

Bookstore Project

Presented by Pro Group



Group's members

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Nguyen Thi Nhungh Anh

Main contents

” Introduction

” Purposes

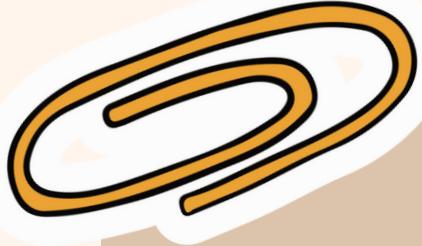
” Project Framework

” Project Summary

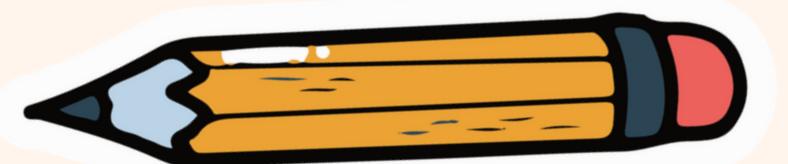
” Strengths & Weaknesses

” Conclusion

Introduction



- E-commerce Bookstore Website project focuses on developing a robust and user-friendly **e-commerce website for a bookstore**.
- The project encompasses various aspects, including frontend and backend development, user experience design, database management, and quality assurance.
- Therefore, we aim to revolutionize the online bookstore market, providing an exceptional shopping experience!



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Purposes

1

Bookstore e-commerce

Establish an online platform for selling books, expanding the reach of the bookstore beyond its physical location.

2

Community Engagement

Foster a sense of community among book lovers through social features like customer reviews, ratings, and wishlists.

3

User friendly Experience

Create user-friendly UI, intuitive navigation, and responsive design for a seamless and enjoyable browsing and shopping experience.

Purposes

4

Scalability & Future Growth

Design the website to be scalable, accommodating potential expansion into new markets and the addition of new features.

5

Order Tracking & Support

Include features such as order tracking and customer support to keep customers informed and assist them throughout the purchasing process.

6

Secure Online Transactions

Implement robust security measures to ensure secure online transactions, instilling customers' trust & safeguarding their personal information.

Main contents

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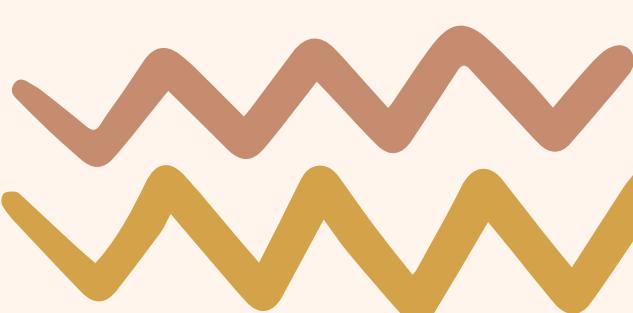
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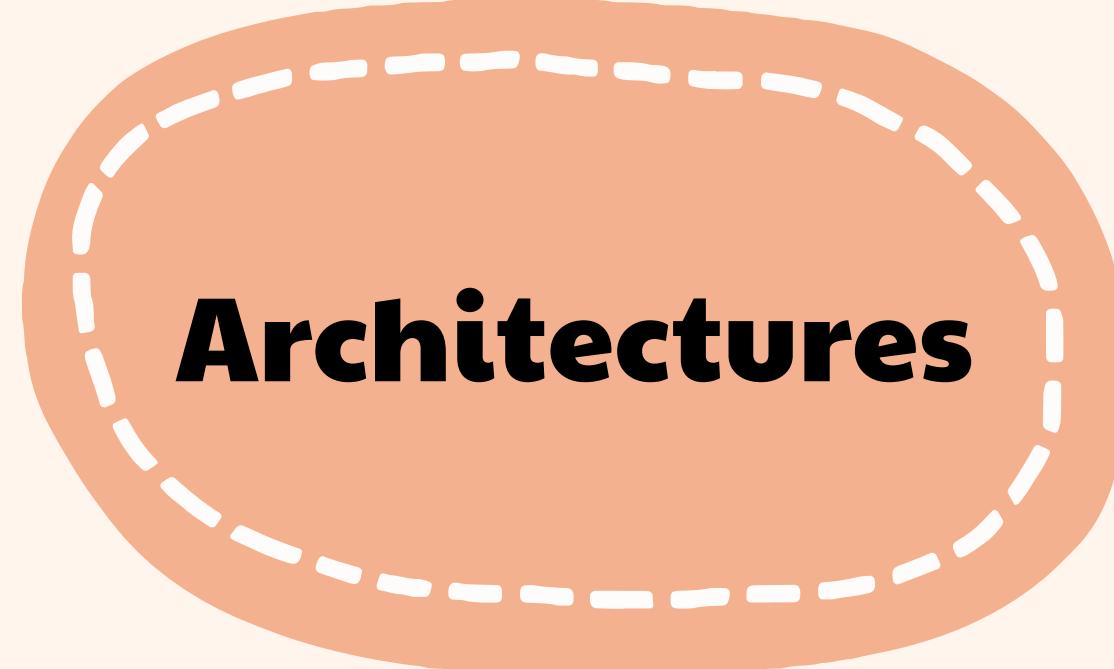
” Conclusion



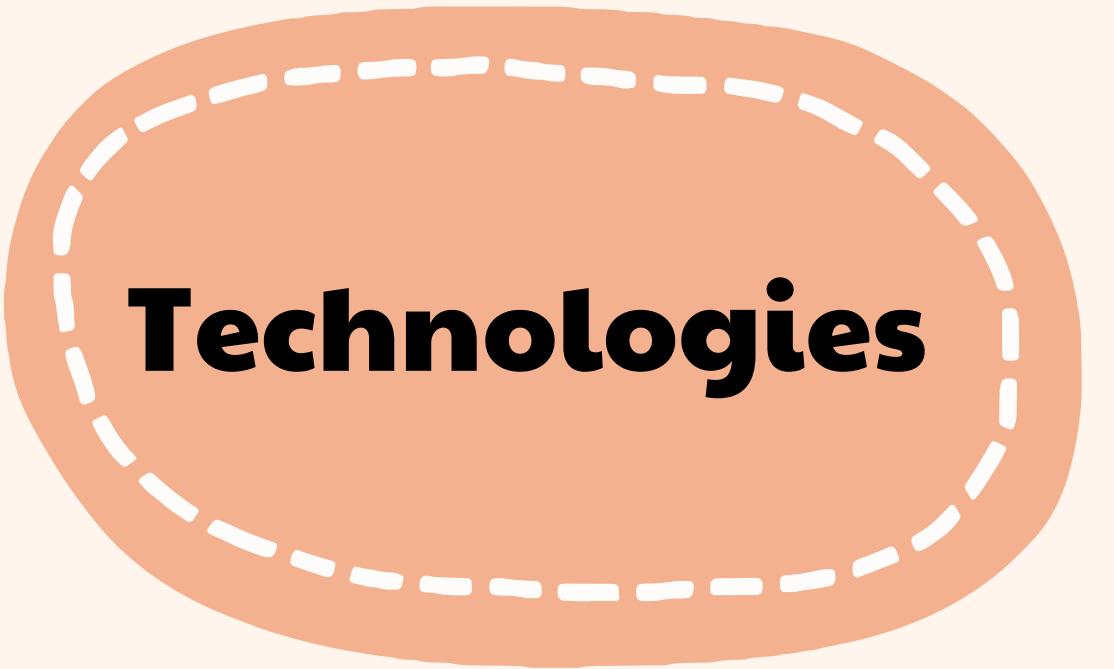
Project Framework



Methodology



Architectures



Technologies



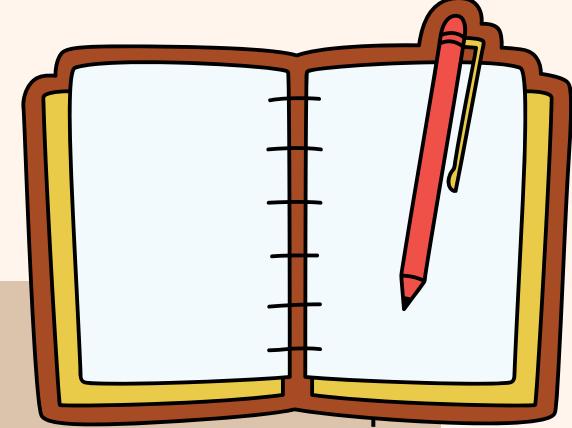
Scrum Methodology

Introduction

An Agile project management framework that provides a structured approach to deliver high-quality software in a collaborative and iterative manner.

Benefits

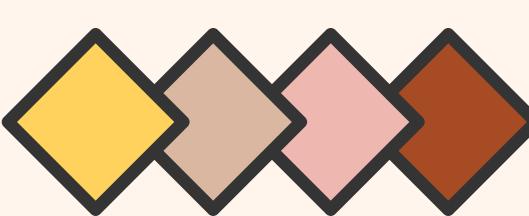
- Transparency & Visibility
- Adaptability & Flexibility
- Collaboration & Ownership
- Continuous Improvement



Project Management

To complete the project on time and in the best way, we used a **task management application** called **Trello** due to its wonderful performance:

- Visual Organization
- Easy Collaboration
- Flexibility and Customization
- Easy Onboarding
- Cost-Effective



Trello Workspaces Recent Starred Templates Create

Search 9+

?

MT

K không gian làm việc của Đàm Linh Free

- Boards
- Members
- Workspace settings
- Workspace views
- Table
- Calendar

- Your boards

SE2

SQA

Try Premium free

SQA

Workspace visible

Board

Power-Ups

Automation

Filter

MT HT VH NN +2

Share

Done (Sprint 3)

- Get order history (customer) (NN, HT)
- Checkout order (HT, VH)
- Online payment (HT, VH)
- Upload product images from devices (VH)
- Add, delete voucher (admin) (MT, HT)
- Admin page (MT, HT)

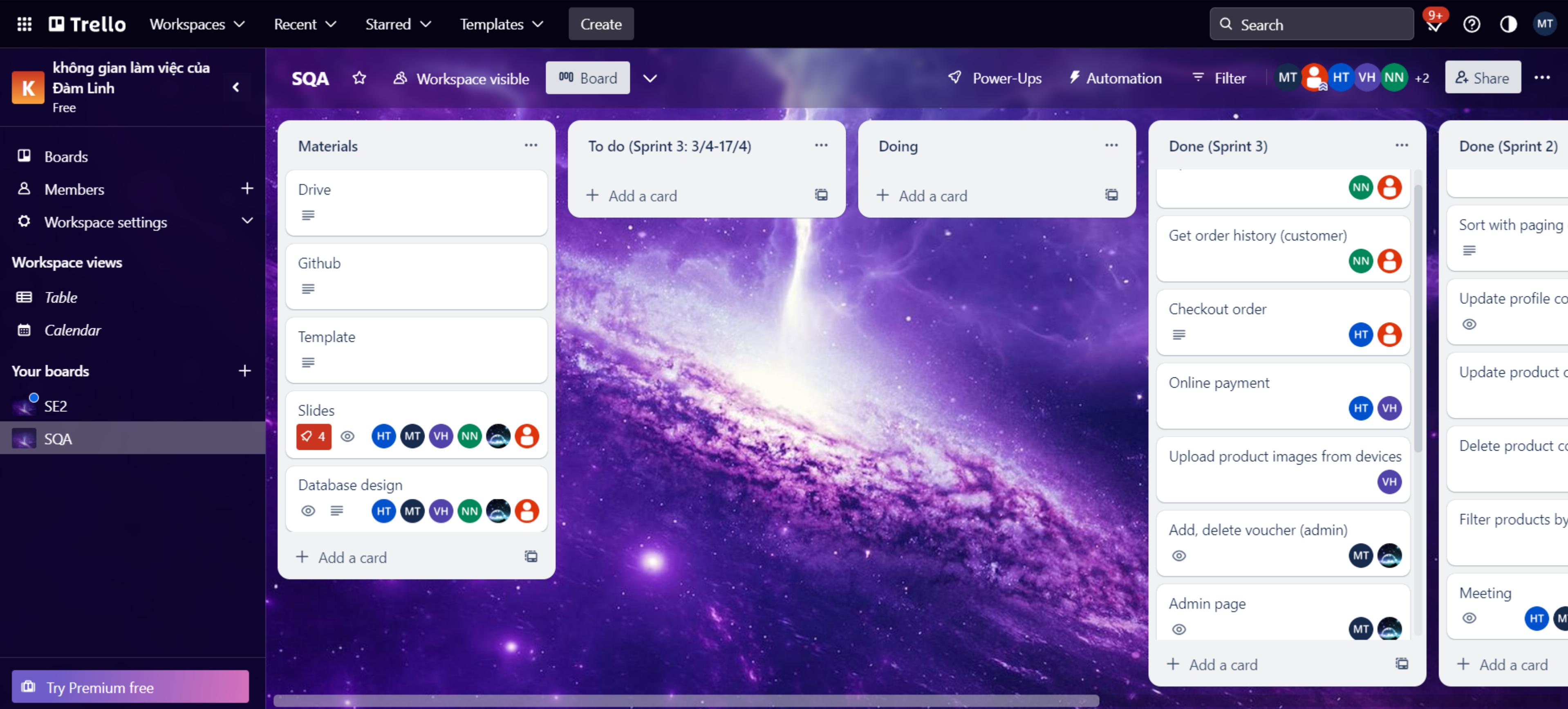
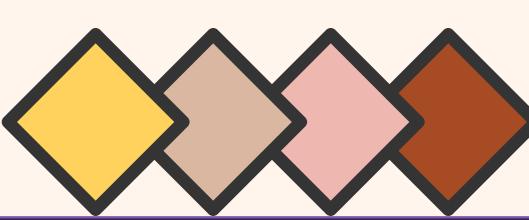
Done (Sprint 2)

- Sort with paging code, doc & test (NN, HT)
- Update profile code, doc & test (MT)
- Update product code, doc & test (HT)
- Delete product code, doc & test (HT)
- Filter products by category (NN)
- Meeting (HT, MT, VH, NN, HT, HT)

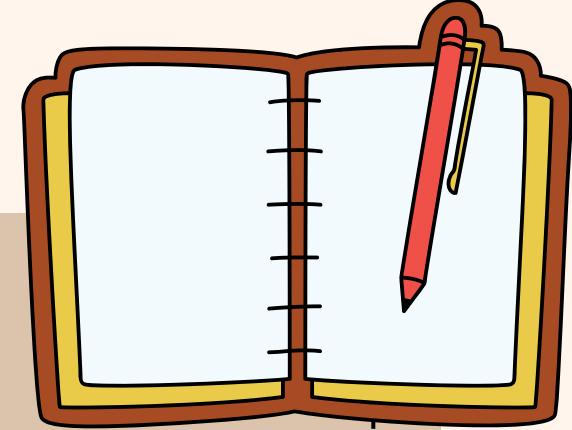
Done (Sprint 1)

- Activity diagrams for register, login, logout (HT, MT)
- Login code (HT, MT)
- Register code (NN, HT)
- Logout code (HT, VH)
- Class diagrams for user, customer, admin (VH)

+ Add another list



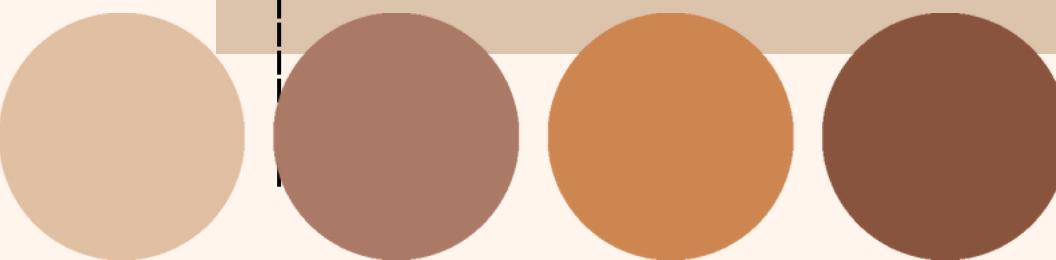
Architectures

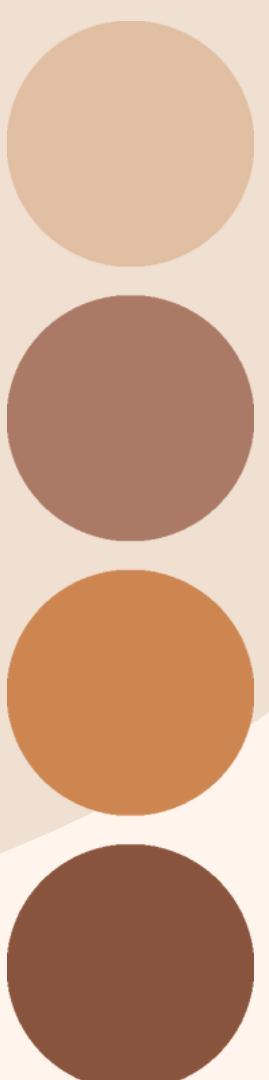
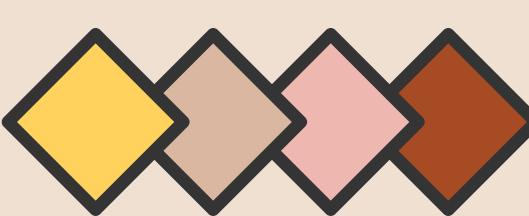


The Bookstore e-commerce Website project utilizes:

- Back-end: a combination of
 - Domain-Driven Design (DDD) architectures
 - Model-View-Controller (MVC) architectures
- Front-end: Component-Based architecture

This approach significantly ensures a **scalable**, **modular**, and **maintainable** system.





Technologies

BE

Java Spring Boot: A Java-based framework that simplifies and accelerates the development of web applications by providing a convention-over-configuration approach, robust features, and seamless integration with other Spring components.

FE

ReactJS: A JavaScript library for building responsive and interactive user interfaces, leveraging reusable components and a virtual DOM for efficient rendering.

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Project Summary

1

Requirement

- Use case diagrams
- Written use cases
- Activity diagrams
- ER Diagrams
- Wireframes

2

Analysis & Design

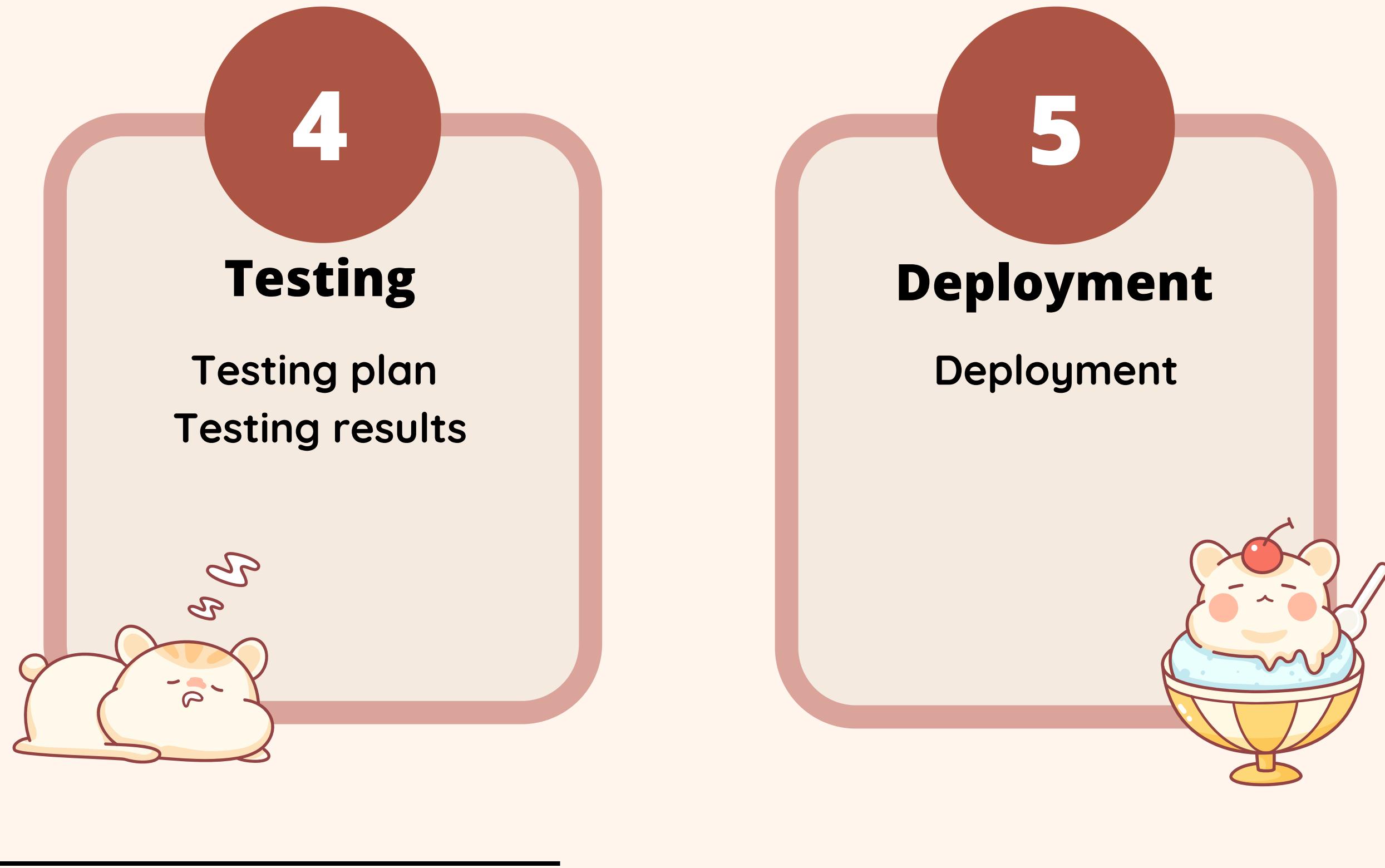
- System Architecture
- UI Design
- Database Design
- Class Diagrams
- Sequence Diagrams

3

Implementation

- Source Code
- Database Export
- User Manuals
- Administrator Manuals

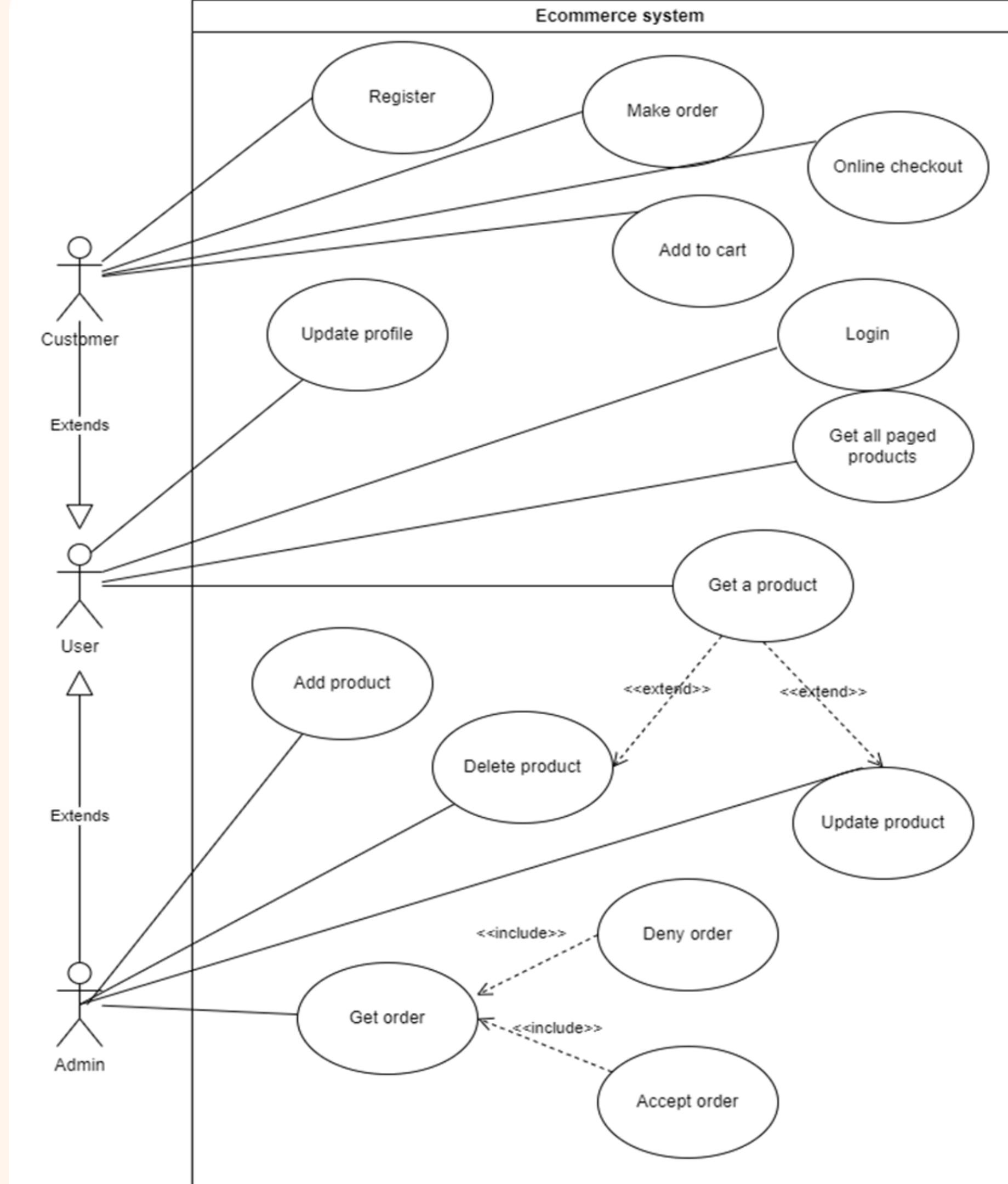
Project Summary



Requirements



Usecase diagram





Written Usecase

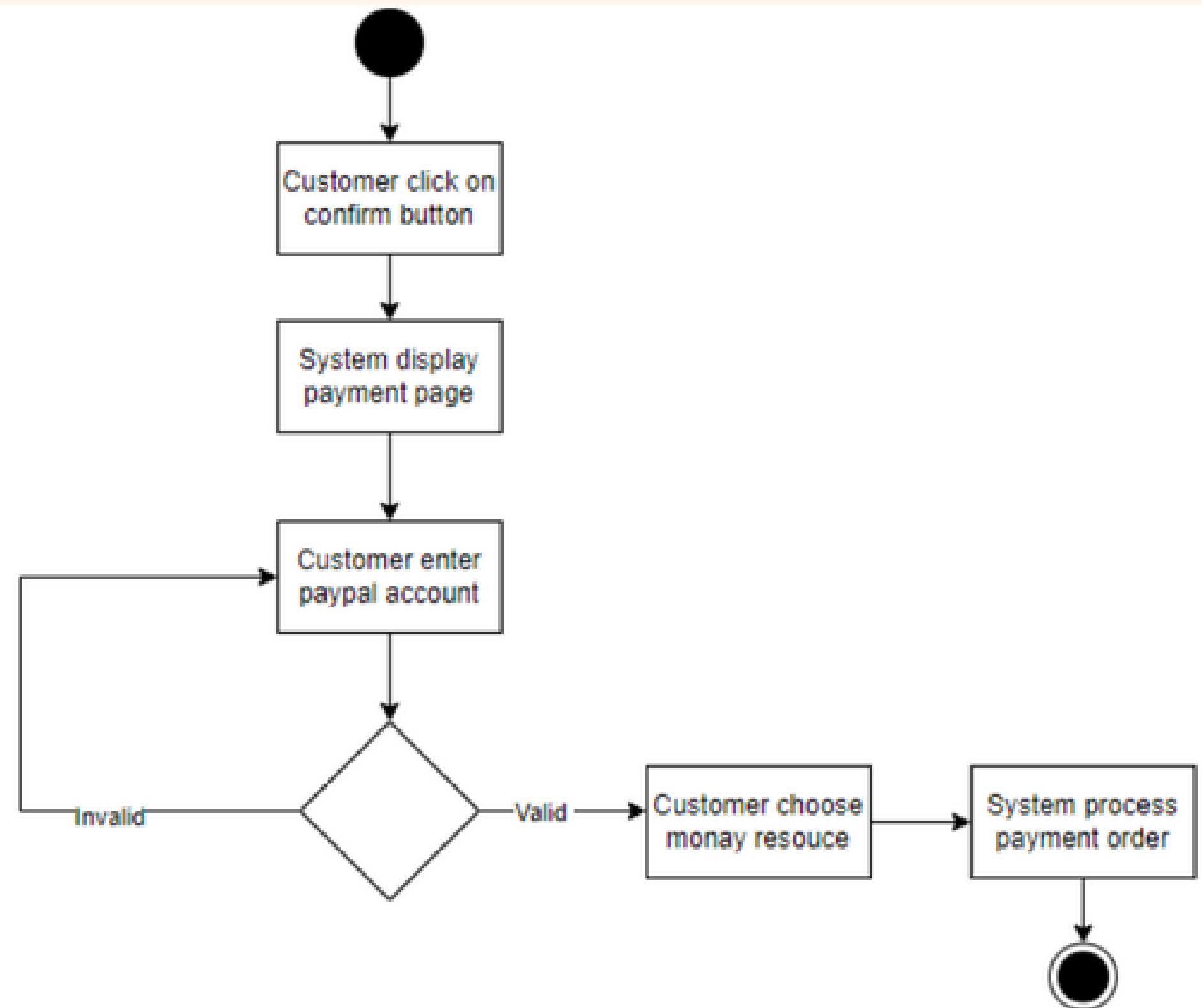
Example UC-1 / 22: Register

ID & Name	UC-1: Register
Primary Actor	User
Description	Describe the process of user registering an account.
Trigger	User clicks on the “Sign up” button.
Pre-conditions	None
Post-conditions	The website displays successfully registered notification and redirect to login page User has an account in the database of the web application
Normal Flow	1. Click on the “Register” button 2. Enter username 3. Enter email 4. Enter password 5. Click on the “Submit” button
Alternative Flows	None
Exceptions	Exception #1: Username or email already exists. 5. Click on the “Submit” button 6. System displays “User has existed” 7. Re-enter information Exception #2: Invalid information. 5. Click on the “Submit” button. 6. System displays specific validation error (point out the rule) 7. Re-enter information
Priority	Must have

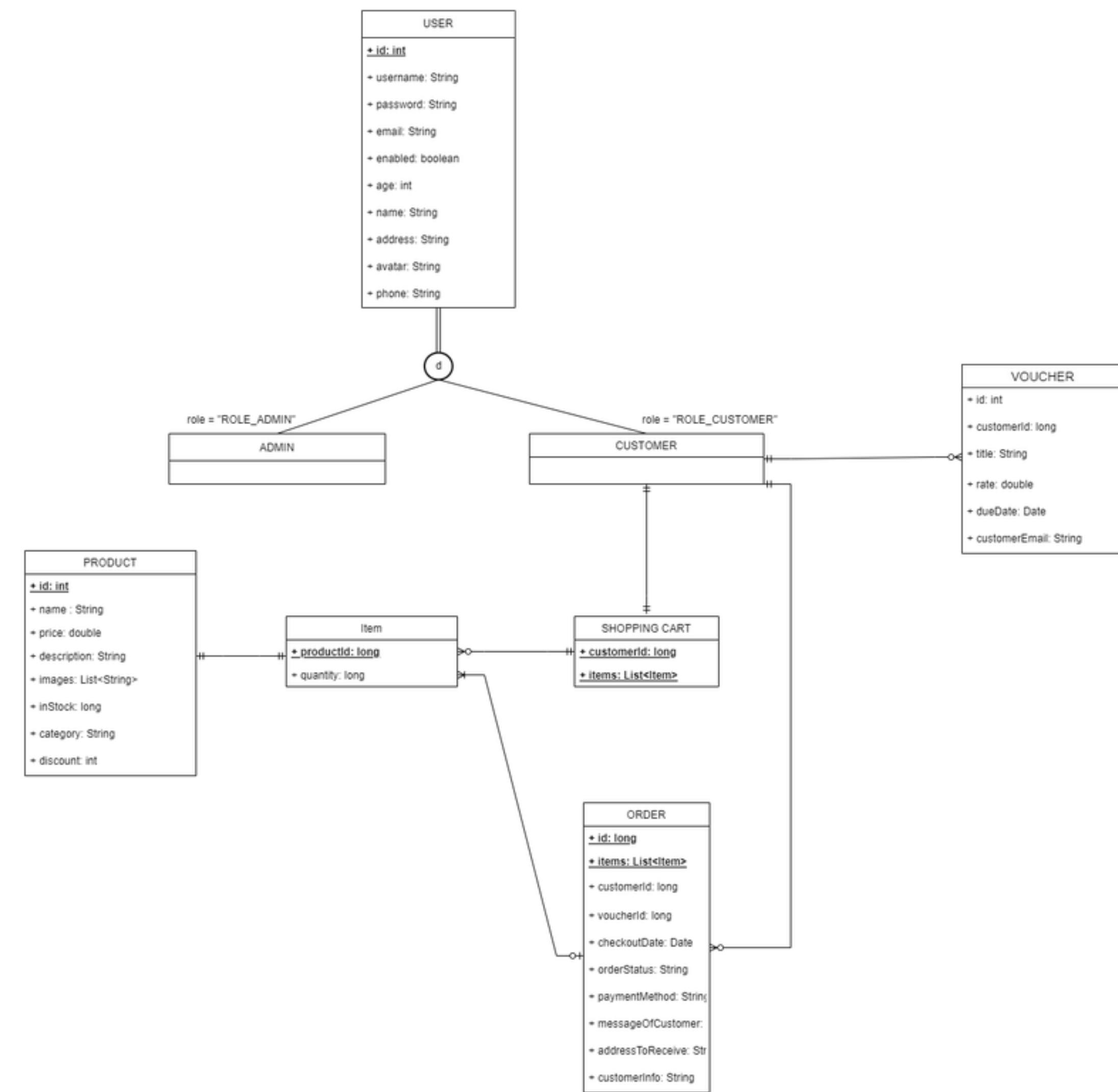


Activity Diagram

Example UC-22 / 22: Pay by Paypal

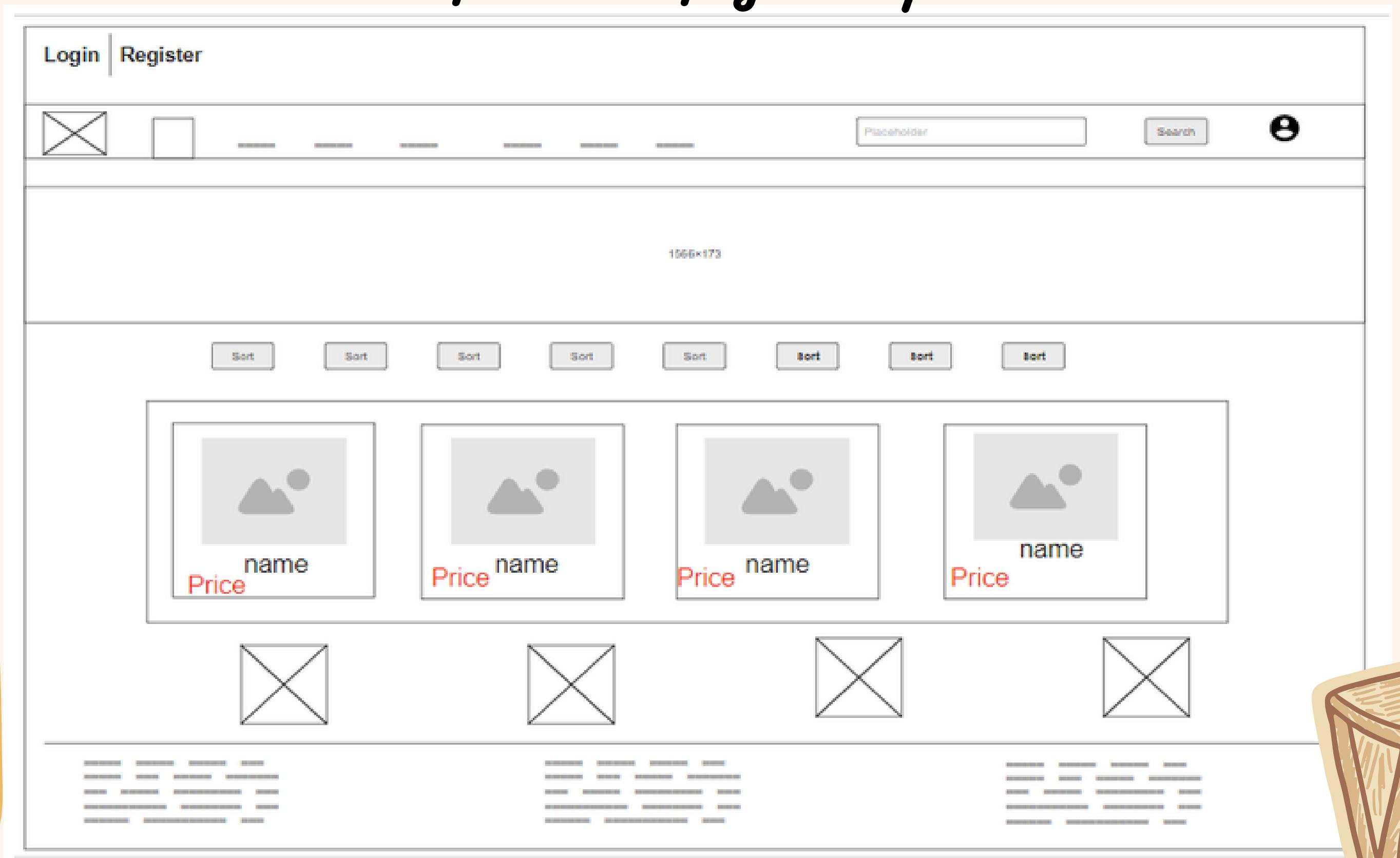


Entity Relationship Diagram



Wireframe

Example: Homepage wireframe



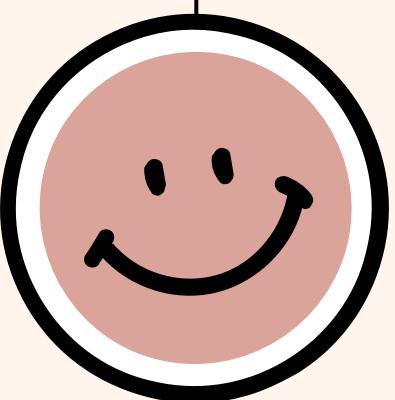
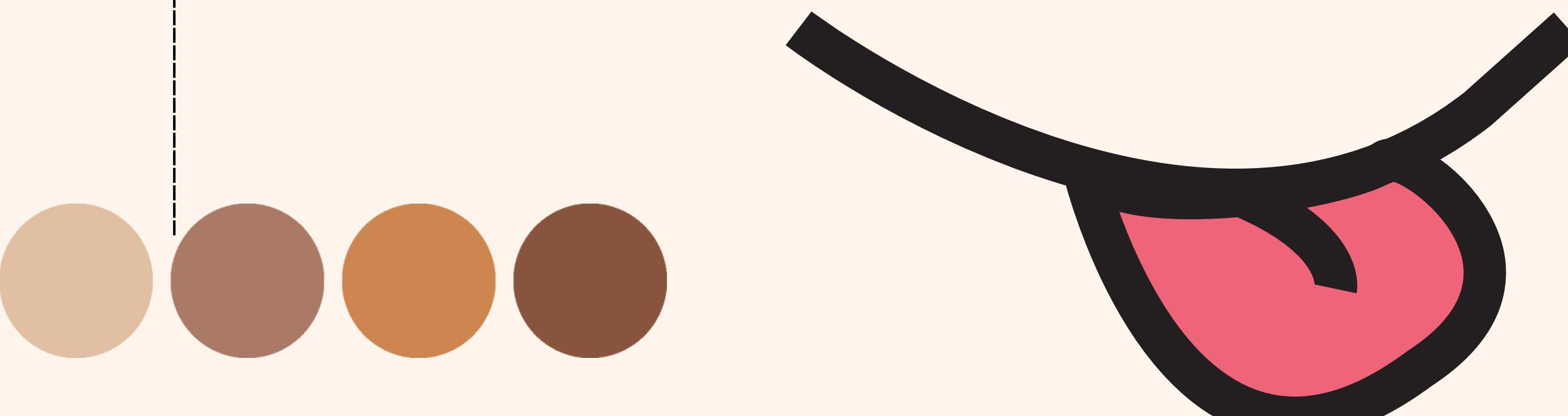
Analysis & Design

System Architectures



Front-end

Back-end

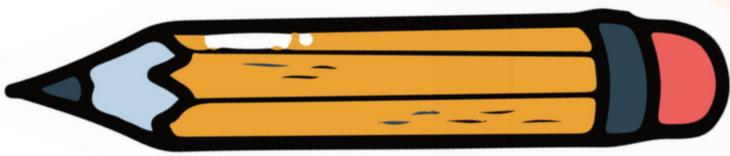
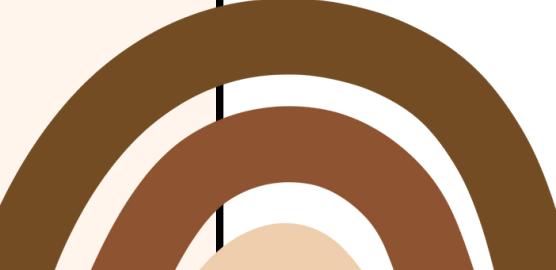




FE architecture

Component-based Architecture

- Component-based approach promotes **reusability**, **modularity**, and **Maintainability**.
- Components are self-contained and reusable units that can encapsulate a specific functionality or UI element, easily composed and combined to build complex UIs.



FE architecture

```
components
└── admin
    ├── Admin.css
    ├── AdminOrders.jsx
    ├── AdminProducts.jsx
    ├── AdminVouchers.jsx
    ├── ProductAdd.jsx
    ├── ProductUpdate.jsx
    └── VoucherAdd.jsx
```

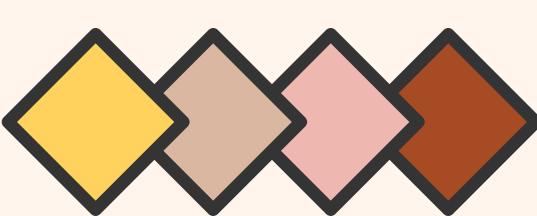
```
> auth
> customer
> footer
> header
> homepage
> order
> others
> product
App.css
App.js
App.test.js
index.css
index.js
setupTests.js
```

BE architectures

Model-View-Controller Architecture

MVC provides a structured approach to separate concerns and organize the backend codebase.

- **Model:** represents the domain models, encapsulating business logic and data persistence.
- **View:** handles the presentation layer and user interface, providing a visually appealing and interactive experience for users.
- **Controller:** acts as the intermediary between model and view, handling user requests, processing inputs, and coordinating the flow of data.

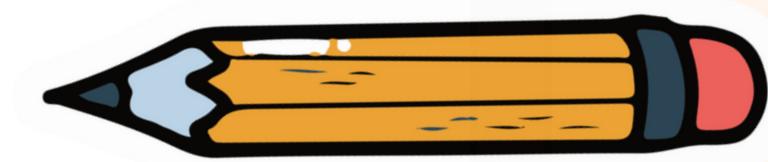


BE architectures

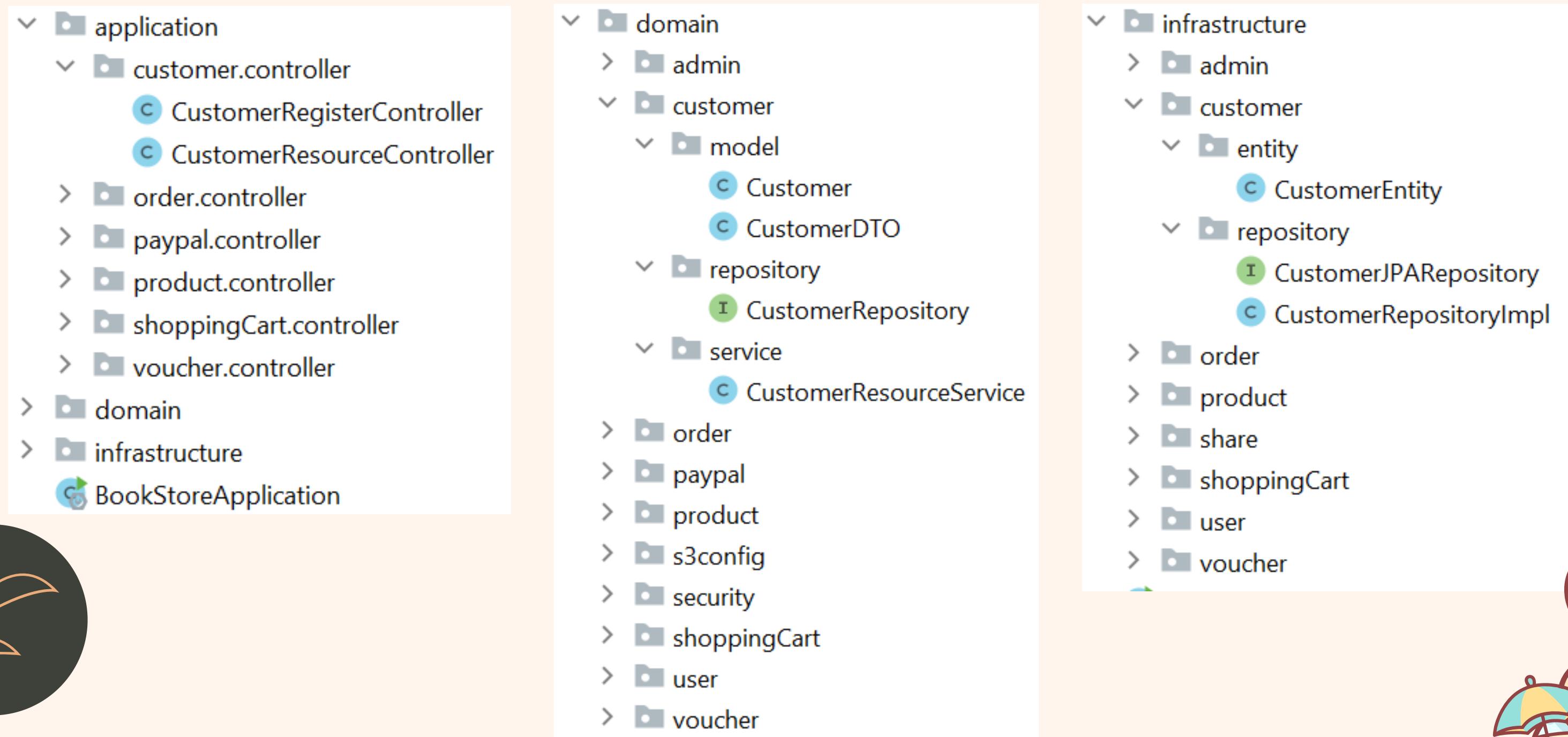
Domain-Driven-Design Architecture

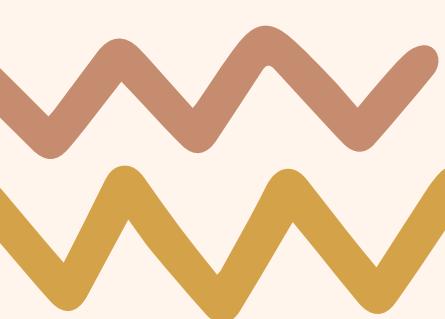
DDD ensures the software design aligns with the business domain, enabling the development of complex systems that accurately meet the business requirements and logic.

- **Application layer:** coordinates use cases, handling transactions, applying business rules, and mapping between the presentation and domain layers.
- **Domain layer:** encapsulates the core business logic, enforces business rules.
- **Infrastructure layer:** provides technical implementations and services, such as data persistence, data access, repositories, external API integrations, ...



BE architectures





UI design

Example: My shopping cart

Logout |

Detective Fiction Horror Comic Adventure Literature

Enter name of book Search

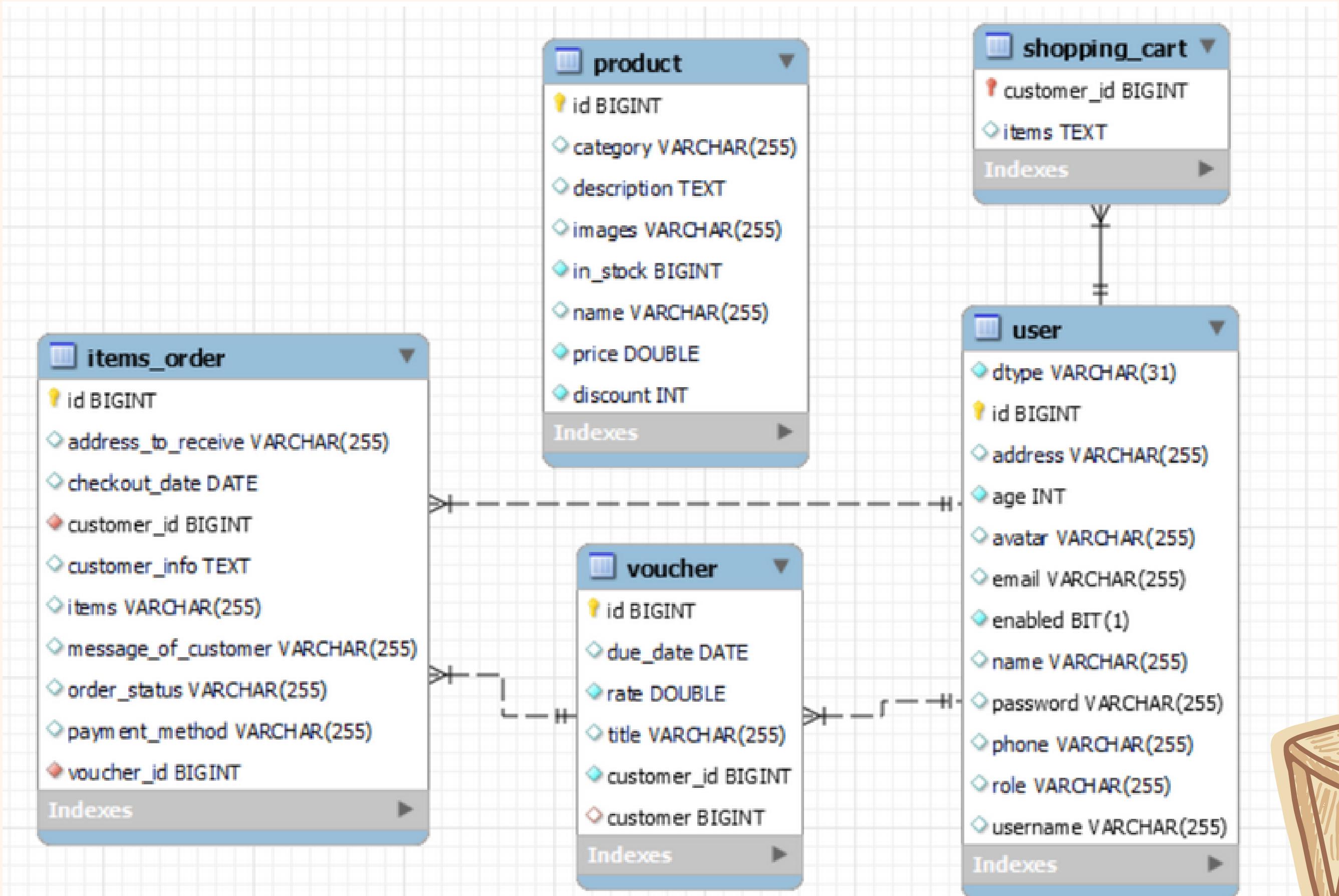
My shopping cart

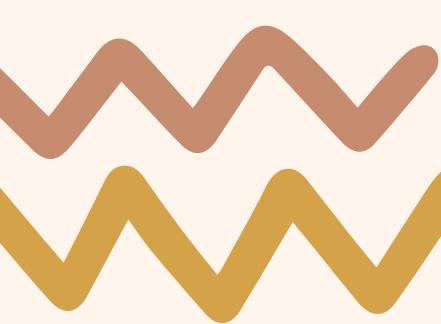
Book name	Book price	Number	Delete
I Am Gifted, So Are You!	14.85 \$	+ 2 -	<button>Delete</button>

Total price: 29.7 \$ [Buy now](#)

Dedicated service Different products Fast delivery Dedicated service

Database design

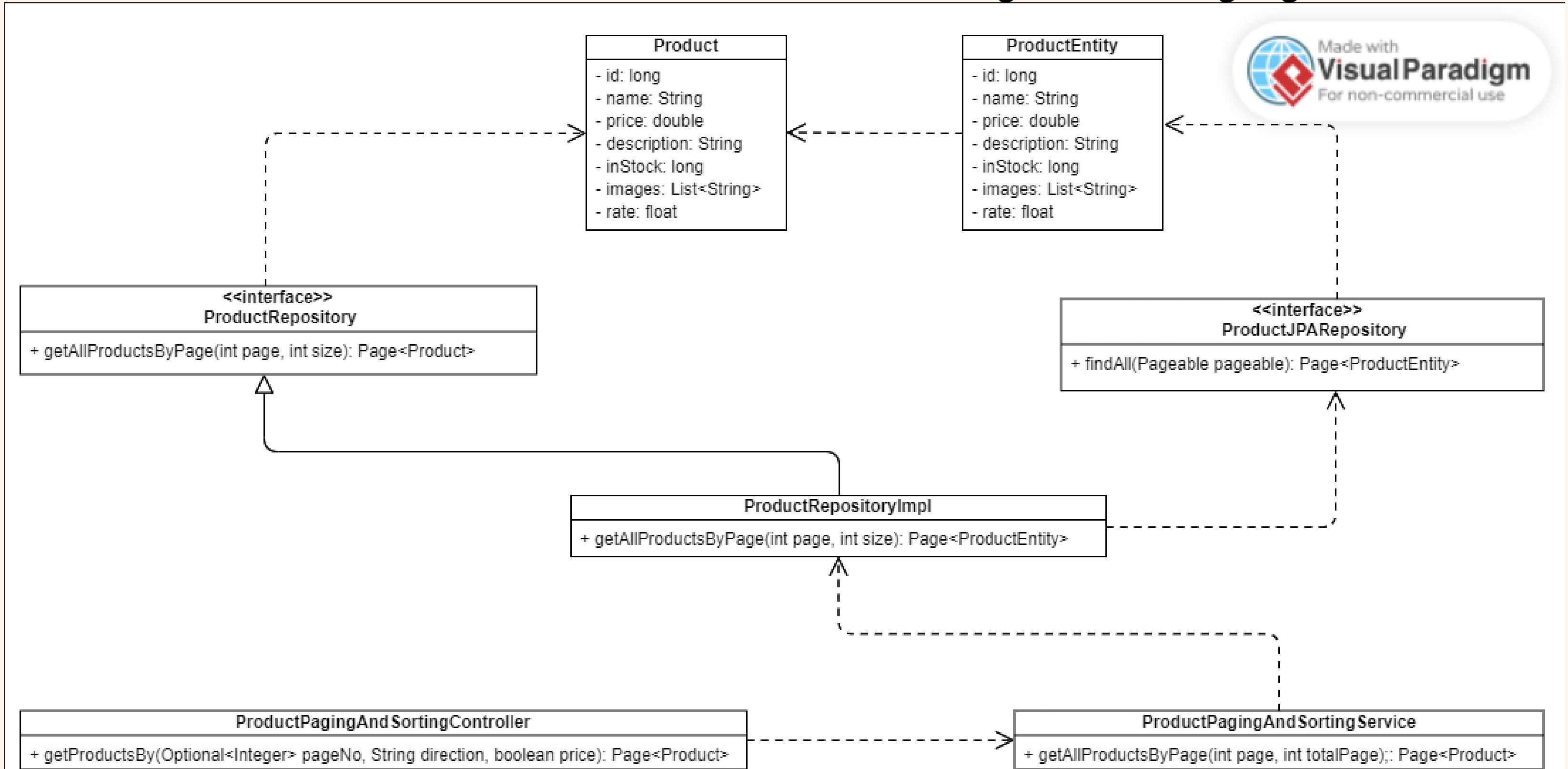




Class Diagram

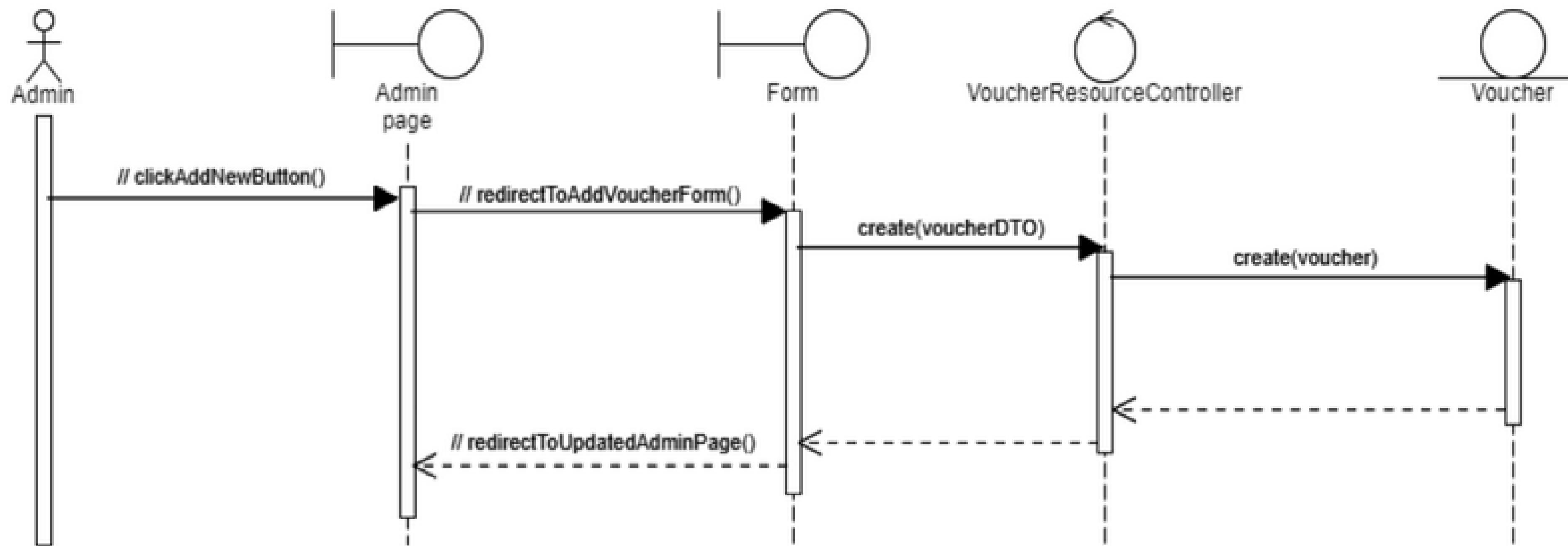


Example UC-4 / 22: View home page with paging



Sequence Diagram

Example UC-20 / 22: Add new voucher



Implementation





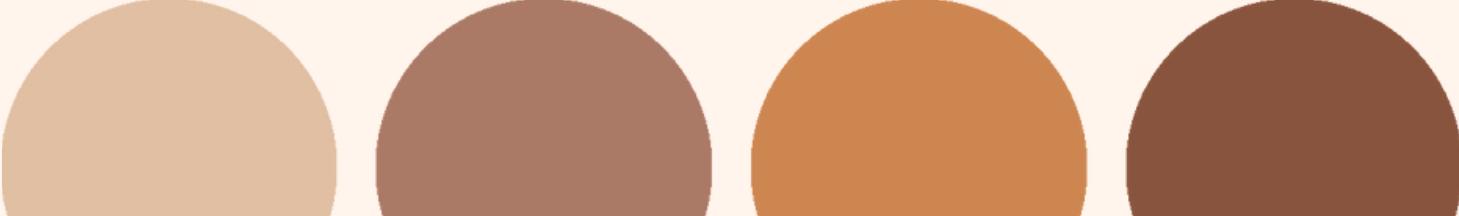
Source code



<https://github.com/Group9876>



repositories available. Follow their code on GitHub.





Customer & Admin manuals



https://docs.google.com/document/d/1YkWo6F4vk0ms9XsqAOkhHuQ_2EjA9j2Xv8TcSBHUVn4/edit?usp=share_link

https://docs.google.com/document/d/1grVjSD2Uuk8Bfn0ZkrxzYDF56lvAbrjfIPRtM5QHIDY/edit?usp=share_link

<https://www.youtube.com/watch?v=Fo6gck0YV1I>



Database Export

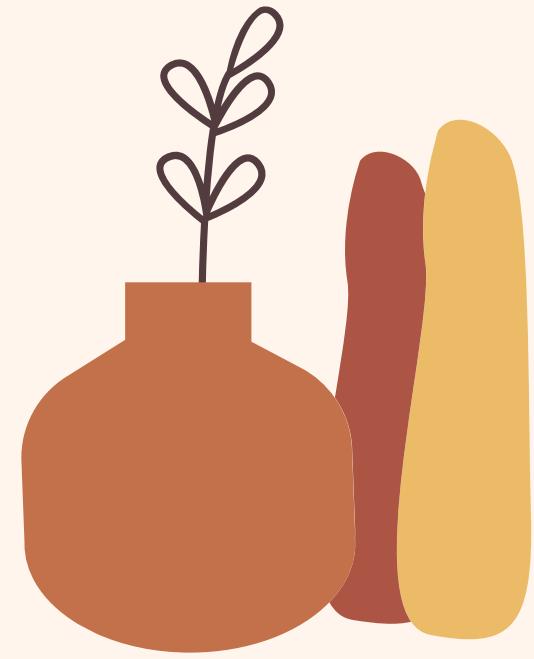
```
DROP TABLE IF EXISTS `product`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `product` (
  `id` bigint NOT NULL,
  `description` varchar(255) DEFAULT NULL,
  `images` varchar(255) DEFAULT NULL,
  `in_stock` bigint NOT NULL,
  `name` varchar(255) DEFAULT NULL,
  `price` double NOT NULL,
  `rate` float NOT NULL,
  `category` varchar(255) DEFAULT NULL,
  `discount` int NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

-- 
-- Dumping data for table `product`
-- 

LOCK TABLES `product` WRITE;
/*!40000 ALTER TABLE `product` DISABLE KEYS */;
/*!40000 ALTER TABLE `product` ENABLE KEYS */;
UNLOCK TABLES;
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;
```



Testing





Testing Plan

Verification & Validation



1. Test Environment

4. Test Reporting

2. Test Types

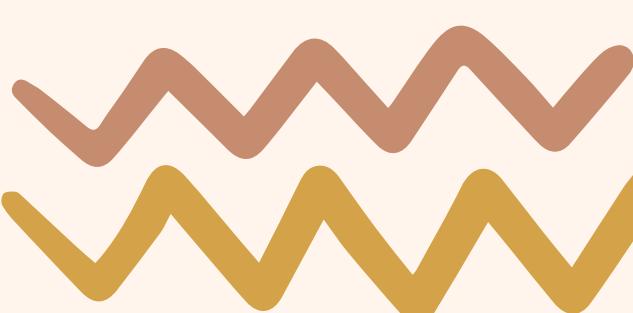
5. Risks & Mitigation

3. Test Approach



6. Sign-off





Testing Result

Example voucher manual test



No.	Testcase description	Test env	Test input	Expected result	Executed date	Actual result
1	View all vouchers	Postman & firefox	No input	Return all vouchers	5/4/2023	Return all vouchers
2	Add new voucher when logged in as admin	Postman & firefox	Voucher information	201 created	5/4/2023	201 created
3	Add new voucher when logged in as admin	Postman & firefox	Invalid voucher's information	400 bad request	5/4/2023	400 bad request
4	Add new voucher when logged in as customer/anyone else	Postman & firefox	Any	401 unauthorized	5/4/2023	401 unauthorized
5	Delete voucher when logged in as admin	Postman & firefox	id	204 deleted	5/4/2023	204 deleted
6	Delete voucher when logged in as customer/anyone else	Postman & firefox	id	401 unauthorized	5/4/2023	401 unauthorized



Deployment



Deployment

<https://bookstore-551a9.web.app>

The homepage features a navigation bar with categories: Detective, Fiction, Horror, Comic, Adventure, Literature. A search bar with placeholder "Enter name of book" and a "Search" button. Below is a large image of several books standing in a field of yellow flowers. A row of filters: ↑ Price, ↓ Price, ↑ Name, ↓ Name, ↑ Category, ↓ Category, ↑ In Stock, ↓ In Stock. A grid of five books with discounts: Rework (10%), Doraemon (2%), Bug (5%), The Walking Dead (3%). At the bottom are service icons: Dedicated service, Different products, Fast delivery, Dedicated service.

Contact Us
Tel:(84-24) 38544338
Address: Km 9, đường Nguyễn Trãi, quận Nam Từ Liêm, Hà Nội, Việt Nam
Email: hanu@hanu.edu.vn | tuyensinh@hanu.edu.vn

About Us
This is where you can buy any book you want

Our partners
Hanoi university

Icons: Facebook, Instagram, TikTok.

The admin panel has a login form with fields for Username and Password, and a "Submit" button. Below are service icons: Dedicated service, Different products, Fast delivery, Dedicated service. The main area shows a table of books with columns: Book Name, Price, In stock, Image, Category, Discount, Update, Delete. Books listed include I Am Gifted, So Are You!, Doraemon 1, Harry Potter, Conan 100, Clean Code: A Handbook of Agile Software Craftsmanship, Head First Design Patterns, and Conan 7.

Welcome ADMIN! ☰

PRO BOOKSTORE

Manage books

Manage orders

Manage vouchers

Books

Book Name	Price	In stock	Image	Category	Discount	Update	Delete
I Am Gifted, So Are You!	23	20		Literature	0%		
Doraemon 1	2	200		Comic	0%		
Harry Potter	10	30		Adventure	0%		
Conan 100	2	20		Detective	0%		
Clean Code: A Handbook of Agile Software Craftsmanship	12	25		Literature	0%		
Head First Design Patterns	11	100		Literature	1%		
Conan 7	3	20		Detective	0%		

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” Conclusion



STRENGTHS

- Successful applications of Scrum methodology; DDD, MVC & Component-Based architectures; Java Spring Boot, ReactJS, MySQL, CSS.
- Reusability & Adaptability without changing code
- User-friendly Interface.
- Quality Assurance
- Efficient Search, Sort, Filter Functionality
- Authorization and Authentication
- Seamless Checkout Process
- Secure Payment
- Order Tracking
- Product, Voucher, Order Management
- Profile Modification



WEAKNESSES

- Lack of Mobile responsiveness
- Lack of User Account Management
- Lack of Wishlist and Bookmarks
- Lack of Recommendation Function
- Lack of User Ratings and Reviews
- Lack of Shipping Management
- Challenges in performance optimization



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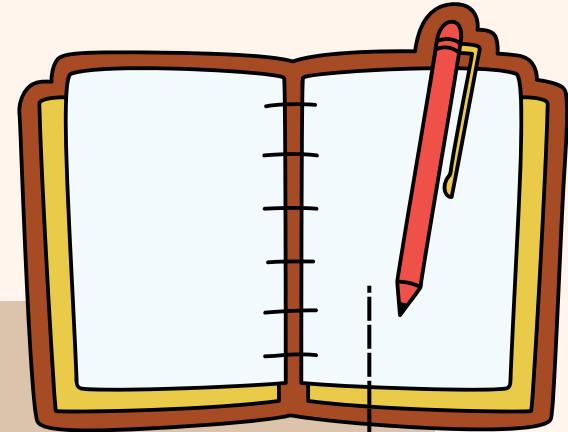
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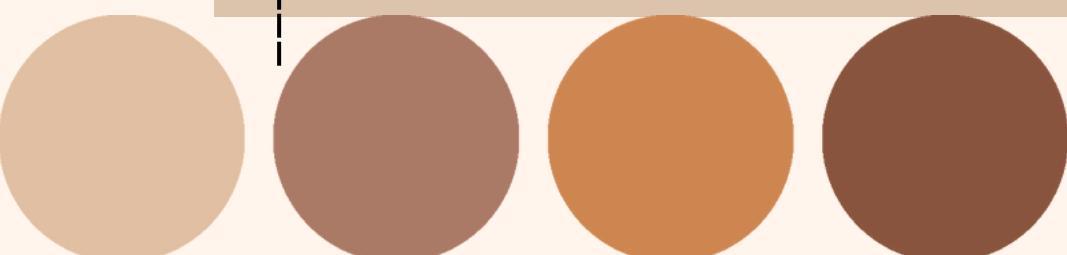
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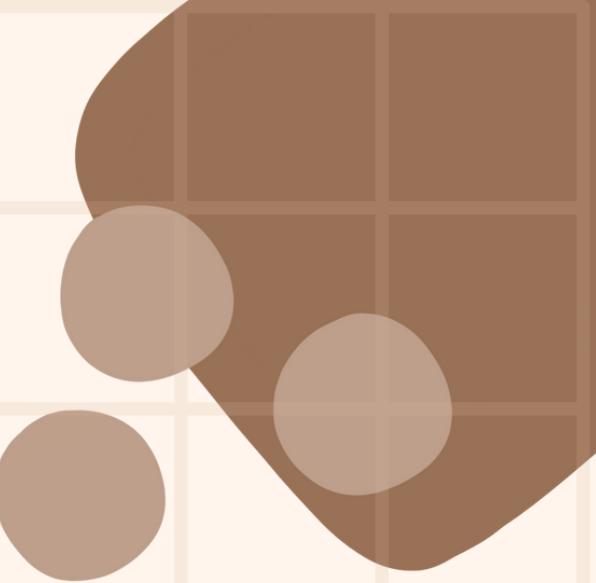
Conclusion



- By prioritizing quality assurance, the project aims to build trust with customers, enhance user satisfaction, and establish a competitive edge in the **online bookstore market**
- We highlighted the **purposes, project frameworks, implementation, strengths and weaknesses** of our project. The website will continue to address the identified weaknesses and leveraging the strengths to **stay competitive** in the online bookstore market.
- We are confident that it will contribute to the growth of the bookstore business, attract a wide range of customers and provide a convenient platform for exploring and purchasing books online.



THANK YOU
SO MUCH!





Question Time