing large amounts of data. It is known for its scalability, reliability, and security, and provides developers with a range of features and tools for building high-performance databases.

3.9 Integration

ASP.NET, C#, and MSSQL are designed to work well together, allowing developers to build highly integrated and scalable e-commerce websites. The integration of these technologies allows for the development of secure and high-performance e-commerce websites that are able to handle large amounts of data and traffic.
To sum up, the combination of ASP.NET, C#, and MSSQL is a great choice for building e-commerce websites because of their robust features, scalability, and security. The integration of these technologies also allows for the development of highly customized and feature-rich e-commerce websites that are able to meet the needs of customers and businesses alike.

4 Appendix

4.1 Interview

1. What are the Product and its target audience?
2. How many different types of items will you sell?
3. What information you need to create customer cassette?
4. What features should your e-commerce website contain (user registration, file upload, contact form, photos, videos, etc.)?
5. Do you want to have third-party to accept the online payment?
6. Who do you want to enter your website, include your staff?
7. What kind of features you want for each position in the staff (Can modify news and advertise,etc.)?
8. Do you have any colour preferences or look and feel for the e-commerce website?
9. Please list the names of three sites that you like and explain what you like about them?
10. What is your budget and your deadline for completing the e-commerce website?

4.2 Questionnaire

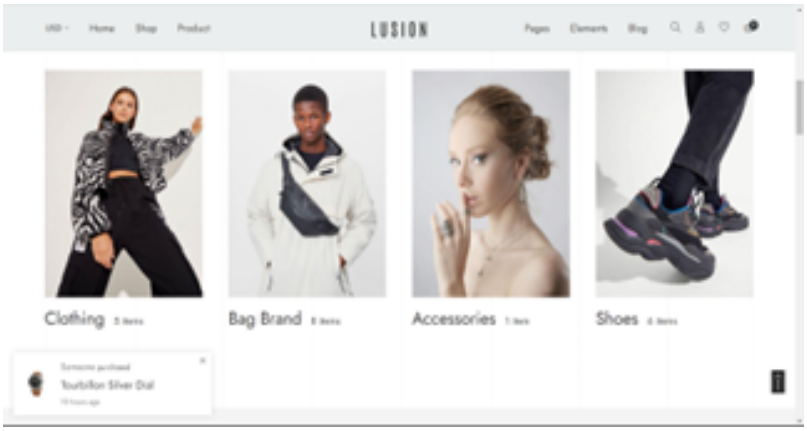
1. What do you want in your website?
   A. News
   B. Products
   C. Category.
   D. All of above.
   E. Another:...
2. How many news will appear in single page?
   A. None.
   B. More than.
   C. Less than.
   D. Another:...

3. How many products will apear in single page?
   A. All of products.
   B. Around 10.
   C. Around 20.
   D. Another: ...

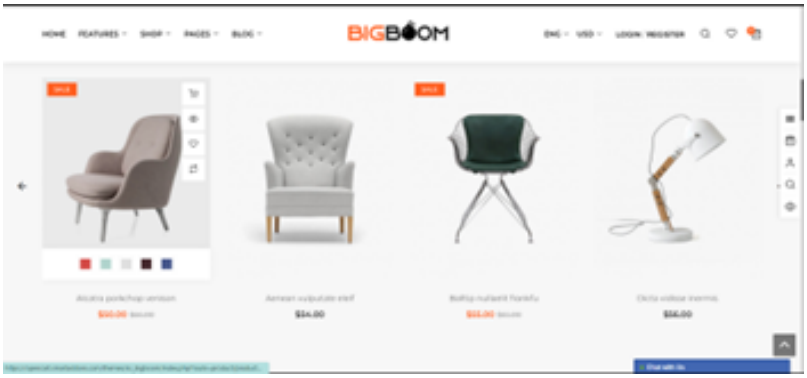
4. What kind of function will apear in home page?
   A. Promotion for products.
   B. Advertise new information.
   C. Priority some products.
   D. Another: ...

5. What kind of category you prefer?
   A. New arrival.
   B. Trending.
   C. Sale.
   D. Your shop suggestion.
   E. Another: ...

6. Which of the homepage layouts do you prefer?

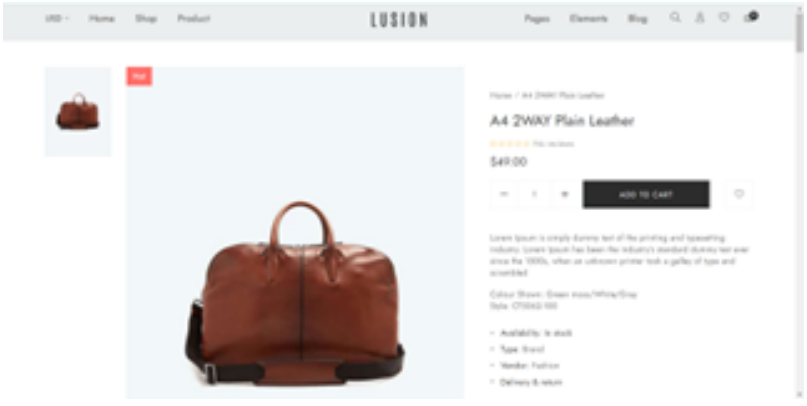
(a) 

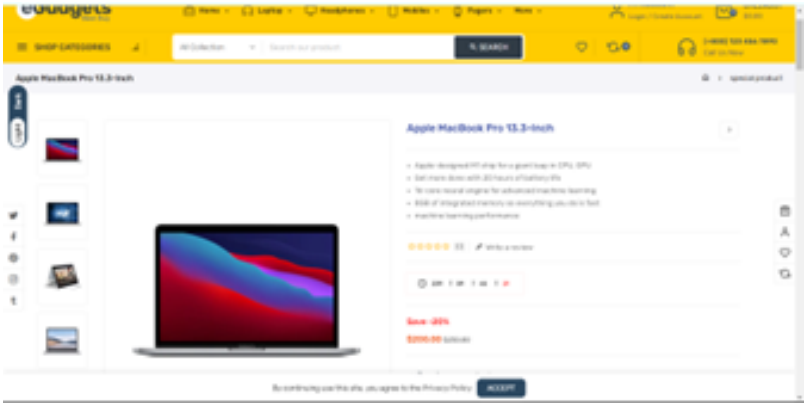
(b) 

(c) 

(d) None of above.

7. Which of the product detail do you prefer?

(a) 

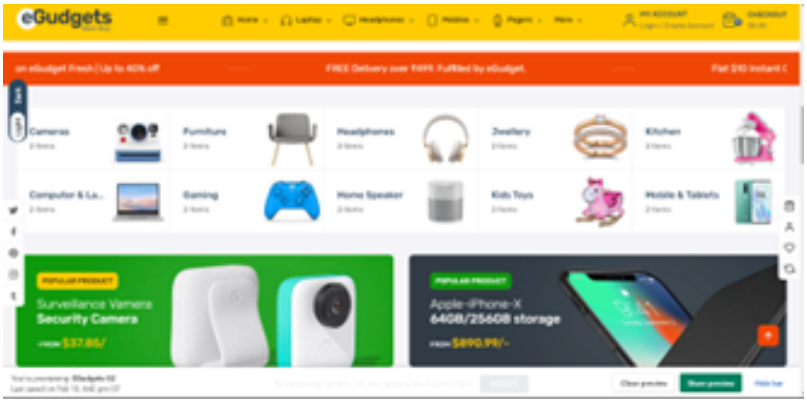
(b) 

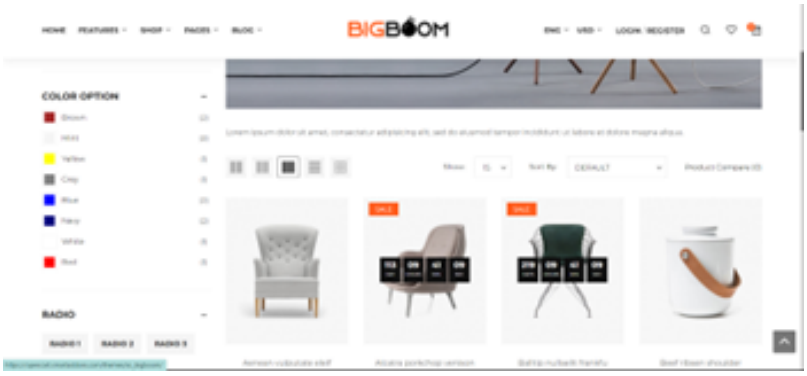
(c) 

(d) None of above.

8. Which of the category layouts do you prefer?

(a) 

(b) 

(c) 

(d) None of above.

References

[1] Alan Dennis, Barbara Haley Wixom, Roberta M. Roth, [2018], Systems Analysis and Design, 7th Edition, John Wiley Sons, Inc., USA.