FPT- APTECH COMPUTER EDUCATION

eProject Report

Yash Gems & Jewelries

Group 2	
Group Member	Phạm Trọng Quân – TH2203016 - Leader Hạ Quang Sơn – TH2112009 – Backend Dev Bùi Hải Giáp – TH2207053 – Frontend Dev Nguyễn Huy Anh Duy – TH2211002 - Backend Dev Phùng Hoàng – TH2209052 – Frontend Dev
Batch	T2301E
Center	FPT Aptech
Semester	3/4

- Hanoi, July /2024 -

Contents

1. Acknowledgements 3
2. Introduction 3
3. Problem Definition 3
   3.1. Problem Abstraction 3
   3.2. The Current System 4
   3.3. The Proposed System 4
   3.4. Boundaries of the System 5
   3.5. Development Environment 5
4. Requirements and Business Flows 6
   4.1. Customer Requirements 6
   4.2. Activity Diagram 6
   4.3. Use Case Diagram 8

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5. Design 8
   5.1. System Architecture 8
   5.2. Entity Relationship Diagram **Error! Bookmark not defined.**
   5.3. Database Design 9
6. System Prototype 10
6. Management and Project Planning 10
   6.1. Management Approach 10
   6.2. Project Plan 11
   6.3. Task Sheet 12
7. Checklists 12
   7.1. Check List of Validation 13
   7.2. Submission Checklist **Error! Bookmark not defined.**
8. Screenshots 13
9. Coding Convention **Error! Bookmark not defined.**
10. User Guide **Error! Bookmark not defined.**

1. Acknowledgements

We would like to express our deep gratitude to Mr. Trinh Quang Hoa and everyone in the project team. Your enthusiastic support and dedication made the project meaningful and successful.

A heartfelt thank you to family, friends and loved ones for their unwavering support. Your encouragement is a great and important motivation to help us overcome this challenge.

Finally, we would like to sincerely thank everyone for taking the time and interest to read and evaluate our project. Your interest and evaluation are a great source of encouragement to help us improve more and more

2. Introduction

Discover the magic of Yash Gems & Jewelleries, where craftsmanship meets innovation. Founded by Mr. Robert D'costa in 2005, we specialize in crafting exquisite gold and diamond jewelry using the latest technologies. As a trusted supplier to elite retailers, our intimate market knowledge ensures we deliver impeccable quality and design. Our talented team of designers and craftsmen bring dedication and artistry to every piece, offering top-quality jewelry at the best possible prices. Experience the elegance and brilliance that have made Yash Gems & Jewelleries a benchmark in the Indian jewelry industry.

3. Problem Definition

3.1. Problem Abstraction

The primary challenge faced by Yash Gems & Jewellery (P) Ltd is to transition from a traditional, physical retail environment to a comprehensive, user-friendly online platform. This platform should seamlessly facilitate the manufacturing and trading of gold and diamond jewelry, leveraging advanced technologies to enhance user experience and operational efficiency.
Key problems include:

1. **User Interaction**: Ensuring a smooth and intuitive user interface that allows customers to easily search, filter, and purchase jewelry.
2. **Search Functionality**: Developing an advanced search engine capable of handling complex search criteria to provide relevant and exhaustive search results.
3. **Shopping Cart and Payment Security**: Implementing a secure shopping cart feature that allows for easy addition and removal of products, coupled with a secure and confidential transaction process.
4. **Vendor Operations**: Enabling vendors to manage their product listings, update inventory, handle orders, and maintain detailed customer records with ease.
5. **Customer Management**: Facilitating user account creation and management, ensuring that customers can securely log in, view, and manage their purchases.

6. **Database Integration**: Maintaining a robust database to store and retrieve customer details, product listings, order details, billing information, and transaction records efficiently.
7. **Educational Content**: Providing informative content about diamonds, gems, and certifications to educate customers and enhance their buying experience.
8. **Marketing and Promotions**: Designing an attractive home page that highlights discounts, gift offers, festive offers, and new launches to engage and attract customers.

3.2. The Current System

Yash Gems & Jewelleries (P) Ltd currently operates in a traditional brick-and-mortar retail environment, where the business model is centered around physical interactions and transactions. The existing system has the following characteristics:

1. **Manual Operations**: The business relies heavily on manual processes for managing inventory, processing orders, and handling customer interactions. This includes physical record-keeping and direct communication with customers.
2. **Limited Reach**: The current system limits Yash's market reach to local and walk-in customers, restricting the potential for national and international sales.
3. **In-Person Sales**: Customers must visit the physical store to view and purchase jewelry, which can be time-consuming and inconvenient, especially for those who are not in close proximity to the store.
4. **Customer Service**: Customer service and support are provided face-to-face or via phone, which may not be as efficient or responsive as modern digital communication methods.
5. **Inventory Management**: Inventory updates and product information are managed manually, leading to potential delays in updating available stock and product details.
6. **Marketing and Promotions**: Marketing efforts are primarily traditional, relying on local advertisements, word-of-mouth, and in-store promotions. This limits the ability to reach a broader audience and leverage digital marketing strategies.
7. **Security**: Transactions and sensitive customer information are handled in-person, which may not provide the same level of security and confidentiality as a well-designed online system.
8. **Educational Content**: Information about diamonds, gems, and certifications is provided through in-store consultations, which may not be as comprehensive or accessible as digital content.

3.3. The Proposed System

Based on the problems that exist in the YGJ website, we propose a number of solutions to enhance and optimize the current system:

Optimized user interface:

- Redesign the website with a more user-friendly and intuitive interface.

-Improve user experience during the ordering process, ensuring smooth order selection and completion.

Expanded functionality:

-Each product detail should have more information, including attractive collections and images.

Efficient payment process:

-Simplify the payment process to reduce the risk of losing customers.

-Supports many payment methods and ensures high security standards during the transaction process.

Advanced order management system:

-Integrate real-time notifications and updates on order status.

-Improve delivery confirmation and tracking processes to ensure accuracy and timely response to customer needs.

These solutions aim to improve user experience, expand functionality and enhance management processes so that YGJ can better meet customers' wants and expectations.

3.4. Boundaries of the System

Data type:

- Jewelry products: YGJ website manages product information including images, descriptions, prices and customer reviews of this product
- Customers: Includes customer personal data such as name, age, address, phone number, customer email.
- Order: Order information includes selected products, recipient name, phone number, address, order status (ordered, in progress, paid, completed, canceled ...), payment method, delivery method.

Customer Information Management:

-Permissions: Users can create accounts to store personal information and track their order history.

-Account security: The system protects customer account information using encryption and other security measures.

3.5. Development Environment

-Programming language:

Front-end: Html, Css, Javascript & Reactjs

Back-end: C#, ASP .Net

-Database: SQL server

-Framework: Bootrap, jQuery, MVC

-Development environment:

With Backend : Visual studio

With Front-end : Visual studio code

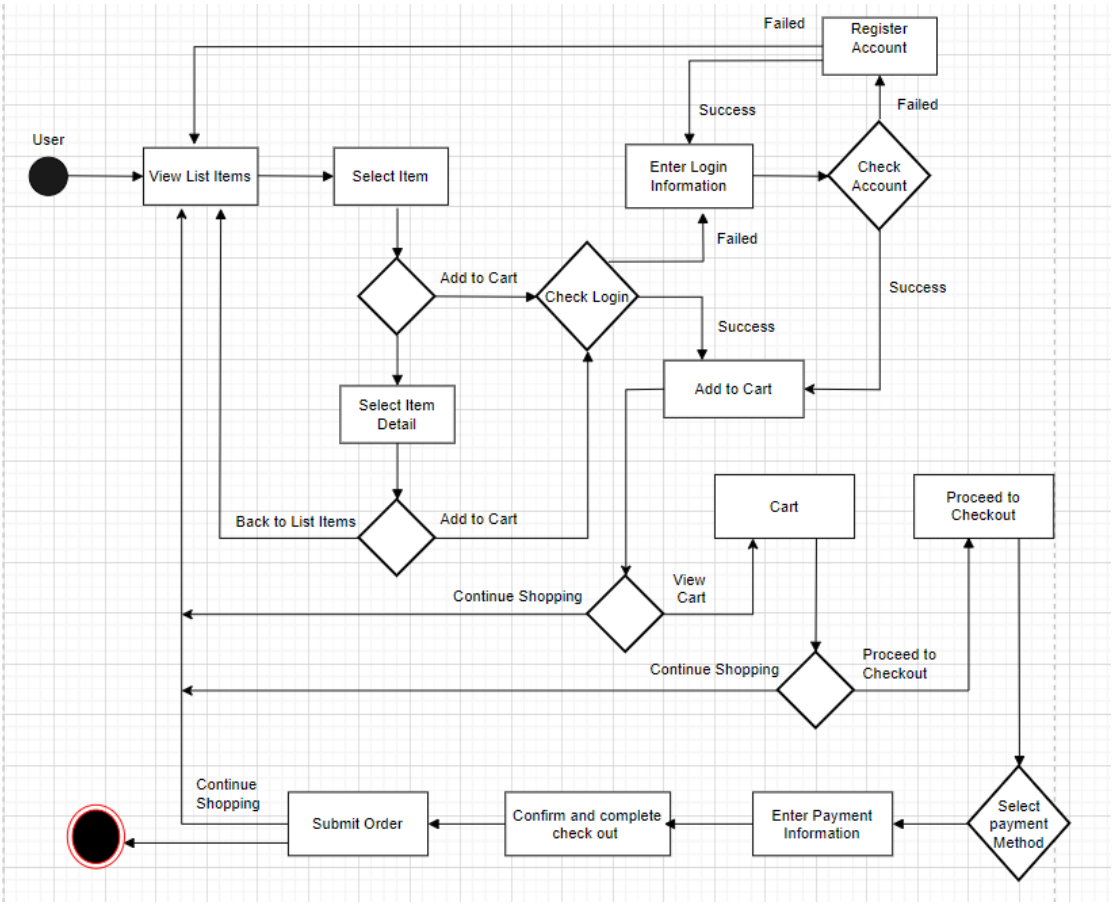
4. Requirements and Business Flows

4.1. Customer Requirements

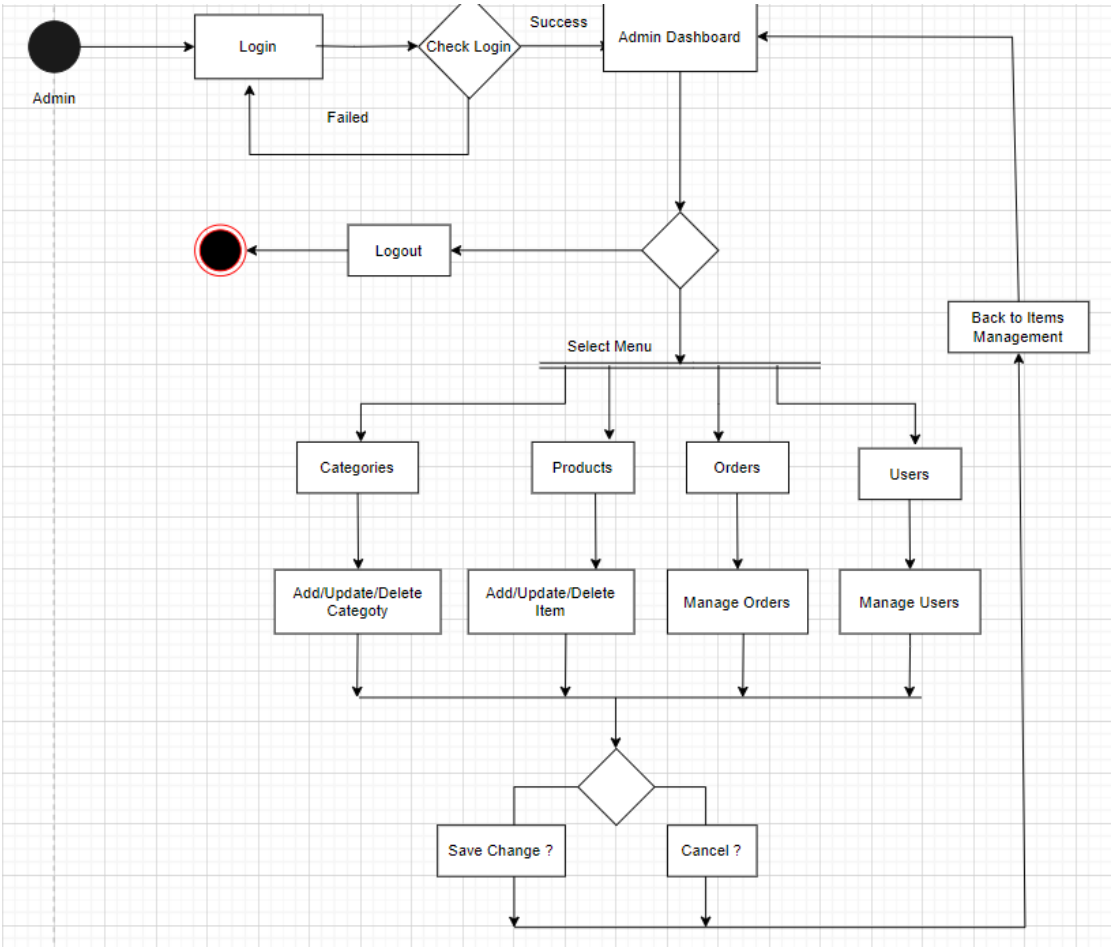
The customer wants a jewelry website that has all the basic functions of an online shopping site. The website must describe the product in detail and have clear images so that customers have a realistic view of the product. Regarding the search function, it is necessary to support customers in flexible searches, allowing filtering by price or product classification.

In addition, the website needs to have a simple, user-friendly interface to facilitate ordering, provide many flexible payment methods, and have an order tracking function. Furthermore, the website must include customer engagement features such as reviews and comments sections, customer support capabilities, and updates on promotions and discounts.

4.2. Activity Diagram



User activity diagram



Admin activity diagram

4.3. Use Case Diagram

5. Design

5.1. System Architecture

Front-end:

- Web Browser Interface: Provides a user interface for customers to interact with the website.
- HTML, CSS, JavaScript & Reactjs: Use web programming languages to display and interact with website content.

Back-end:

- Web Server: Ensures website service and handles user requests.
- Application Server (ASP.NET): Handles business logic, manages order status, and interacts with the database.
- Database Server (SQL server): Stores data related to products, customers, orders, and other information.

Databases:

- Product: Stores detailed information about the product, including images, prices, descriptions.
- Customers: Preserving customers' personal information.
- Orders: Record information about orders, status and payment details.

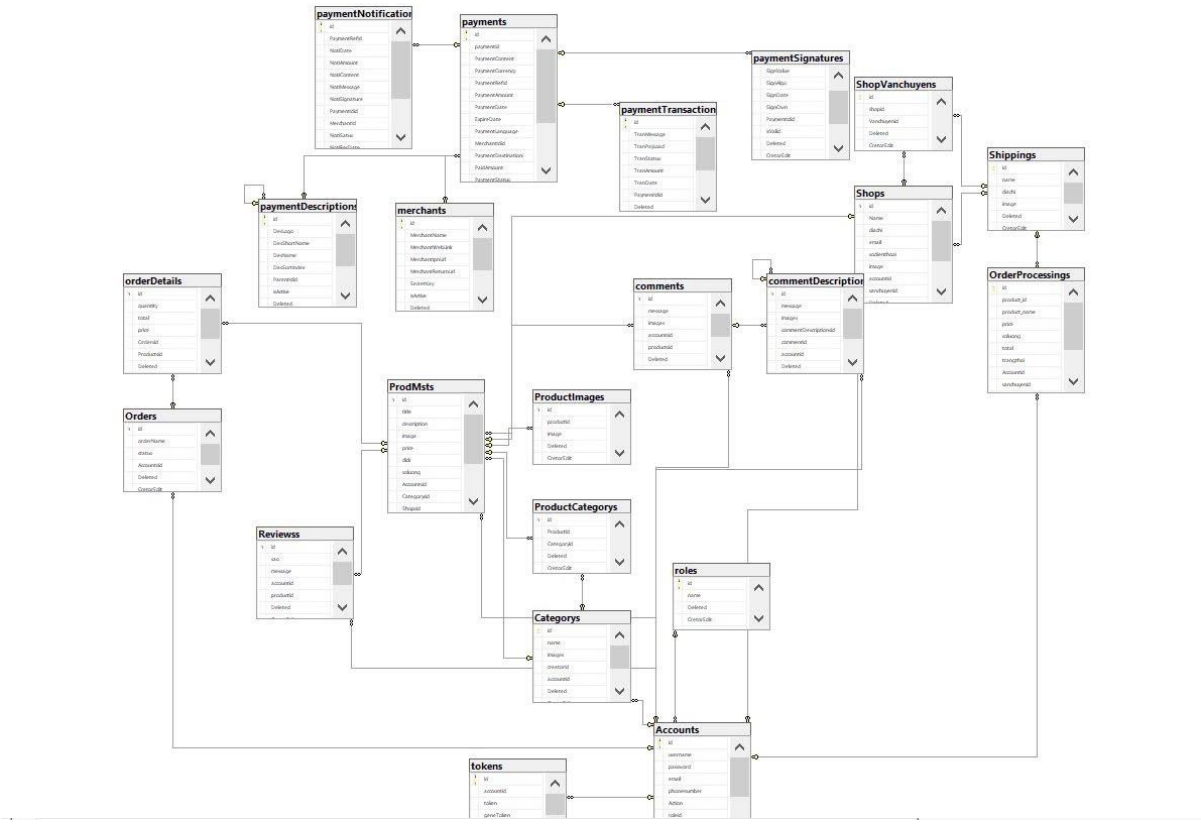
Order and order management:

- Payment: Implement payment information storage and payment integration
- Delivery: Store delivery information
- Send notifications and updates to customers about orders, offers, and other events.

Security Layer:

User Authentication: Authenticate users and manage access rights.

5.2. Database Design



6. System Prototype

6. Management and Project Planning

6.1. Management Approach

Member:

-Phạm Trọng Quân (Leader)
-Hạ Quang Sơn
-Bùi Hải Giáp
-Nguyễn Huy Anh Duy
-Phùng Hoàng

Project Management:

- Utilize the Agile methodology for project management to enhance flexibility and adaptability to changes.
- Implement the Scrum framework to break down the project into short sprints with specific goals.

Team Organization:

- Foster a positive and collaborative work environment by encouraging open communication and sharing of ideas.
- Adopt a self-managed team model to stimulate innovation and contributions from all team members.

Task Assignment:

- Use Excel for task tracking and assignment.
- Select suitable individuals for tasks based on skills and preferences.

Progress Monitoring:

- Conduct short sprint meetings to assess progress and ensure everyone is working in the right direction.
- Always monitor tasks to keep everyone updated on their work and identify risks promptly.

Meeting Frequency:

- Organize weekly meetings to review progress, address issues, and set priorities for the upcoming week.
- Conduct sprint reviews after each sprint cycle to evaluate success and adjust plans if necessary.

Meeting Content:

- Review and discuss completed tasks, tasks in progress, and emerging issues.
- Identify and prioritize tasks to be undertaken in the next sprint cycle.

6.2. Project Plan

Project name: Yash Gem & Jewelry website
Time: 21/06/2024 – 29/07/2024

Determine Requirements:
Start Date: 21/06/2024
End Date: 22/06/2024
Person Responsible:
Phạm Trọng Quân (Leader)
Hạ Quang Sơn
Bùi Hải Giáp

Requirements Analysis and Design diagram,database:
Start Date: 23/06/2024
End Date: 28/06/2024
Person Responsible:
Hạ Quang Sơn
Bùi Hải Giáp
Nguyễn Huy Anh Duy
Task:
Collect requirements from customers.
Analyze the market and competitors.
User interface, activity diagram, Database and user experience design.

Website Development :
Start Date: 28/06/2024
End Date: 17/07/2024
Responsible Person:
Hạ Quang Sơn
Phạm Trọng Quân
Bùi Hải Giáp
Phùng Hoàng
Job:
Back-end with ASP.NET : develop an optimized database, then handle server-side logic and build APIs, integrating security measures such as encryption, authentication,... to optimize performance
Front-end with Reactjs : Communicate with Backend, User Interface (UI) Design and User Experience (UX) Optimization while developing interactive features, optimizing performance and compatibility with different browsers

Testing and Fixing:
Start Date: 17/07/2024
End Date: 21/07/2024
Responsible Person:
Phạm Trọng Quân
Phùng Hoàng
Nguyễn Huy Anh Duy
Job:
Conduct functional and performance testing on the backend side

Fix errors and optimize the website, improve user experience

Prepare resources and reporting:

Start Date: 22/07/2024

End Date: 29/07/2024

Person Responsible:

Phùng Hoàng

Nguyễn Huy Anh Duy

Job:

Track progress and resources will be submitted and then given to the leader for final inspection

Project report and faculty input

Final editing, packaging and project submission

6.3. Task Sheet

Time: 23/06/2024 - 28/06/2024 : Requirements Analysis and Design diagram

No	Task Name	Deadline	Implementer	Status	Issue
1	Collect Requirements from Customers		Sơn	Done	No issue
2	Database Design		Sơn	Done	No issue
3	User Interface Design		Giáp	Done	No issue
4	User Experience Design		Giáp	Done	No issue
5	Activity Diagram Design	23/06/2024 - 28/06/2024	Duy	Done	No issue

Summary of Sprint 1

Goal: Complete requirements analysis and design for UI, activity diagram, database, and user experience.

Result: All tasks are completed as planned, ensuring a solid foundation for the next stages of development.

Sprint backlog

See detailed Sprint Backlog here:
https://docs.google.com/spreadsheets/d/11Jqy0UT8Fb4qoiGnx9y-Bnmm9mfMfocgr6OGOUR4x54/edit?usp=sharing

7. Checklists

7.1. Check List of Validation

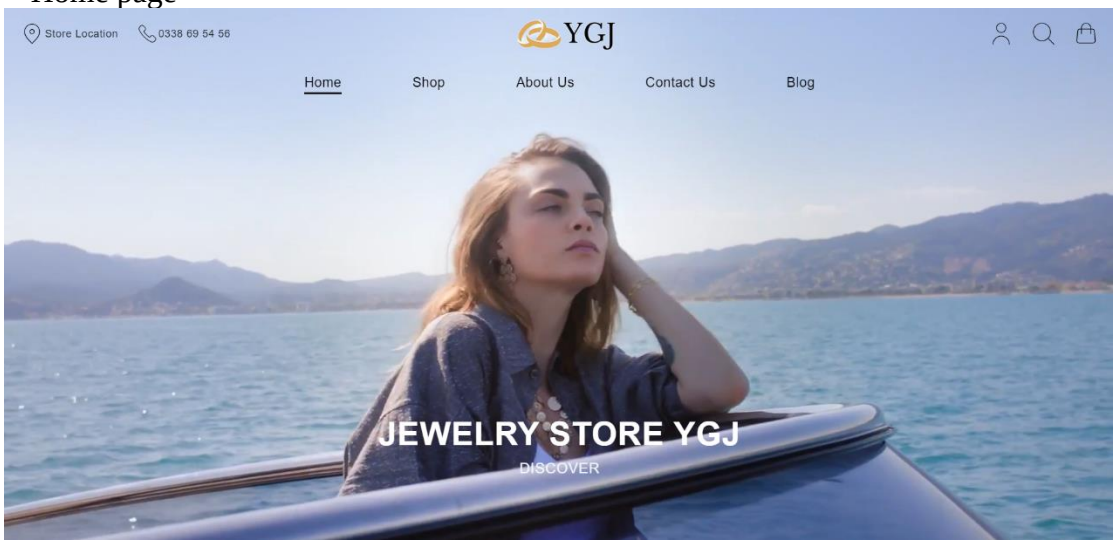
No		Description	Status	Priority	Tester	Test Date	Result
1	Login and Registration	Verify the accuracy of the login and registration process. Ensure that user information is authenticated correctly.	Checked - Pass	Hight	Duy	20/07/2023	Pass
2	Search and Filter Products	Check the accuracy of the search and filter functionalities. Confirm that products are displayed based on search and filter criteria.	Checked - Pass	Hight	Quân	17/07/2024	Pass
3	Product Detail Page	Test the format and display of detailed product information. Confirm the checkout process	Checked - Pass	Hight	Hoàng	20/07/2024	Pass
4	Shopping Cart and Checkout	Test the accuracy of the add to cart functionality.	Checked - Pass	Hight	Quân	18/07/2024	Pass
6	User Comment and product reviews	Confirm the accuracy of the system collecting feedback from users. Check the correctness of error messages and confirmation notifications.	Checked - Pass	Medium	Duy	19/07/2024	Pass
8	Performance	Test the performance of the website, including page load time and request processing.	Checked - Pass	Hight	Hoàng	19/07/2024	Pass
9	payment methods	Verify the accuracy of the payment acceptance process and order recording.	Checked - Pass	Hight	Quân	20/07/2024	Pass

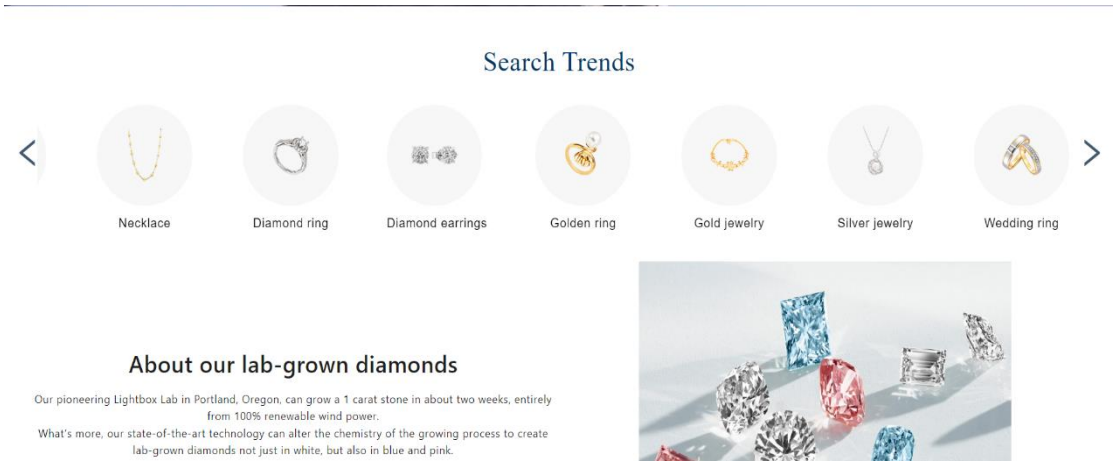
See detailed Check List of Validation here:
https://docs.google.com/spreadsheets/d/11Jqy0UT8Fb4qoiGnx9y-Bnmm9mfMfocgr6OGOUR4x54/edit?usp=sharing

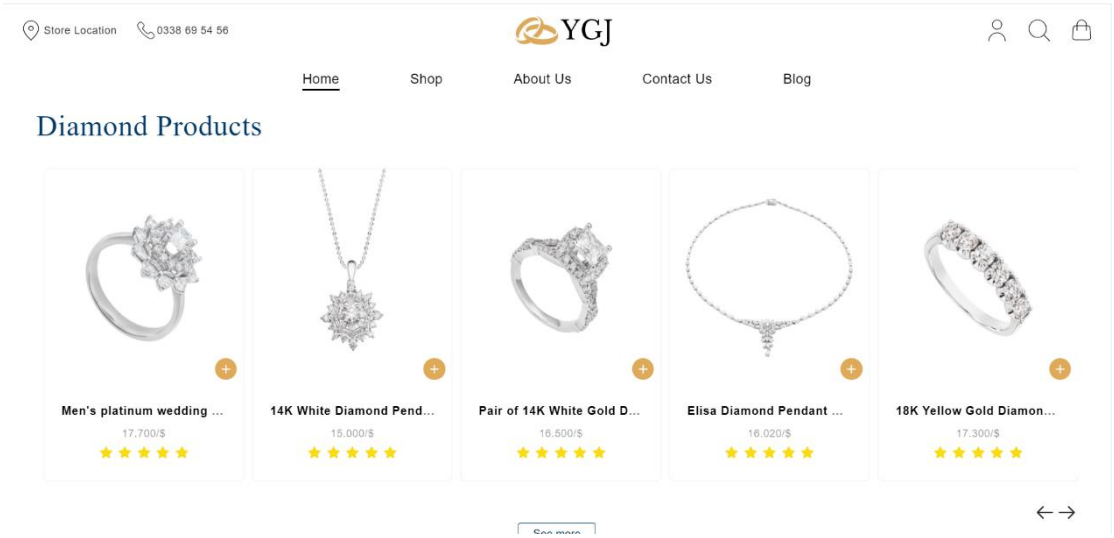
8. Screenshots

User Page:

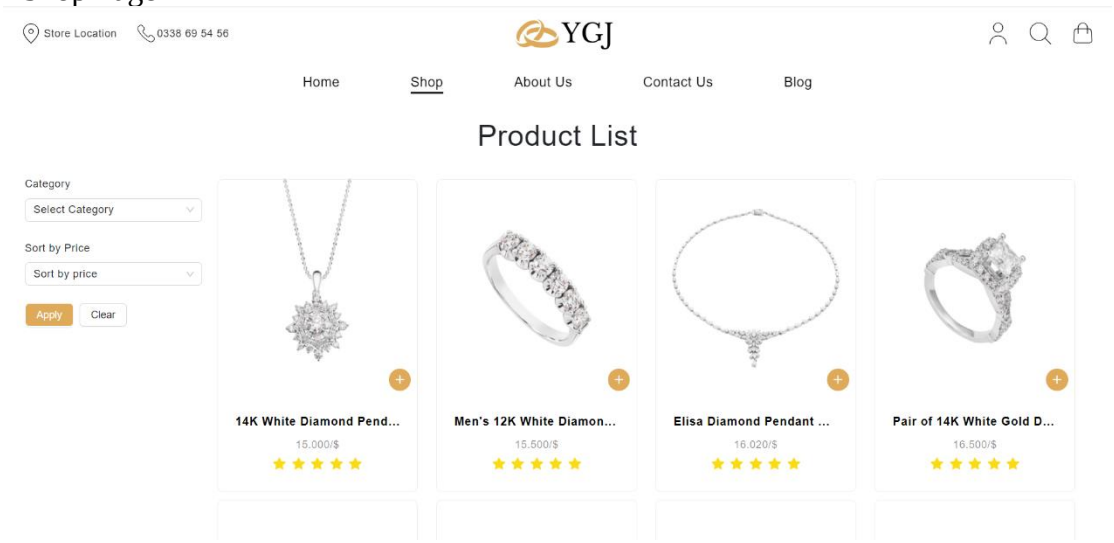
- Home page



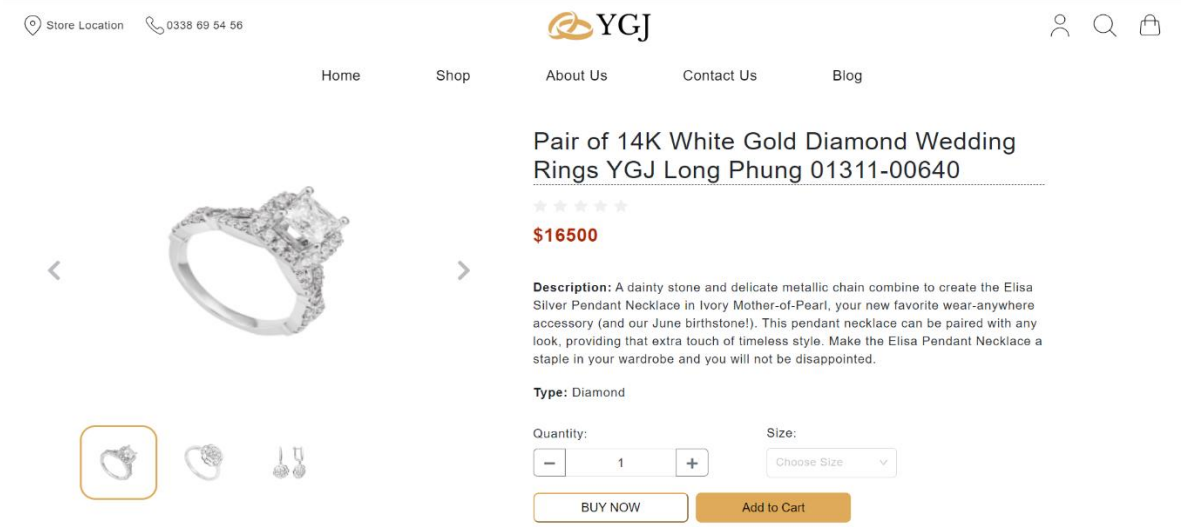




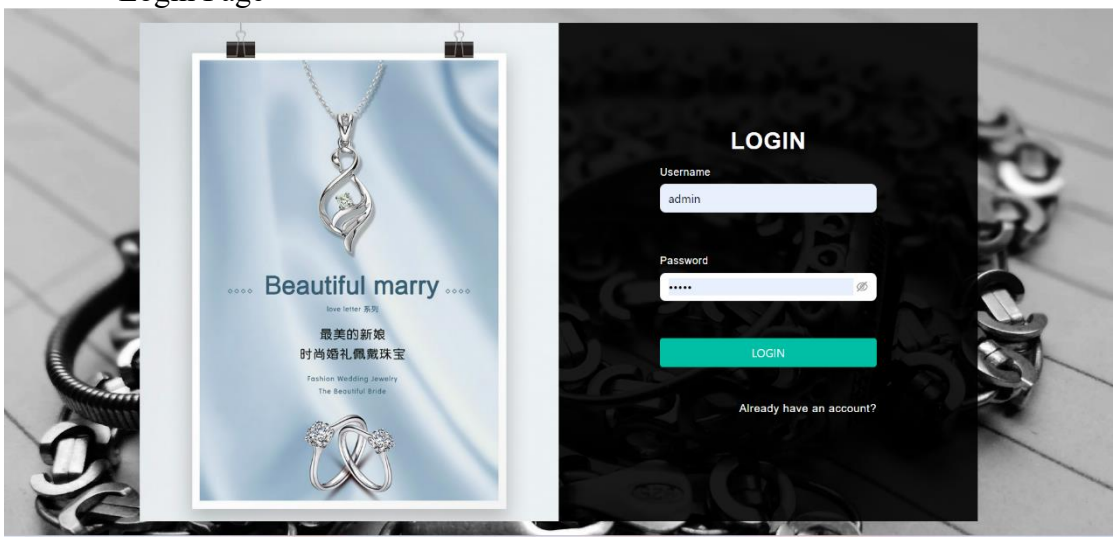
- Shop Page



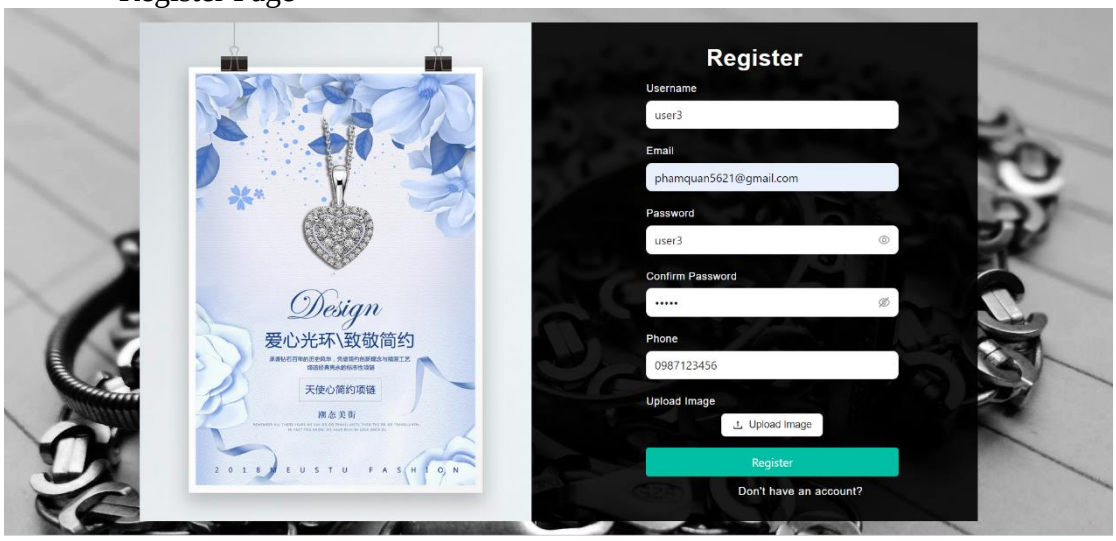
- Product Detail



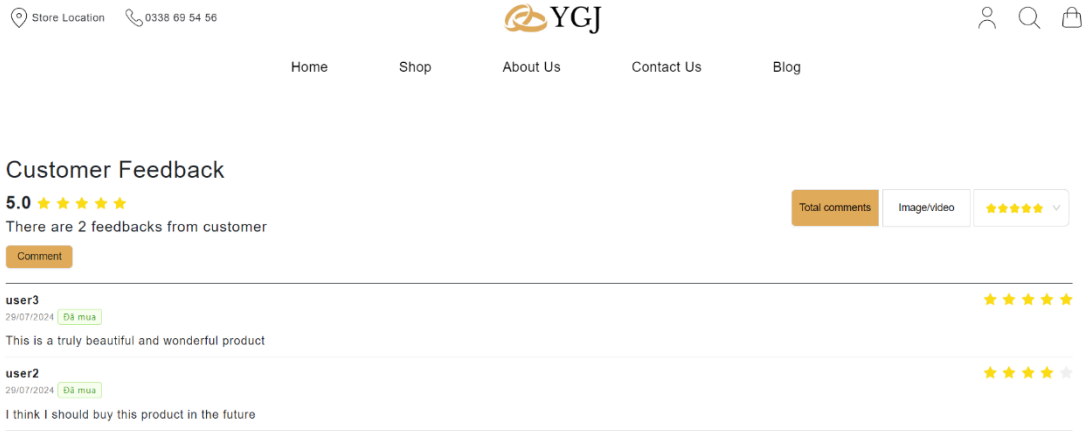
- Login Page



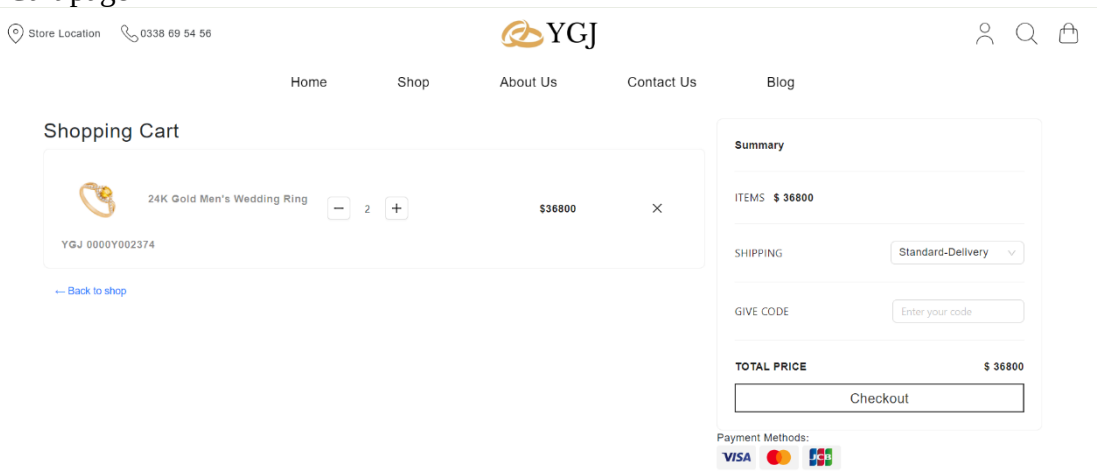
- Register Page



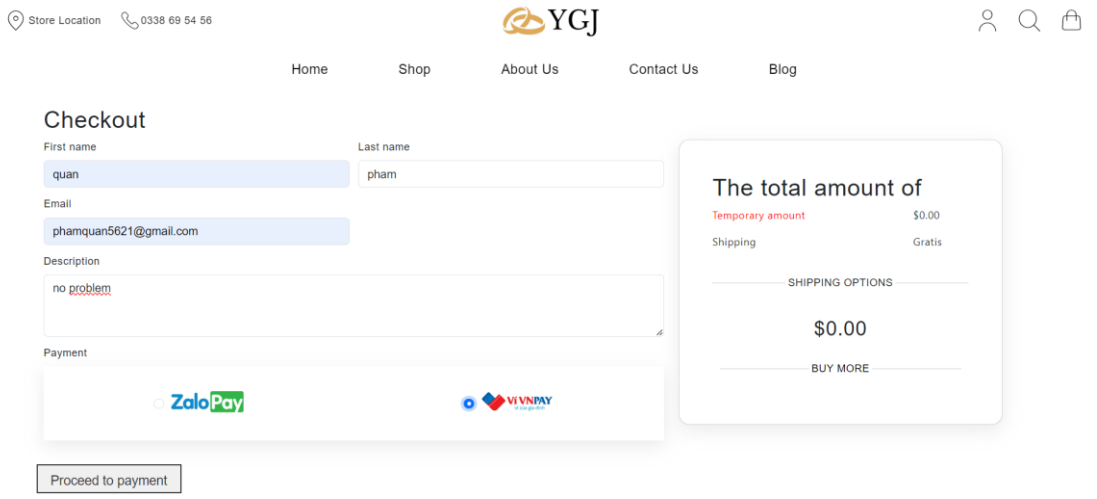
- Vote star and comment for product



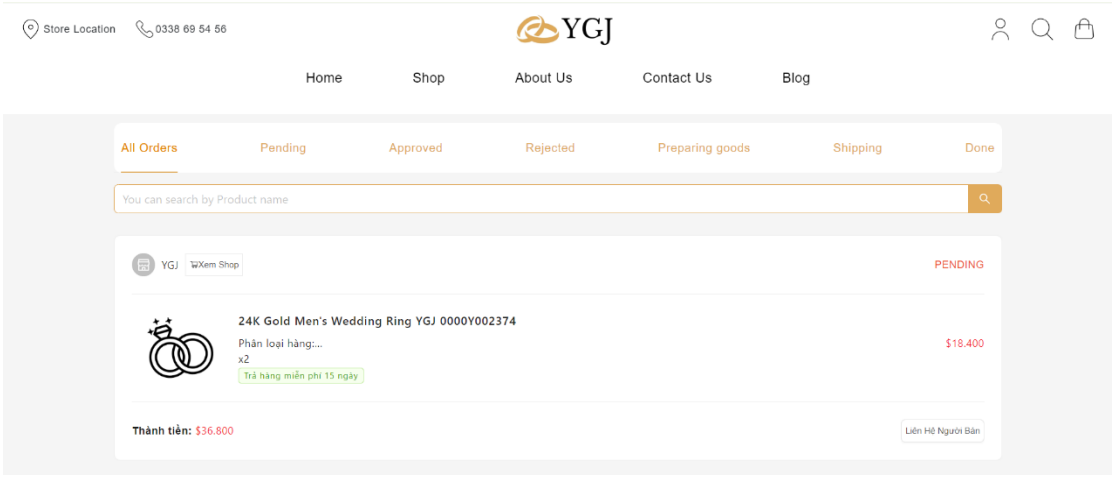
- Cart page



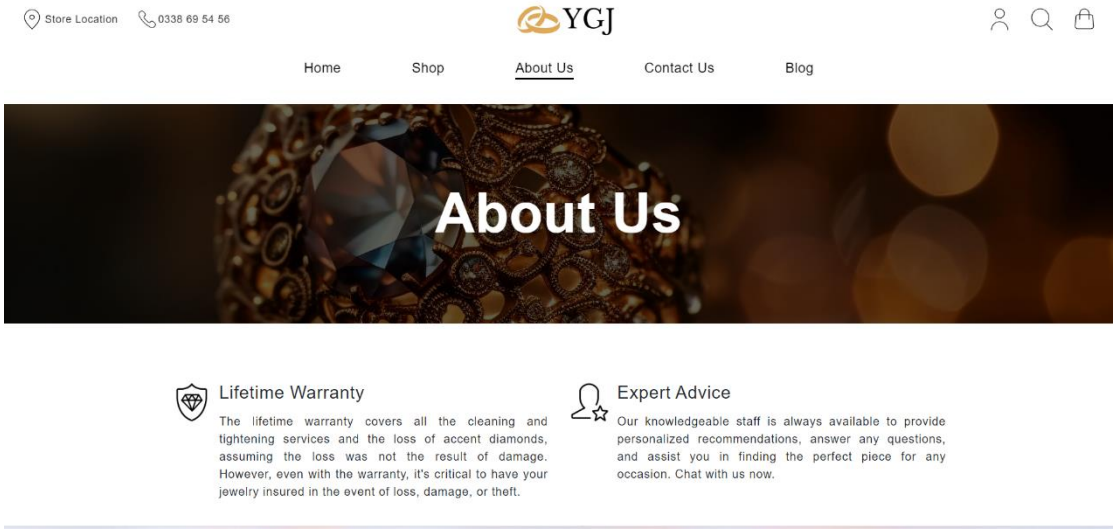
- Check out

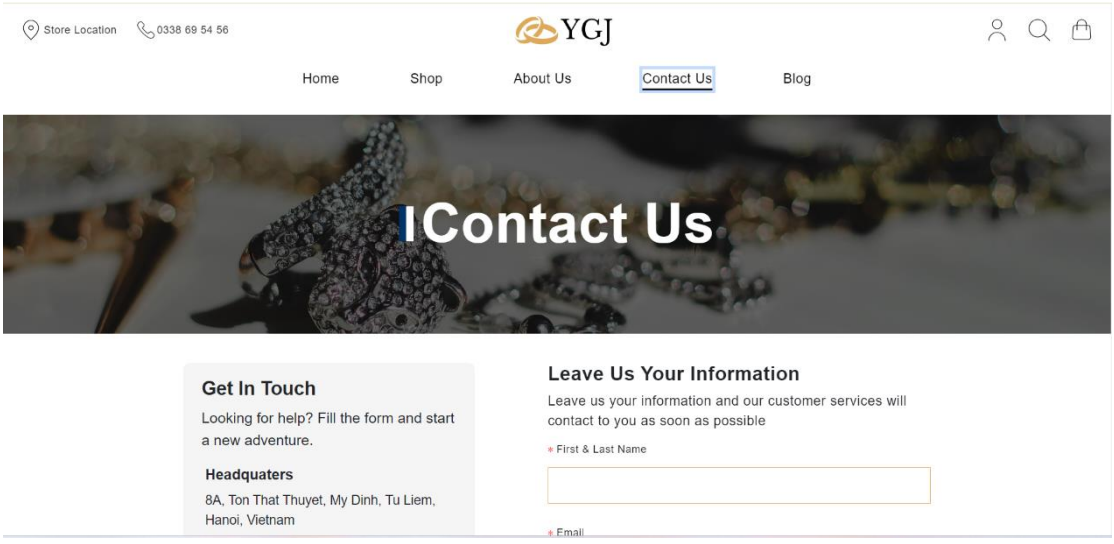


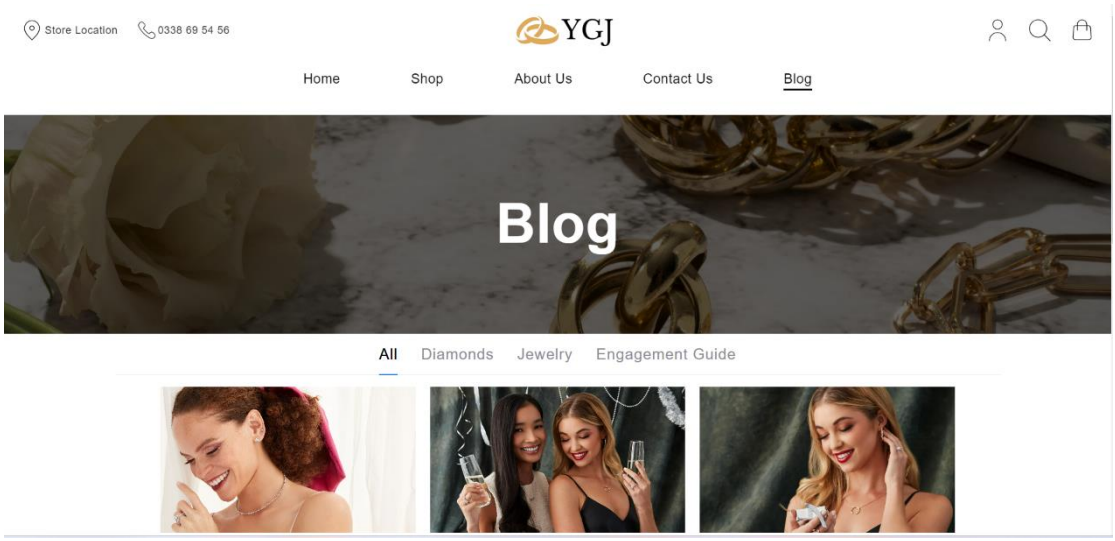
- Purchased order


Store Location
0338 69 54 56
YGJ
Home
Shop
About Us
Contact Us
Blog
All Orders
Pending
Approved
Rejected
Preparing goods
Shipping
Done
You can search by Product name
YGJ
Xem Shop
PENDING
24K Gold Men's Wedding Ring YGJ 0000Y002374
Phân loại hàng:...
x2
Trả hàng miễn phí 15 ngày
$18.400
Thành tiền: $36.800
Liên Hệ Người Bán

- Orther page

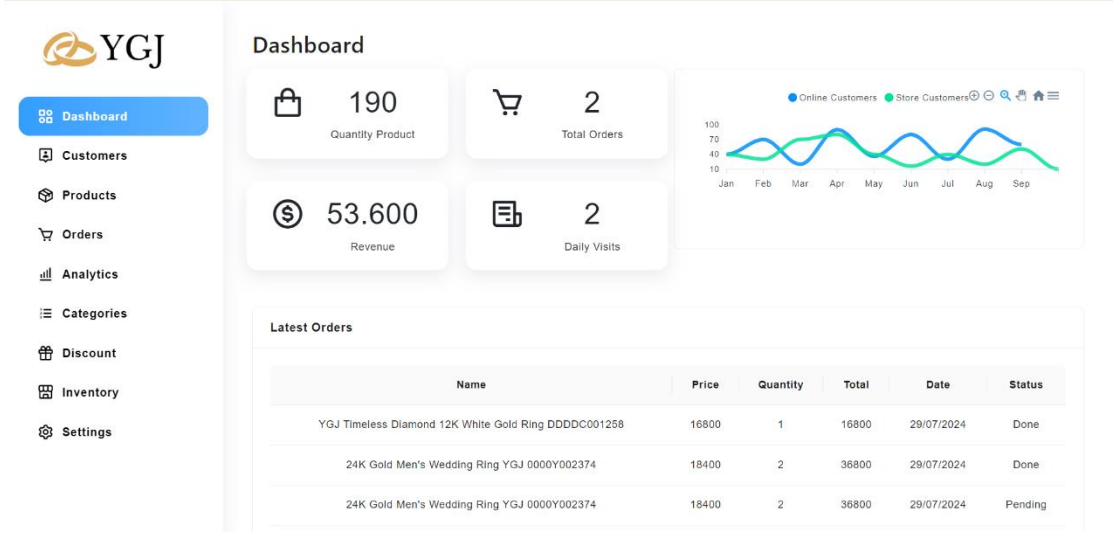

Store Location
0338 69 54 56
YGJ
Home
Shop
About Us
Contact Us
Blog
About Us
Lifetime Warranty
The lifetime warranty covers all the cleaning and tightening services and the loss of accent diamonds, assuming the loss was not the result of damage. However, even with the warranty, it's critical to have your jewelry insured in the event of loss, damage, or theft.
Expert Advice
Our knowledgeable staff is always available to provide personalized recommendations, answer any questions, and assist you in finding the perfect piece for any occasion. Chat with us now.


Store Location
0338 69 54 56
YGJ
Home
Shop
About Us
Contact Us
Blog
Contact Us
Get In Touch
Looking for help? Fill the form and start a new adventure.
Headquaters
8A, Ton That Thuyet, My Dinh, Tu Liem, Hanoi, Vietnam
Leave Us Your Information
Leave us your information and our customer services will contact to you as soon as possible
* First & Last Name
* Email

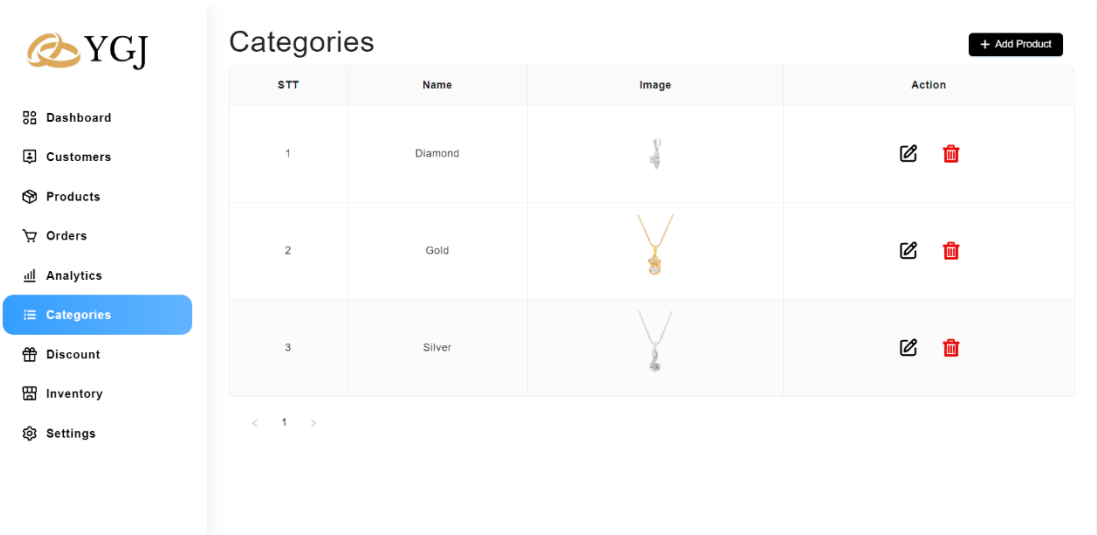


Addmin Page:

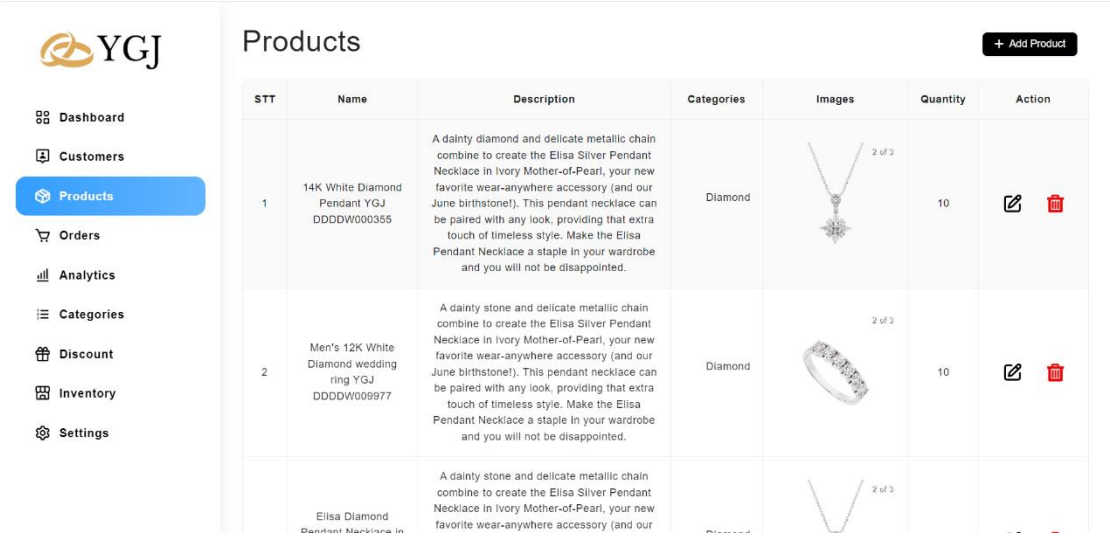
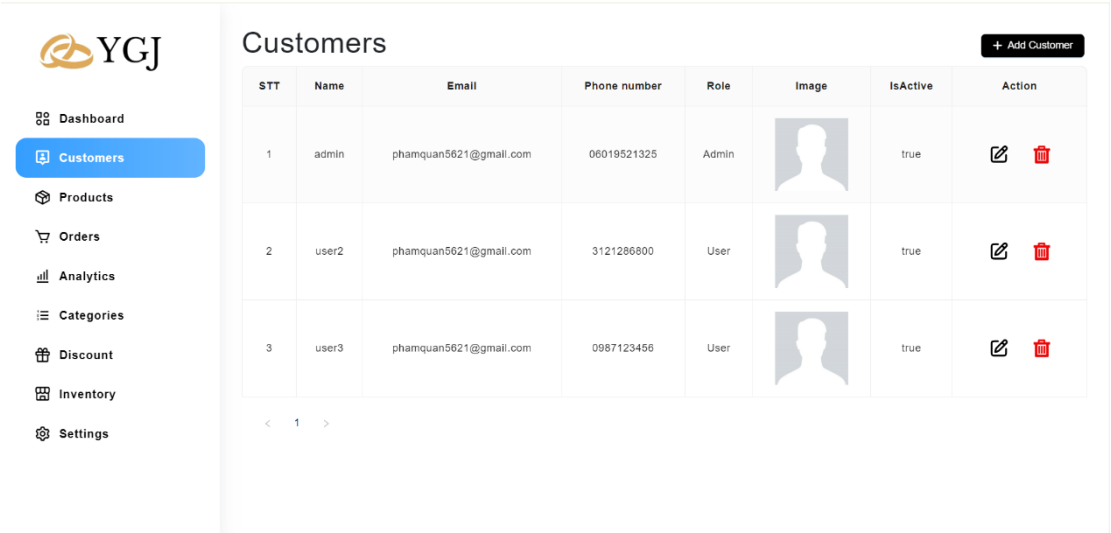
- Dashboard



- Create, Update, Delete Category



- Create, Update, Delete Product



- User, Customer management