

CAN THO UNIVERSITY  
COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGY



**GRADUATION THESIS  
BACHELOR OF ENGINEERING IN  
INFORMATION TECHNOLOGY  
(HIGH-QUALITY PROGRAM)**

**BUILDING A SYSTEM FOR SELLING PET CARE PRODUCTS  
AND SERVICES**

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**Student ID: B1910403**

**Class: 2019-2023 (K45)  
Advisor: Dr. Vo Quoc Bao Bui**

***Can Tho, 12/2023***

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## **REMARKS FROM THE COUNCIL**

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## **LIST OF ABBREVIATIONS AND TERMS**

No	Terminology/Abbreviation	Definition/Explanation
1	DB	Database.
2	Server	a kind of computer that connects to other computers online to receive, transfer, or store data and programs.
3	Client	one workstation utilized by one person.
4	Wi-fi	Radio waves are used by wireless network systems.
5	Admin	The system's highest authority is held by the administrator.
6	Usecase	(Use Case Diagram)

## SUMMARY

Nowadays, in the era of digital transformation, the technology market is growing, smartphones, powerful laptops, or modern watches full of gadgets are impossible items. lacking in everyone's life. Thanks to it, we can easily communicate with relatives and friends, follow the news, and entertainment, monitor health and use in each person's own work. Besides, with the integrated life, the need to access news every day, and at the same time the epidemic situation is constantly changing, people cannot go to the store to choose the right product for their needs. Because of the above reasons, the topic "**Building a system for selling pet care products and services based on ReactJS and NodeJS**" was born to improve business development. **PETSHOP** e-commerce website is designed with a flat, beautiful, and simple interface that is easy to use. **PETSHOP** is built on the framework of ReactJS library managed by the **MYSQL** database management system and the **Visual Studio Code** programming tool is the above combination that will meet all the needs of programmers. The system will help customers easily search and view detailed information about products, and along with that, the website also supports commenting and product evaluation functions. The website integrates **PayPal's online payment** technology into the payment process to make the purchase happen quickly. On the other hand, the website supports statistics, product management, article management, and orders, ... thereby making it easy for administrators to update and manage products to serve customers as well as increase system revenue. The system has been successfully installed and operated on website and smartphone platforms. With the technologies used and the features of the system, hopefully, the topic will be applied in practice and promote its effectiveness, as well as being helpful for businesses and customers.

## Section I: Overview

### 1. Problem Identification

These days, practically everyone uses the internet and has grown to love it. Due to the rapid development of the internet, people no longer bother to engage with the outside world and are only interested in using their smartphones to browse the web or read news. about. In addition, there are worries about restricted traditional purchases and unsafe traffic, particularly in light of the COVID-19 pandemic. Online shopping thus becomes even more crucial and required; simply visit Go to the sales website, pick out what you want, and place your order. The seller will deliver the item to your house. You can shop whenever you want when you shop online. People can shop online 24/7 because these stores are always open. It is challenging to compare and assess products when you shop at markets, malls, or retail establishments. You can quickly compare products and choose the best option when you shop online. At the same time, making an appointment in advance is essential. Having recognized that need, I got to work on the project: website that offers pet care services and supplies to enable people to You can easily check prices and make an appointment for your pet.

The following needs are catered for in the system design:

- Assist clients in viewing product details that catch their attention.
- Assist store owners with staff management, profit statistics, product management, and warehouse import and export management.
- Assist sales representatives, counsel clients on products, and facilitate information sharing with clients.

### 2. Related work

E-commerce is expanding rapidly these days and is increasingly the transaction method of choice for consumers. Online shopping and the growing popularity of online payments are not unique to Vietnam. Taking advantage of the current consumer red trend, a number of well-known e-commerce sites offering technology products have rapidly emerged and grown both nationally and globally, offering a wide range of genres. There are big websites like Amazon.com and Alibaba.com that are located outside the nation. We can

list the websites lazada.vn,tiki.vn, shopee.vn, sendo.vn, and hoanghamobile.com as domestic examples. Each of the aforementioned websites specializes in offering technology products for online purchase by clients. The websites listed above in particular receive a tremendous amount of traffic and income. Many upperclassmen at Can Tho University's Faculty of Information Technology and Communications have also studied and constructed e-commerce website models, and they have all been extremely successful with their topics. For this reason, the PETSHOP website was created. It is a website that caters to today's consumers' needs by selling pet-related goods and services and follows e-commerce and service trends. The website has a flat design. Color-wise harmonious, user-friendly, featuring a list of all product lines available in the store in a range of sizes and colors for customers to freely select from, along with a feature that allows them to leave comments about specific products. In addition to seeing comprehensive product information that presents all relevant details and photographs that are viewable from multiple perspectives, providing the highest level of authenticity for customers to select from, you can review the reviews left by prior customers. Make a direct choice. Paypal allows users to make quick and easy online purchases and payments without wasting much time. Customers can also find products quickly with the aid of conditional product filtering, voice search, and the search function. all to create a website that effectively satisfies user needs.

### **3. Research subjects and scope**

#### **3.1 Research subjects**

- Study applications and systems in the field of online business that are currently on the market by learning about small and medium-sized online sales systems. This will help you understand practical needs...
- Bootstrap framework. Responsive interface.
- Learn programming languages HTML, CSS, Javascript.
- Find out how to incorporate online payments from Paypal into the checkout process..
- The requirements of clients and retailers utilizing the sales website system.

### 3.2 Scope of the study

Are clients who use the system to search for the newest and most cutting-edge pet care goods and services for themselves, as well as retailers who wish to sell their goods to customers online. Learn about and conduct research on online business models. Particularly marketing goods and services related to pet care.

- Discover how to create systems and data structures for a fully functional system that can be used in real-world scenarios. Furthermore, the system architecture must facilitate expansion and maintenance.
- Understand and be proficient in using NodeJS to develop the system's backend.
- Understand how to use HTML, CSS, and Bootstrap to design the front-end portion of the system using the ReactJS platform.
- Understand how to manage databases with MySQL.

## 4. Study materials

The following sections must be studied and researched in order to create a comprehensive technology product purchasing management system:

- Look into and learn about MVC-based web design.
- Learn how to create front-end applications using HTML, CSS, BOOTSTRAP, and REACTJS so that users can interact with them easily and responsively.
- Study the MySQL database.
- Learn how to create models for systems using design tools.
- Discover how to organize a full application that functions well in real-world scenarios and is simple to update and grow.
- To construct a database and website layout, familiarize yourself with the product management process through research and learning.

## 5. Thesis outline

The thesis is organized into three primary sections and three chapters:

- **Section I: Overview:**

- Problem Identification.

- Related work.
  - Research subjects and scope.
  - Study materials.
  - Thesis outline.
- 
- **Section II: Content:**
    - Chapter 1: Problem description and functional requirements analysis.
    - Chapter 2: Design and implementation of the solution.
    - Chapter 3: Assessment and experimentation.
    - Chapter 4: Testing and evaluation.
  - **Section III: Conclusion and future work:**
    - Conclude.
    - Limit.
    - Development.

## Section II. Content

### CHAPTER 1: SYSTEM DESCRIPTION

#### 1. Description of the topic

The PETSHOP system is designed to cater to small and medium-sized businesses by offering authentic pet care products and pet care services. It facilitates the process of searching for product details, placing orders, and more. Every product has basic information like its name, price, and a brief description, as well as more specific details like its category, manufacturer, quantity, and detailed description. Use intuitive search to find the information you need to help customers make decisions that work for them. Customers can also assess themselves after buying the product, see recommendations for related products, and read other people's reviews about it to help them make more informed decisions. in keeping with what the customer is watching. Additionally, it aids consumers in having a better understanding of the item they plan to purchase. In addition to providing administrators with real-time notifications of new orders and messages from customers, the system allows administrators to generate weekly, monthly, annual, and quarterly revenue and profit statistics. and each product's sales volume, from which the system will extract and produce comprehensive statistics on the kinds of products that are uninteresting or low-demanding so that it can more effectively update and modify business plans. The system also keeps track of visits by year and month, the percentage of browsers used, and the popularity of payment options that will help with system development and optimization in the future. The administrator also oversees a variety of other elements, including news articles, warehouse receipts, customers, staff, category management, online customer chat, and calendar tracking. Employee and customer access history on the system.

#### 2. Principal operations of the system

**Customers:** not set up an account Consumers can only view detailed product information if they haven't created an account. Product category, price, and name searches are available. To maximize their search, customers can also quickly search using voice search. Examine product reviews; do not assign a rating to the item. Customers without an account can also view news content, but they are unable to comment on articles.

**Users:** are clients who have created an account on the website, allowing them to view product details, log in and out, make purchases, and make payments. After purchasing, you can leave comments on news articles and product reviews. Check the status and history of your orders. Revise the account details. Members can search by name, price, and category. Customers can select from a search results page displayed by the interface when they enter search keywords. Furthermore, in order to enhance user experience, the customer support system has the ability to conduct rapid voice searches.

**Admin** All user and website activity will be monitored and managed by the administrator. In order to access the management page and utilize the management tools on this website, the administrator will have a separate account with rights. The manager will be able to perform the following tasks after logging into the system: Manage the following: orders, articles, customers, manufacturers, suppliers, member accounts, revenue by day, week, month, and quarter, and in particular, statistics on the total number of products, total number of new orders, total number of articles, total number of visits, revenue by category, product, and list of new orders and product types. Customer service consultation: clients will receive consultation when making purchases, enabling them to select goods that align with their needs and budget. When a customer wants to buy, the products will be delivered right to their door. Consulting uses the chatbox system to reply to customer inquiries. Administrators can also perform three types of system backups: simultaneous file-database backup, database backup, and system file backup. When an issue arises, the administrator restores the database using the prior backup file to make sure the system runs properly and doesn't interfere with the user experience.

### 3. System functional requirements

#### 3.1. Users:

- Log in using Google.
- Create an account.
- Reissue the password.
- Voice search.
- Chatbot.

- PayPal transaction.
- Look up prices and categories.
- Cart.
- History of purchases.
- Order monitoring.
- Product evaluations.
- Check out the product details.
- Order cancellation.

### **3.2. Admin:**

- Login.
- Sales data (by product, by day, month, and year).
- Data on how long users spend on a website.
- Manage products (add, edit, delete, hide, show products).
- Manage species within your business (add, edit, delete, hide, show species).
- Manage comments and feedback (delete, hide, show, reply to customer feedback).
- Statistics on past transactions.
- Manage user accounts.
- Manage employee accounts.
- Data on product satisfaction from customers.
- Profit figures.
- Confirmation of order.
- Produce invoices
- Control the receipt of goods.

- Export the Excel goods receipt.
- Chatbox.

### **3.3. Staff:**

- Login.
- Confirmation of order.
- Chatbox.

#### **4. Environment of operation**

With an Internet connection and the browsers Google Chrome, Microsoft Edge, and Coc Coc, the website functions flawlessly.

#### **5. Design limitations and implementation**

Waiting for a response should not take longer than ten seconds.

Using HTML, CSS, and JavaScript to program.

Make use of the ReactJS Framework.

Employ Bootstrap 6.

MySQL is used to store databases.

The system satisfies the safety and information security requirements. Payment is safe. Allows blocking and blocking of some unauthorized accesses. Assurance of software quality: simple to use, maintain, and expand.

Easy-to-use interface that makes tasks simple to complete.

Web browsers that support mobile devices can use this interface. Google Chrome is the operating system. Support tool for programming: Visual Studio Code

## CHAPTER 2: DESIGN AND INSTALLATION OF THE SOLUTION

### I. Technologies and support tools

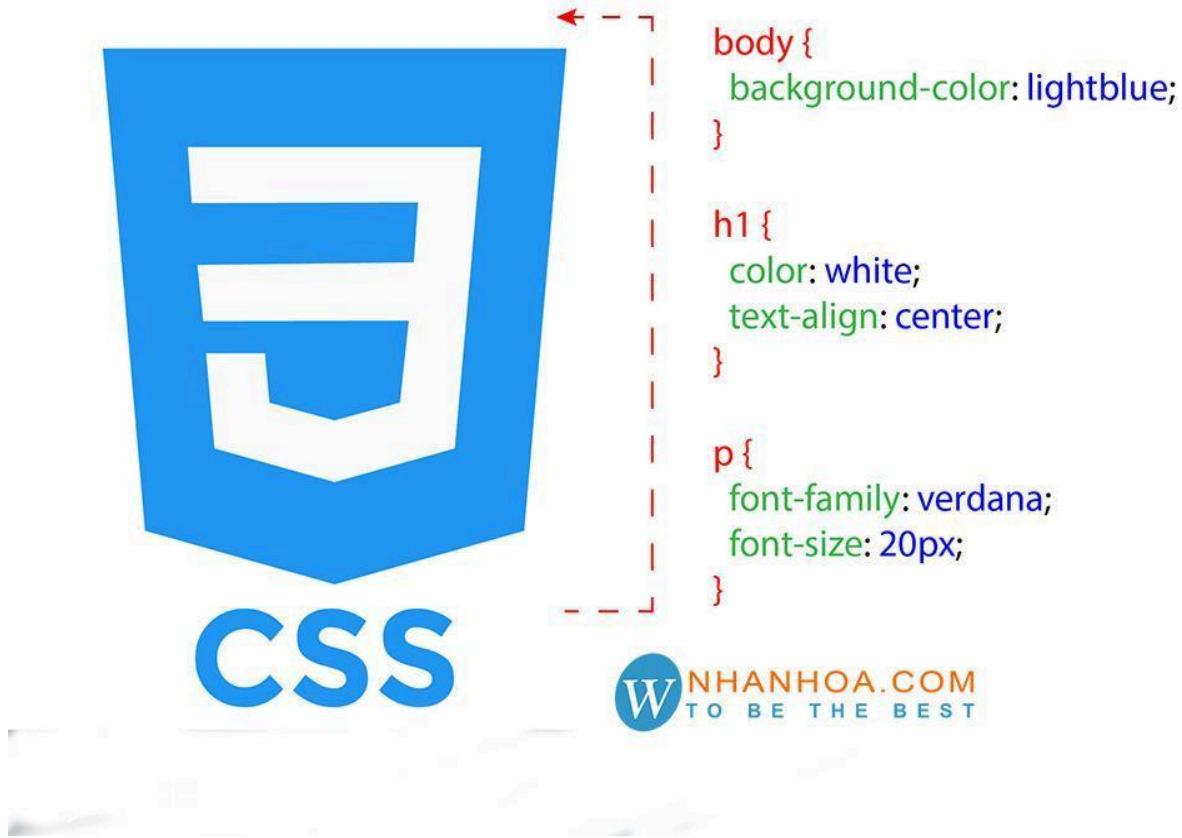
#### 1. Client-side technologies

- ❖ HTML



**Figure 1: HTML**

- ✓ HTML is a contraction for HyperText Markup Language, which is a language used to create websites (translated as Hypertext Markup Language). Every page on a website, regardless of how many there are, is an HTML document. Tim Berners-Lee, the man who created the World Wide Web and is currently president of the World Wide Web Consortium (W3C, the body that establishes standards for the Internet environment), is considered the father of HTML.
- ✓ HTML is not a programming language, so "dynamic" functions cannot be created with it. HTML is used for web page layout and formatting, just like Microsoft Word.
- ✓ HTML When paired with JavaScript and CSS, it forms a strong basis for the internet. Tags, which are written in curly braces, are used to separate HTML elements.



**Figure 2: CSS**

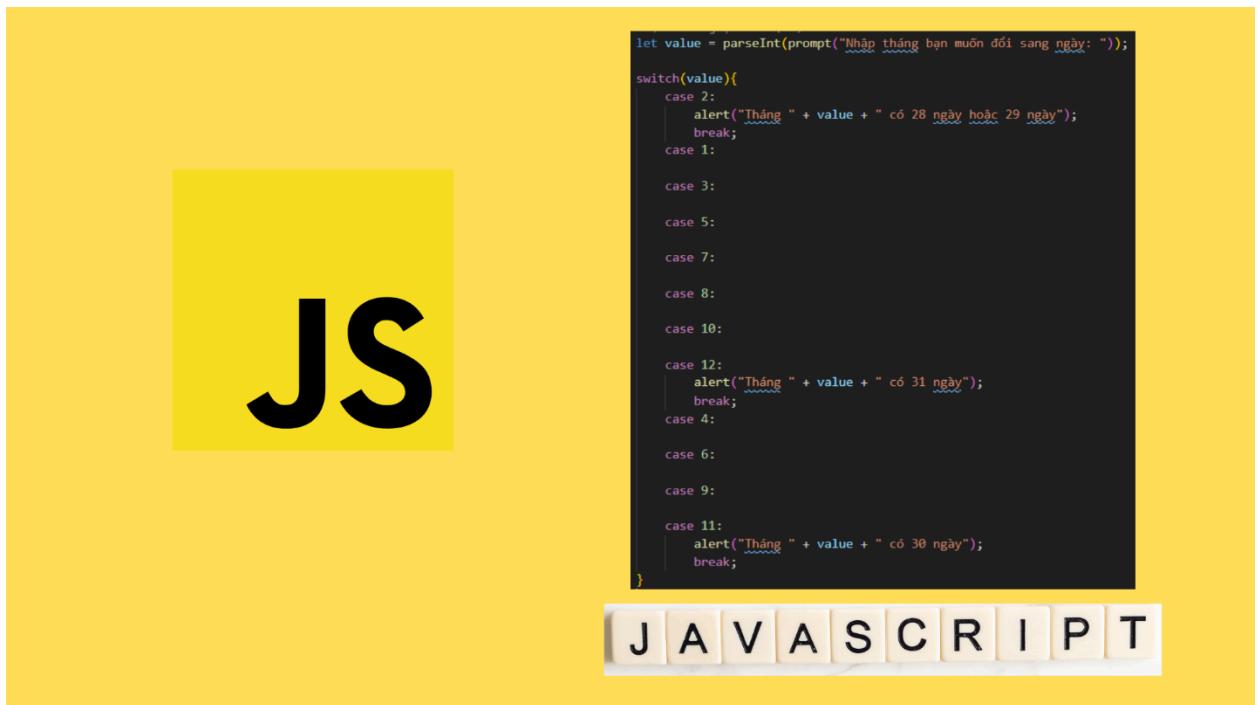
❖ CSS

✓ CSS is a language for locating and reformatting elements produced by markup languages (HTML). It is an acronym for Cascading Style Sheets. To put it briefly, it's a language that designs a website's style. It is easy to understand that CSS will assist us in adding styles to the elements if HTML is responsible for formatting the website's elements, such as text paragraphs, titles, tables, etc. That HTML is equivalent to altering the page's color, layout, text color, font, and structure.

✓ CSS was created in 1996 by the World Wide Web Consortium (W3C) as a result of HTML's inability to incorporate tags for

formatting web pages. CSS operates by conducting a search based on pre-selected areas. The name of an HTML tag, an ID, a class, or many other types can be the selected area. The necessary properties will then be applied to that selection. There is a strong correlation between CSS and HTML. They are inseparable; HTML is the markup language (the site's structure) and CSS specifies the style (everything that goes into the user interface).

### ❖ JavaScript



**Figure 3: JavaScript**

✓ **JavaScript** has been in widespread use for the past 20 years and is one of the three primary languages used for web programming. It was formerly known as Mocha (1995), before going by the names Mona, Livescript, and JavaScript in its current form. 92% of websites as of 2016 make use of JavaScript, so it's likely that you've visited a lot of websites that use this programming language.



Figure 4: Bootstrap

❖ Bootstrap

- ✓ **Bootstrap** is a framework made of HTML, CSS, and JavaScript that makes it simple for users to design websites in accordance with standards, making them responsive to mobile, iPad, tablet, and other handheld devices.
- ✓ **Bootstrap** comprises the most common ones, including buttons, tables, modals, typography, forms, navigation, and picture carousels, among many others. To help you create a responsive design that is simpler, faster, and more convenient, bootstrap includes a lot more components and Javascript.

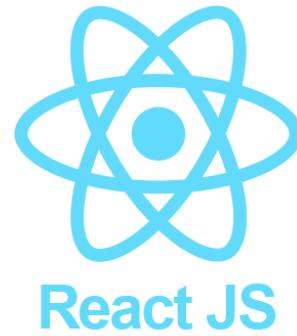
❖ JQuery



**Figure 5: Jquery**

- ✓ **jQuery** is a multi-featured, small, quick JavaScript library that was developed in 2006 by John Resig. Its catchphrase, "Write less, do more," is extremely meaningful.
- ✓ **jQuery** streamlines Ajax interactions, animations, event handling, and HTML document browsing for quick web development. According to web analytics, **jQuery** is the JavaScript library that is most frequently used.
- ✓ **jQuery** is a JavaScript toolkit made to write less code to make a variety of tasks easier.

❖ ReactJS



**Figure 6: ReactJS**

✓ **ReactJS** To put it simply, ReactJS is an open-source library that is heavily loaded with JavaScript. It was developed by the well-known Facebook tycoon, who was born in 2013. Web applications are the reason behind the creation of ReactJS. Quick, effective, and captivating with little coding work. ReactJS's primary objective is to make any website that uses it fluid, quick, scalable, and simple to use.

## 2. Server-side technologies

- ❖ MySQL



**Figure 7: MySQL**

- ✓ **MySQL** A robust, multithreaded, multiuser, and extremely fast SQL (Structured Query Language) database server is provided by the MySQL software. MySQL Server is designed for integration into widely distributed software and heavy-duty, mission-critical production systems. Oracle Corporation and/or its affiliates own the trademark registered under the name Oracle. Oracle Corporation and/or its affiliates own the trademark MySQL, which the customer may not use without express written permission from Oracle. Some names might be trademarks of the people who own them.
- ✓ **MySQL** is a relational database management system (RDBMS) that is free, open-source and uses various proprietary licenses, including GNU General Public License (GPL). As an RDBMS, MySQL uses SQL to manage data inside a database. It organizes correlated data into one or more data tables, and this correlation helps structure the data.

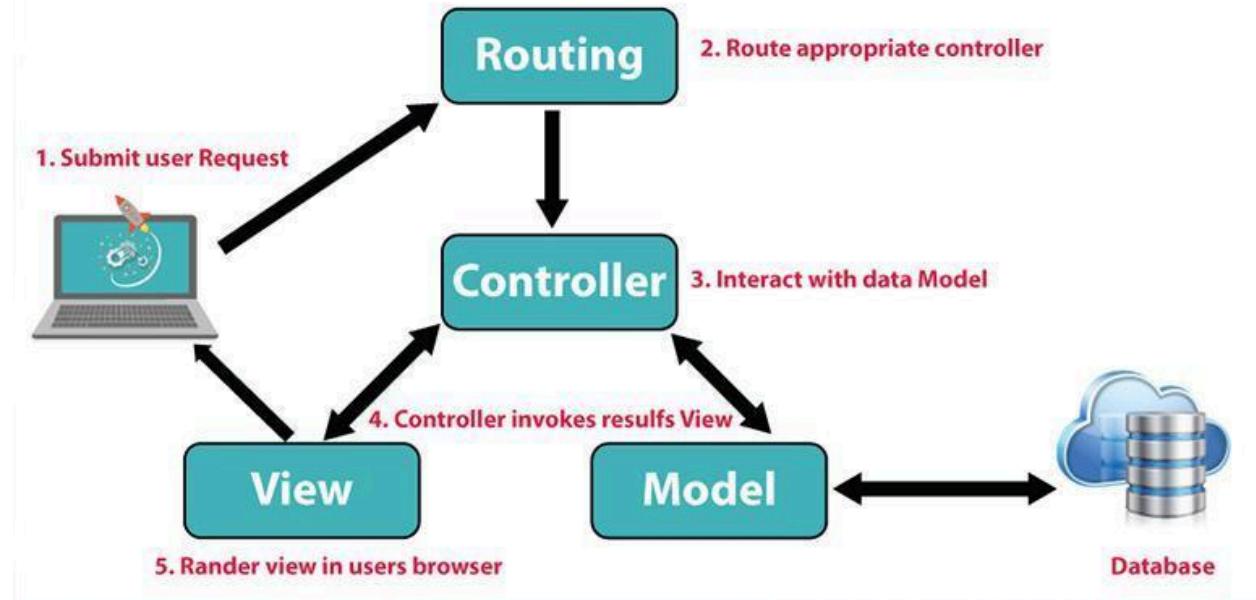
- ❖ NodeJS



**Figure 8: NodeJS**

- ✓ **NodeJS** is a platform developed using the C++ and Javascript-written "V8 Javascript engine." Ryan Lienhart Dahl created this platform back in 2009.
- ✓ Early JavaScript developers expanded it beyond just running in the browser to allow you to run it as a standalone application on your computer, which gave rise to Node.js.
- ✓ NodeJS make JavaScript can now be used for backend tasks instead of just website interaction.

### 3. MVC model



**Figure 9: MVC model system overview diagram**

The acronym **MVC** represents the terms Model, View, and Controller. Within that:

**Model:** prepares data in accordance with controller commands and reliably structures data.

**View:** Based on the user's actions, presents data to the user in an understandable manner.

**Controller:** Takes input from the user, updates data in the Model with commands, and updates the View's user interface with commands sent to it.

Facebook created the open-source **ReactJS** library in 2013, which is a Javascript library used to create interactions between website components. ReactJS has several notable features, one of which is its ability to render data on both the server and client layers. Furthermore, ReactJS focuses on assisting developers in creating user interfaces, or UIs. Programmers writing front-end applications frequently have to focus primarily on two areas: user interface and handling user interaction. Any application's user interface (UI) is made up of various elements, such as buttons, search bars, menus, cards, and so forth. Let's say you are programming an e-commerce website. The next task you have is to add the chosen product to the cart once the user clicks the "Add to cart" button. When

the user returns, go to the shopping cart and show that item once more => handle interaction.

### **Benefits of ReactJS**

Reactjs is incredibly productive: The components truly exist in the virtual DOM that Reactjs creates for itself. Performance will be significantly enhanced by this. Additionally, Reactjs determines which updates to the DOM are necessary and only commits those. This saves Reactjs money on expensive DOM operations.

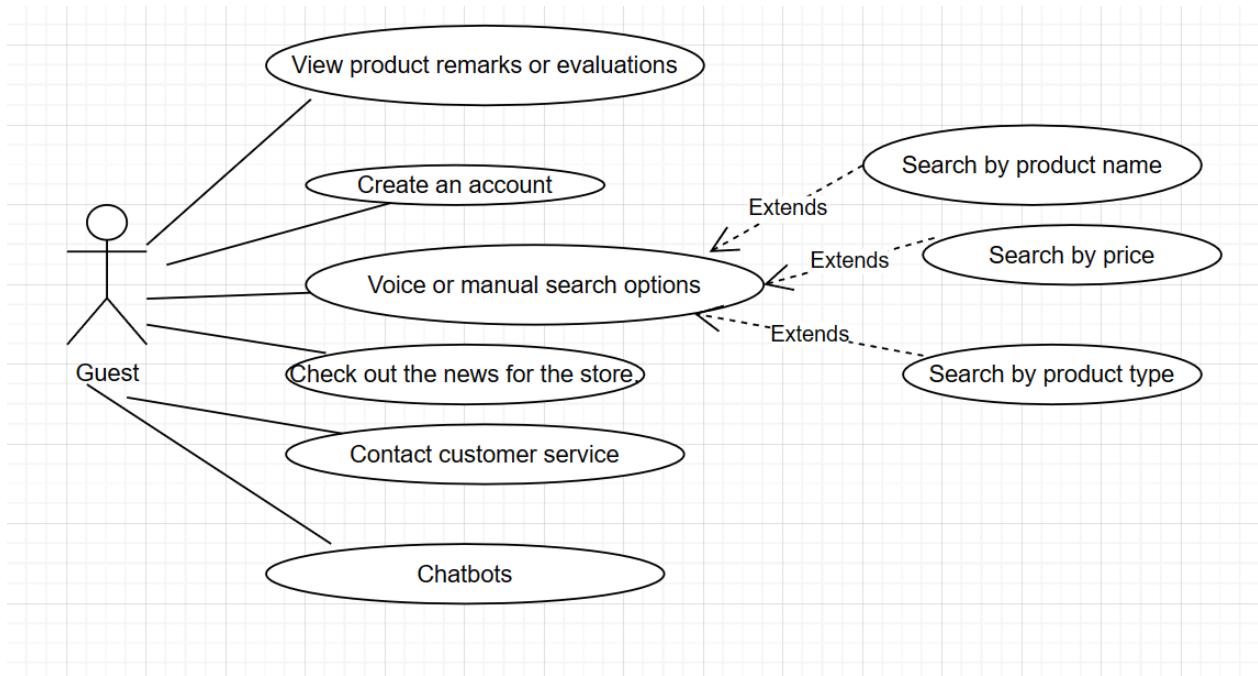
### **The drawbacks of ReactJS**

Reactjs' primary drawbacks are:

- a. Reactjs is useful only for the View layer. React is not an MVC framework like other frameworks; it is simply a view library. This is merely the Facebook library that aids in rendering the Varchar(255). As a result, React will need to integrate with other libraries rather than having a separate Model and Controller section. Moreover, React won't use Ajax or 2-way binding.
- b. Certain configurations must be made in order to integrate Reactjs with conventional MVC frameworks.
- c. React weighs a lot more than other frameworks. React and Angular are roughly the same size—about 35 KB versus 39 KB for Angular. Angular, meanwhile, is a comprehensive framework.
- d. Accessible but challenging for novice Web users

## II. Use case diagrams

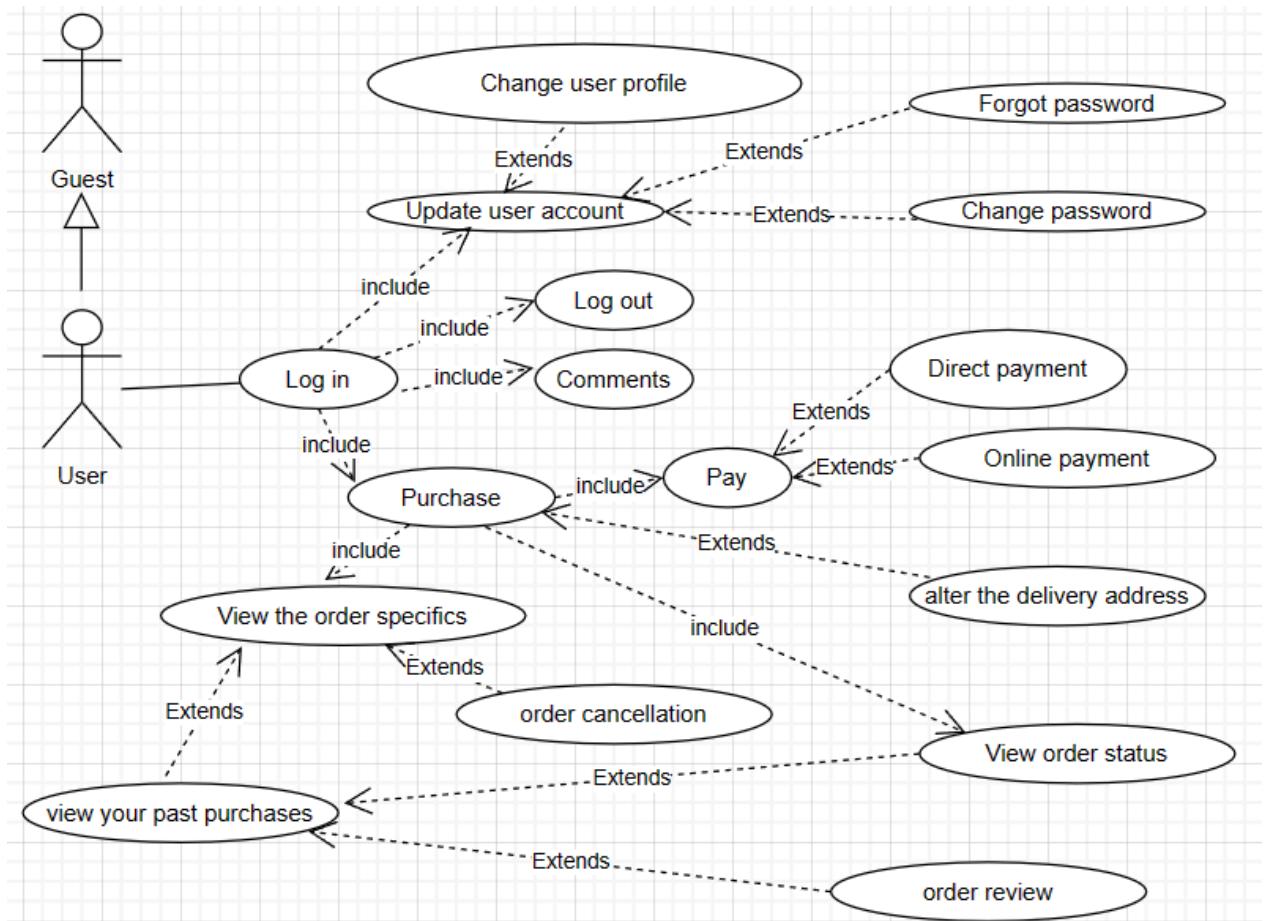
### 1. Use case illustrations for clients without an account



**Figure 10: Visitor use case diagram**

Use case diagram intended for clients without an account. Customers can use it to register for an account, view comprehensive product information, search by brand, price, or name, view news, and get in touch with customer service. Customers can only view product reviews and comments, in addition.

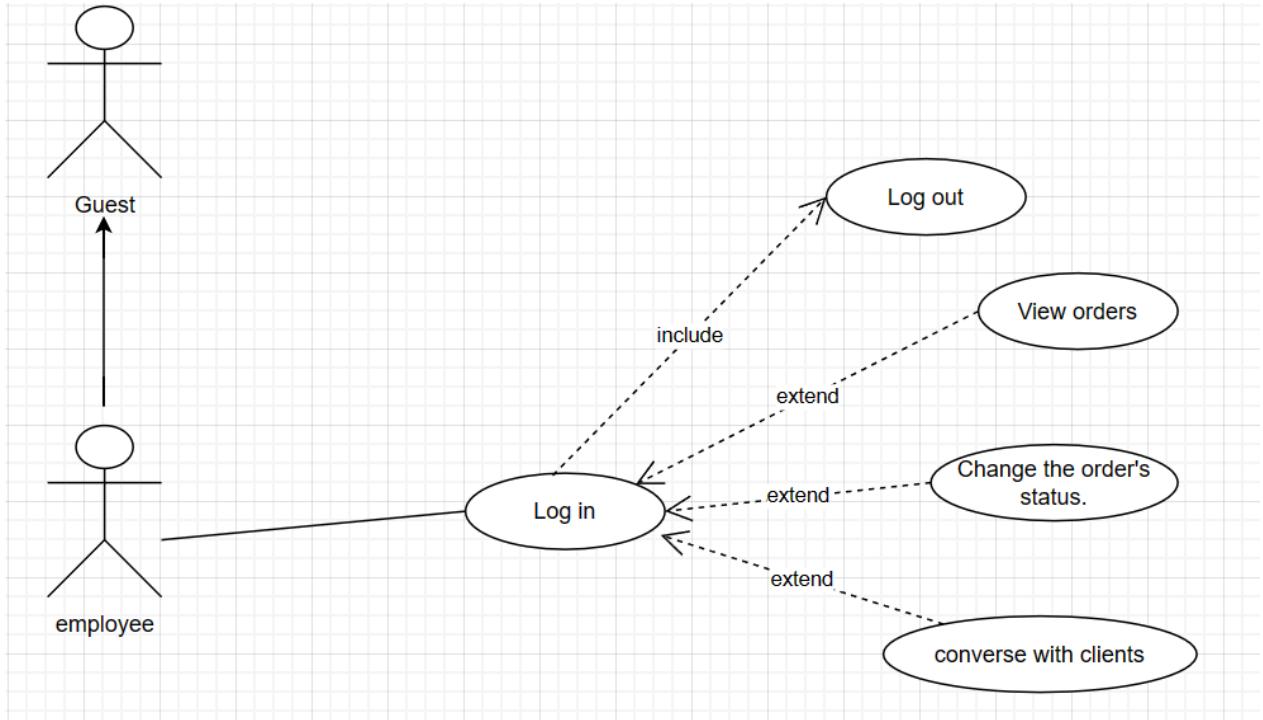
**2. A customer's use case diagram is displayed when they are logged into the website**



**Figure 11: Member customers' use case diagram**

Customer members' use case diagram in the system. Customers who are members, in particular, have access to additional features beyond those available to guests, such as the ability to update personal information (full name, phone number, profile picture), log in and out of their accounts, and log in. information about the account (password reset, forgotten password, contact, address, etc.) and account details. In addition, members can place orders, rate items after they've been purchased, add items to their carts, check their purchase histories, and cancel orders.

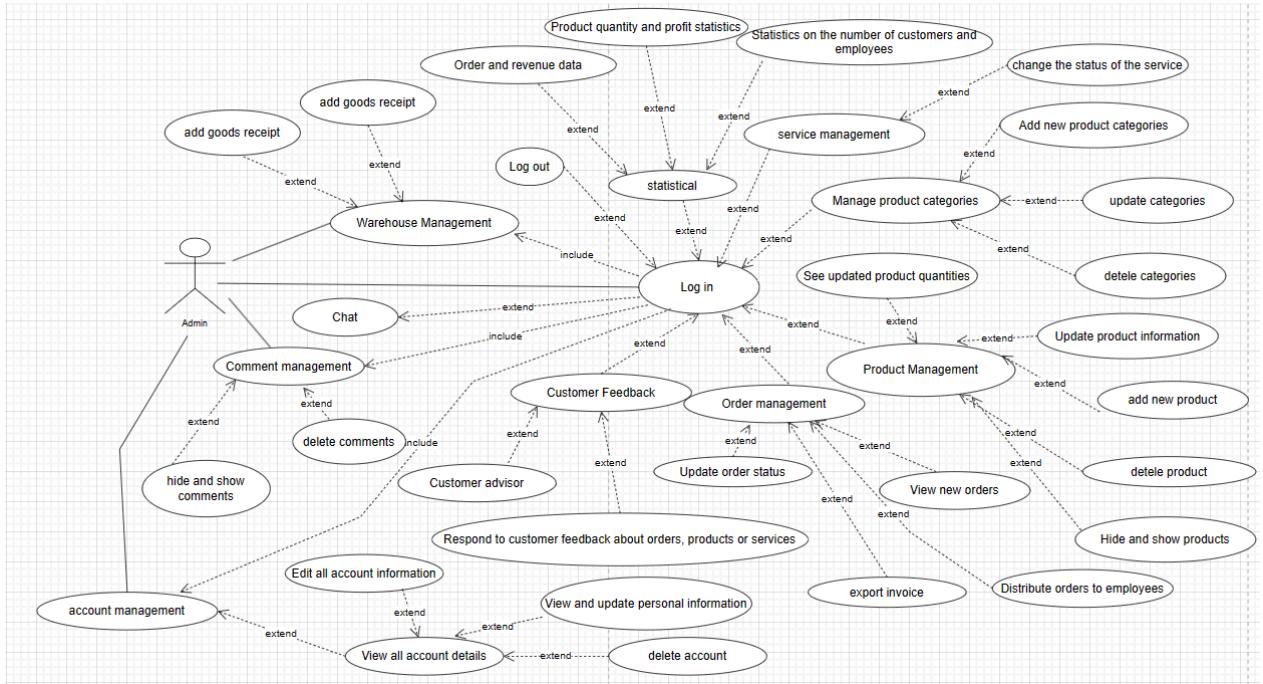
### 3. Employee UseCase diagram for store



**Figure 12: Store employees' use case diagram**

Employee use case diagram in the system. Specifically, employees can do the following in addition to visitor functions: login, log out of accounts, and request a password reset (forgot password, reset password). In addition, over half of the staff members are able to choose which orders to contact in order to sign contracts, converse with clients, respond to inquiries from clients regarding products, and monitor updates and delivered orders. Update the status of the customer's order.

#### 4. The admin's UseCase diagram represents the manager of the store.



**Figure 13: Use case diagram for a system administrator**

Use case diagram for a system administrator. Admin in particular is able to access the administration system and log in and out. Manage the different kinds of products, reviews, orders, warehousing, employee and customer accounts, chat, and permissions for the employees. Administrators can also see data on revenue and profit for the day, week, month, year, and quarter, as well as information on the most viewed, best-selling, and number of new orders. Administrators can also monitor order completion rates, popularity percentage statistics of browsers used, visitation statistics, and user activity tracking. employee via the history of the system. Other unique features include controlling the appointment booking feature and viewing the profits from goods sold during the month.

### III. Database design

#### 1. Conceptual Data Model (CDM)

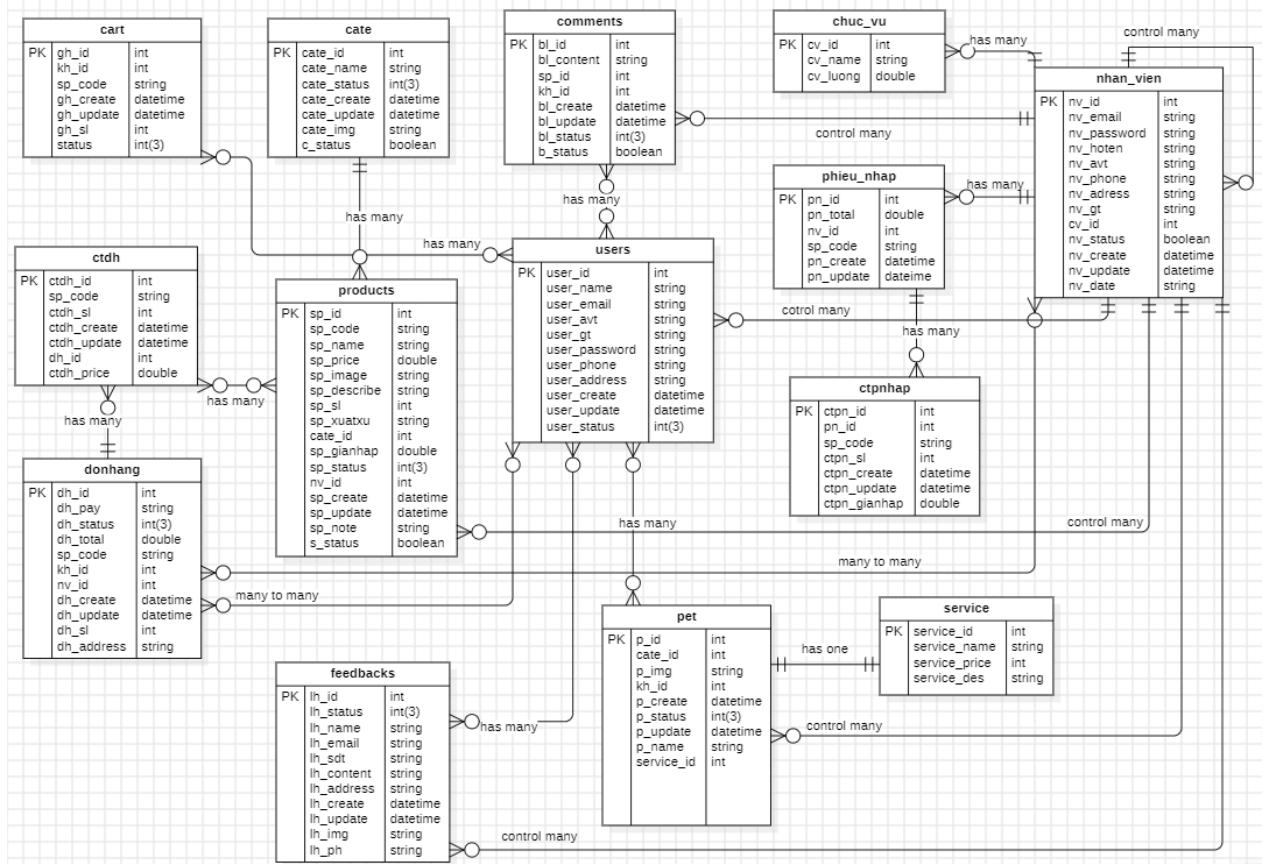
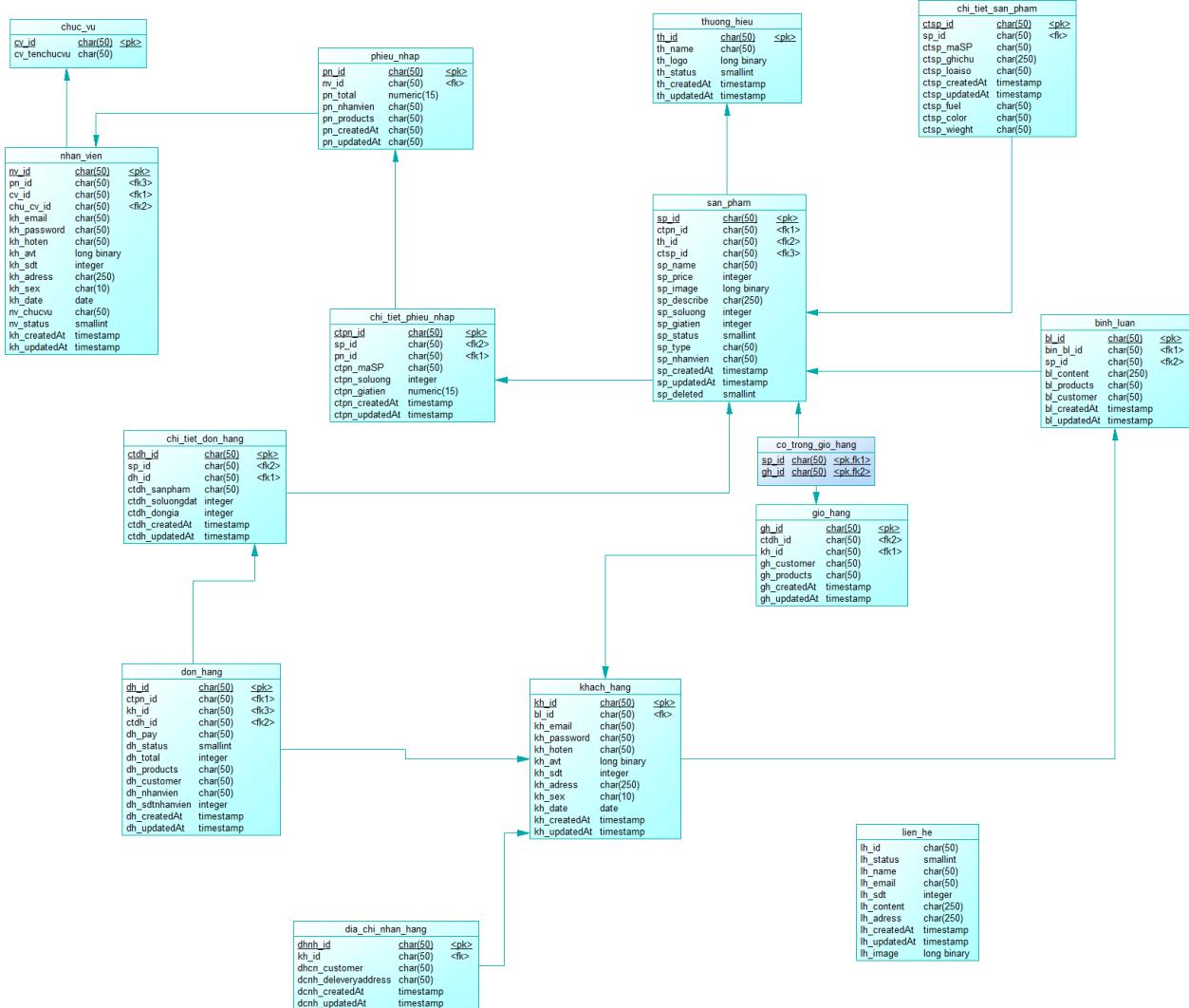


Figure 14: Conceptual data model (CDM)

## **2. Logical data model (PDM)**



**Figure 15: Logical data model (PDM)**

### 3. Database Tables

Placement table				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	cv_id	Int	Primary Key	Position code
2	cv_name	Varchar (255)	Not Null	Rank and place of employment
3	cv_luong	Int	Not Null	Employee salary

**Table 1: Position data description**

Table of Employee Accounts				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	nv_id	Int	Primary Key	Staff code
2	nv_email	Varchar (255)	Not Null	Staff email
3	nv_password	Varchar (255)	Not Null	Staff password
4	nv_hoten	Varchar (255)	Not Null	Staff name
5	nv_avt	Varchar(255)	Not Null	Staff image
6	nv_phone	Varchar(255)	Not Null	Staff phone
7	nv_adress	Varchar (255)	Not Null	Staff address
8	nv_date	Datetime	Not Null	Staff's date born
9	cv_id	Int	Foreign Fey	The chucvu collection's "cv_id" is referenced in the employee's position.
10	nv_status	Tinyint(1)	Not Null	Status employee account
11	nv_create	Datetime	Not Null	Date create account
12	nv_updated	Datetime	Not Null	Date update account

**Table 2: Define data from the employee account table.**

Table of goods receipts				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	pn_id	Int	Primary Key	Receipts Id
2	pn_total	Double	Not Null	Receipts total
3	nv_id	Int	Not Null	The employee imports the reference "nv_id" from the nhan_vien collection
4	sp_code	Varchar(50)	Foreign Key	Products imported from collection products into the reference warehouse "sp_code"
5	pn_create	Datetime	Not Null	Date create receipts
6	pn_update	Datetime	Not Null	Date update receipts

**Table 3: Data from the goods receipt table description**

Table of products				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	sp_id	Int	Primary Key	Product id
2	sp_code	Varchar(50)	Unique	Product code
3	sp_name	Varchar (255)	Not Null	Product name
4	sp_price	Double	Not Null	Product price
5	sp_image	Varchar(255)	Not Null	Product image
6	sp_describe	Varchar(255)	Not Null	Product describe
7	sp_sl	Int	Not Null	Product quantity
8	sp_xuatxu	Varchar(255)	Not Null	Product origin
9	cate_id	Int	Foreign Key	Product type
10	sp_gianhap	Double	Not Null	Product import price

11	sp_status	Int(3)	Not Null	Product status
12	nv_id	Int	Foreign Key	Product import by employee
13	sp_create	Datetime	Not Null	Date create product
14	sp_update	Datetime	Not Null	Date update product
15	sp_note	Varchar(255)	Not Null	Note about product
16	s_status	Tinyint(1)	Not Null	Product status

**Table 4: Product Table Data Description**

<b>Table of domesticated animals</b>				
<b>Description of a data table</b>				
<b>No</b>	<b>Attribute name</b>	<b>Datatypes</b>	<b>Constraint</b>	<b>Describe</b>
1	cate_id	Varchar (255)	Primary Key	Species id
2	cate_name	Varchar (255)	Not Null	Species name
3	cate_img	Varchar(255)	Not Null	Species image
4	c_status	Tinyint(1)	Not Null	Species on off
5	cate_create	Datetime	Not Null	Date add species
6	cate_update	Datetime	Not Null	Date update species
7	cate_status	int(3)	Not Null	Species status

**Table 5: Product Brand Data Description**

<b>Cart table</b>				
<b>Description of a data table</b>				
<b>No</b>	<b>Attribute name</b>	<b>Datatypes</b>	<b>Constraint</b>	<b>Describe</b>
1	gh_id	Int	Primary Key	Cart id
2	kh_id	Int	Foreign Key	"kh_id" is referred to by the customer ID in the users collection.
3	sp_code	Varchar (50)	Foreign Key	The items in the shopping cart make use of the collection products' "sp_code."

4	gh_create	Datetime	Not Null	Date create cart
5	gh_update	Datetime	Not Null	Date update cart
6	status	int(3)	Not Null	Cart status

**Table 6: Data Description for Cart Table**

Order table				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	dh_id	Int	Primary Key	Order id
2	dh_pay	Varchar (255)	Not Null	Payments
3	dh_status	Int(3)	Not Null	Order status
4	dh_total	Double	Not Null	Order total
5	sp_code	Varchar (50)	Foreign Key	The items in the shopping cart make use of the collection products' "sp_code."
6	kh_id	Int	Foreign Key	"kh_id" is referred to by the customer ID in the users collection.
7	nv_id	Int	Foreign Key	Refer to the "nv_id" employee code from the "nhan_vien" collection.
8	dh_sl	Int	Not Null	Order quantity
9	dh_create	Datetime	Not Null	Date create order
10	dh_update	Datetime	Not Null	Date update order
11	dh_address	Varchar(255)	Not Null	Order address

**Table 7: Orders table data description**

Table of customer accounts				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe

1	user_id	Int	Primary Key	User Id
2	user_name	Varchar (255)	Not Null	User name
3	user_email	Varchar (255)	Unique	User email
4	user_password	Varchar (255)	Not Null	User password
5	user_avt	Varchar(255)	Not Null	User avatar
6	user_phone	Varchar(255)	Not Null	User phone
7	user_address	Varchar (255)	Not Null	User address
8	user_gt	Varchar(10)	Not Null	User gender
11	user_create	Datetime	Not Null	Date create user
12	user_update	Datetime	Not Null	Date update user
13	user_status	int(3)	Not Null	User status

**Table 8: Explanatory table of customer data**

Table of services				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	service_id	Int	Primary Key	Service id
2	service_name	Varchar (255)	Not Null	Service name
3	service_price	Int	Not Null	Service price
4	service_des	Varchar(255)	Not Null	Service detail

**Table 9: Service Data Table Description**

Table of comment				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	bl_id	Int	Primary Key	Comment Id
2	bl_content	Varchar (255)	Not Null	Content of comments
3	sp_id	Int	Foreign Key	"sp_id" from the products collection is referred to in the product code.

4	kh_id	Int	Foreign Key	"kh_id" is referred to by the customer ID in the users collection.
5	bl_create	Datetime	Not Null	Date create comment
6	bl_update	Datetime	Not Null	Date update comment
7	b_status	Tinyint(1)	Not Null	Comment status

**Table 10: Data from the comment table described**

Table of contact details				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	lh_id	Int	Primary Key	Contact id
2	lh_status	Int(3)	Not Null	Contact status
3	lh_name	Varchar (255)	Not Null	Contact name
4	lh_email	Varchar (255)	Not Null	Contact email
5	lh_sdt	Varchar(255)	Not Null	Contact Phone
6	lh_content	Varchar (255)	Not Null	Support is required for content.
7	lh_address	Varchar(255)	Not Null	Contact address
8	lh_create	Datetime	Not Null	Date create contact
9	lh_update	Datetime	Not Null	Date update contact
10	lh_img	Varchar(255)	Not Null	Contact image
11	lh_ph	Varchar(255)	Not Null	Reach out for comments

**Table 11: Table Data Description for Contact Information**

Table of Order Details				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	ctdh_id	Int	Primary Key	Order details id

2	sp_code	Varchar(50)	Foreign Key	"sp_code" from the products collection is referred to in the product code.
3	ctdh_sl	Int	Not Null	Order details quantity
4	ctdh_create	Datetime	Not Null	Order details date create
5	ctdh_update	Datetime	Not Null	Order details date update
6	dh_id	Int	Foreign Key	"dh_id" from the order collection is referred to in the order details.
7	ctdh_price	Int	Not Null	Order details price

**Table 12: Data description of the order detail table**

Detailed goods receipt table				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	ctpn_id	Int	Primary Key	Details goods receipt id
2	pn_id	Int	Foreign Key	The Good receipt makes reference to "pn_id" from the Good receipt collection.
3	sp_code	Varchar (50)	Foreign Key	"sp_code" from the products collection is referred to in the product code.
4	ctpn_sl	Int	Not Null	Products quatity
5	ctpn_create	Datetime	Not Null	Date create detail goods receipt

6	ctpn_update	Datetime	Not Null	Date update detail goods receipt
7	ctpn_gianhap	Double	Not Null	Products price import

**Table 13: Input ticket detail table data description**

Table of pet				
Description of a data table				
No	Attribute name	Datatypes	Constraint	Describe
1	p_id	Int	Primary Key	Pet id
2	cate_id	Int	Foreign Key	Pet species
3	p_img	Varchar(255)	Not Null	Pet image
4	kh_id	Int	Foreign Key	"kh_id" is referred to by the customer ID in the users collection.
5	p_create	Datetime	Not Null	Date create book pet
6	p_status	Int(3)	Not Null	Pet status
7	p_update	Datetime	Not Null	Date update book pet
8	p_name	Varchar(255)	Not Null	Pet name
9	service_id	Int	Foreign Key	"Service_id" from the service collection is referred to by the service ID.

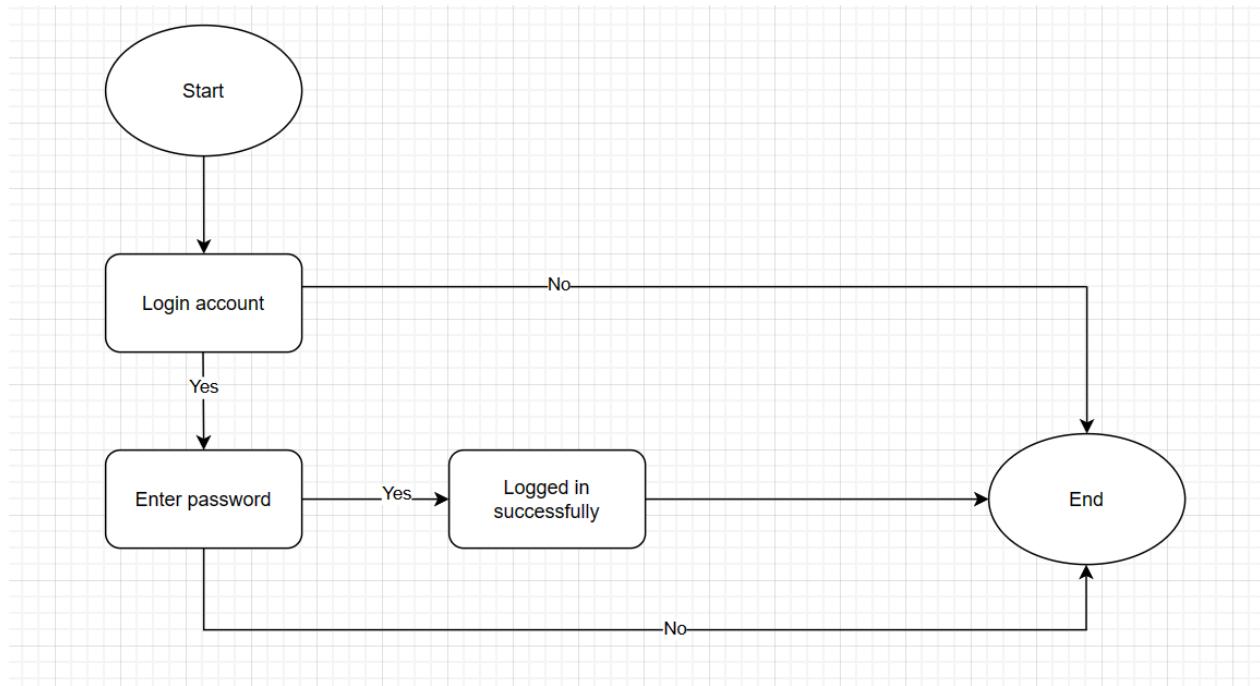
**Table 14: Description of Pet Table Data**

**□ Finish:**

The primary specifications established by the website that sells pet care goods and services have been made clearer with the articulation of the system's functional and database requirements. In terms of functions, use case diagrams to analyze the system's primary functions and provide a detailed description of each function, system component, and use case relationship. assisting users in getting a general understanding of the system. Determine the database for the system based on the functions that were analyzed, and then make sense of the entities, relationships, and constraints that exist within the system.

IV. Flow diagram showing some of the system's primary features

**1. Login function**



**Figure 16: A flow chart that illustrates how to log in.**

## 2. The function of purchasing and ordering payment

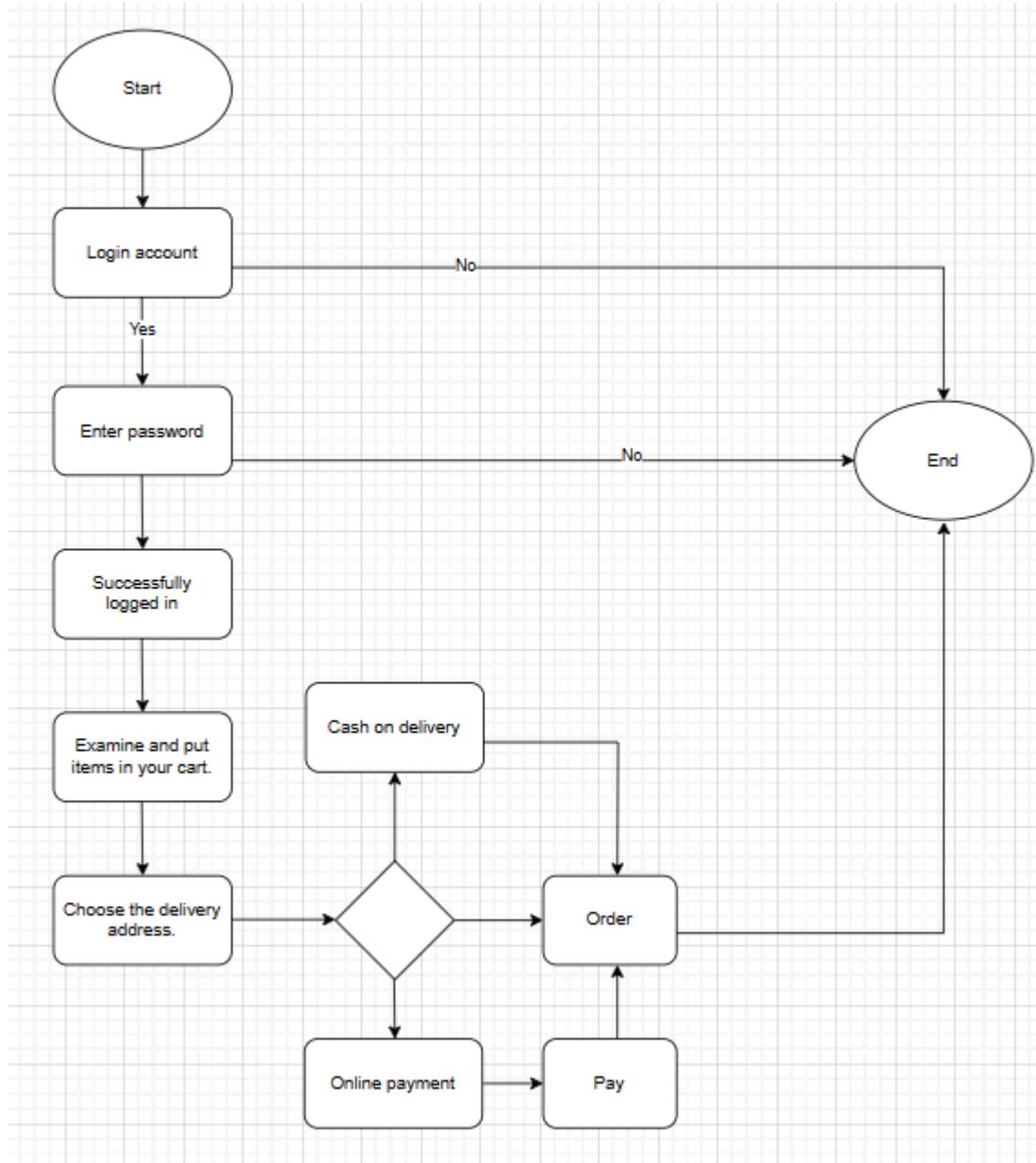


Figure 17: Order function flow chart

### 3. Update function for order status

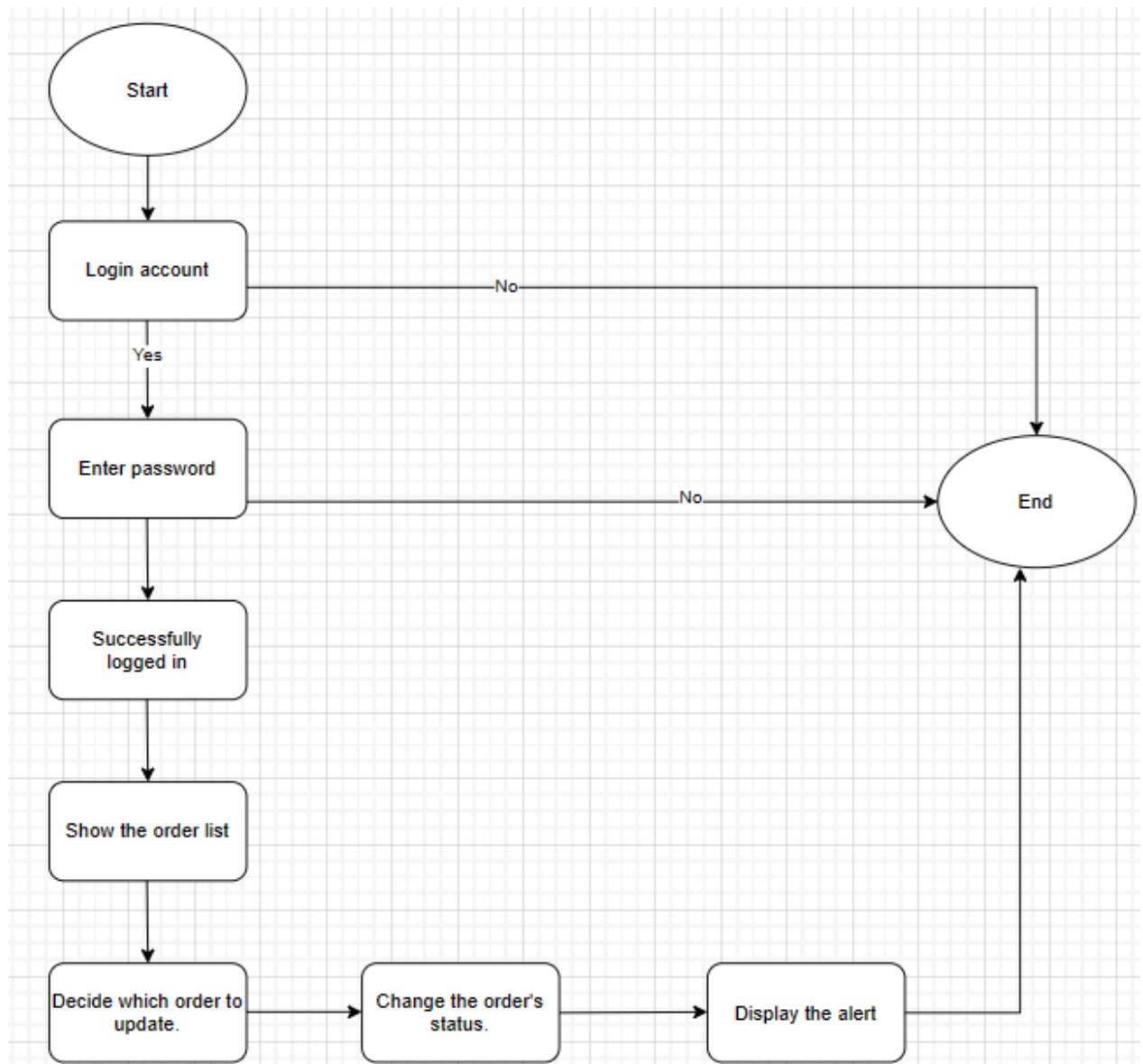


Figure 18: Flow chart for updating order status

#### 4. Product details search feature

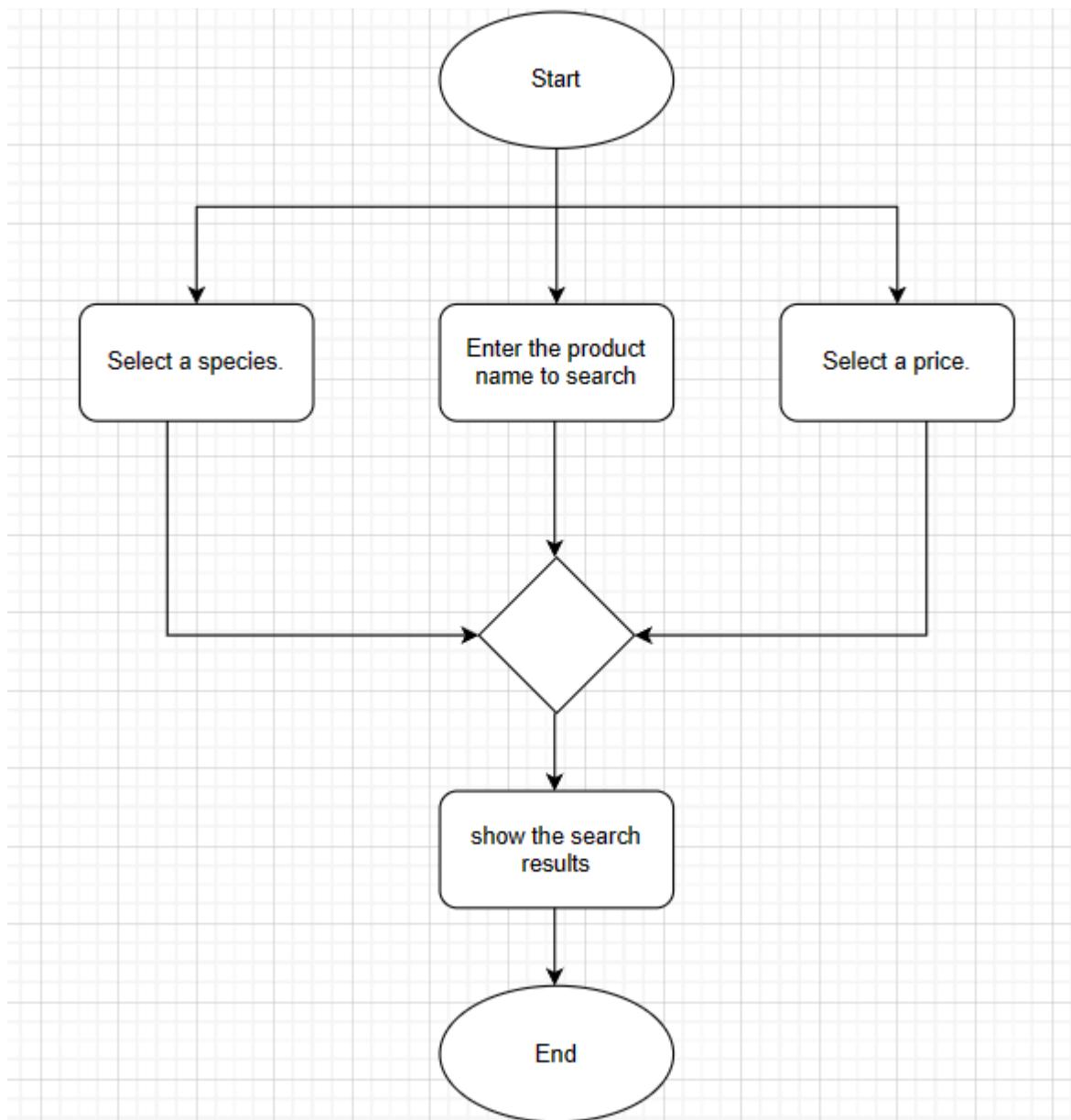
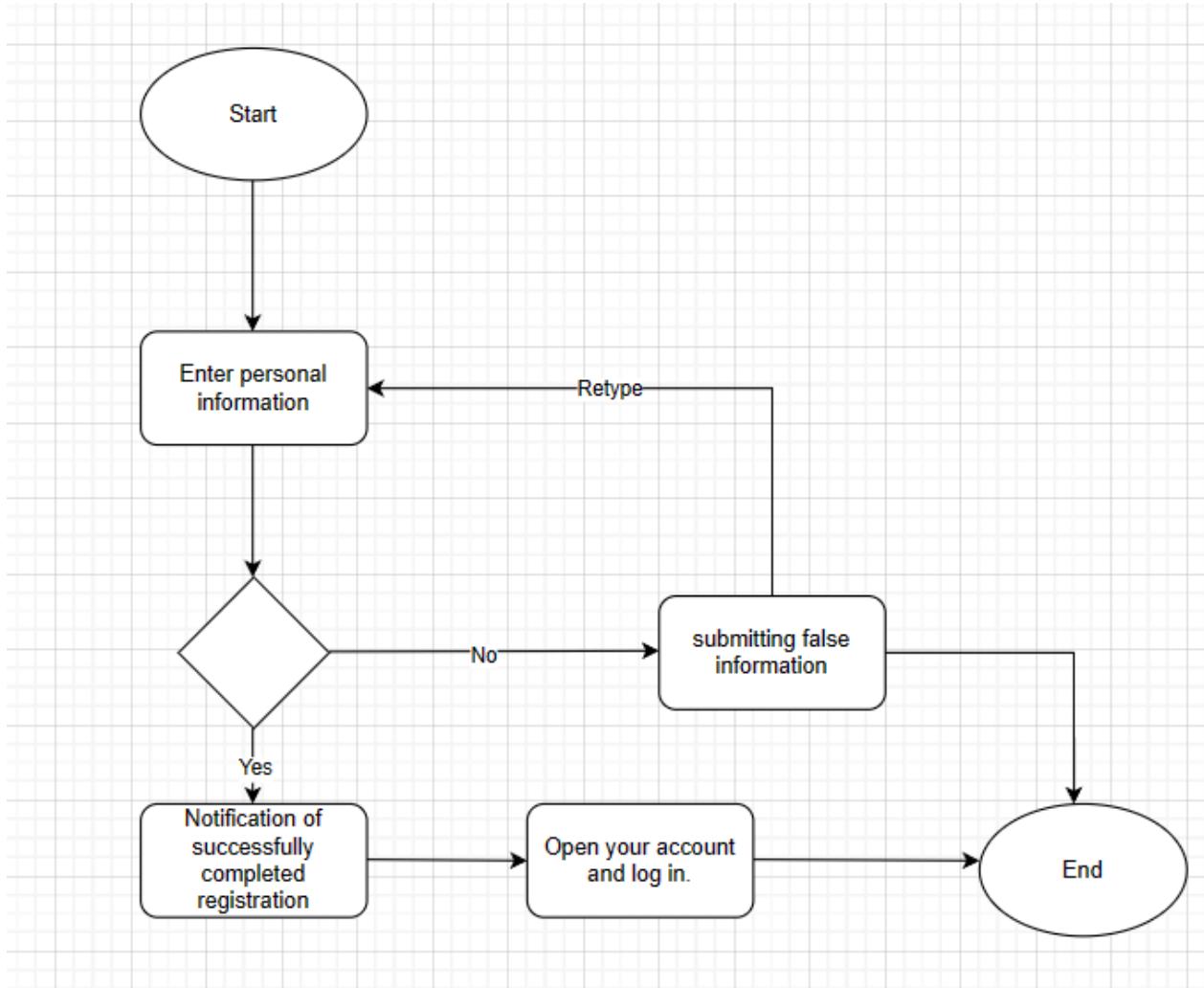


Figure 19: Flow chart for product search

## 5. Function for registering an account



**Figure 20: Account registration function flow chart**

## V. Functions

### 1. Function for registering members

- **Name of function:** Create an account
- **Describe:** Free users can register an account to log in to the website by using the "register account" button.
- **Object:** Customers
- **Required conditions:** Customer
- **Handling:**
  - **Step 1:** Customers can choose to "Register account" from the system's login interface. All the necessary information for the user to register will be displayed on the functional interface.
  - **Step 2:** The user registers by providing all necessary information.

- **Step 3:** User clicks "Register"
- **Step 4:** The data entered by the user is verified by the system:
  - The system will display an invalid and requires re-registration message if the registration information is found to be incorrect.
  - If the user provides accurate and complete information, the system will create a new member account for them, send them a notification, and take them back to the home screen.
- **Result:** Customer registration succeeds or fails

## 2. Login function

- **Function name:** log in
- **Describe:** gives users access to the system for managing products, ordering, and making purchases.
- **Object:** customer, admin
- **Prerequisites:** Needs to have an account to log in.
- **Processing:**
  - **Step 1:** Visit the main page of the system.
  - **Step 2:** The user fills out the login form with their account and password.
  - **Step 3:** Select "Login" from the menu.
  - **Step 4:** The user's account and password will be verified by the system:
    - Users will be able to access the system if their account and password match those on file.
    - The system will ask the user to re enter and display an error message if it is incorrect.
- **Outcome:** successful or unsuccessful login

## 3. Product search function

- **Function name:** Search product
- **Describe:** Search for products on the system
- **Object:** Customer
- **Prerequisites:** Customer
- **Processing:**
  - **Step 1:** Consumers input the information they wish to find about the product.
  - **Step 2:** The system verifies the data the customer entered about the product.
  - **Step 3:** Give the product's quantity and the necessary details.

- **Outcome:** Shows the products that were requested.

#### 4. The function of account logout

- **Function name:** Sign out of your account
- **Describe:** Exit the system by logging out.
- **Đối tượng:** Customer, admin
- **Prerequisites:** must successfully log in to the system
- **Processing:**
  - **Step 1:** From the user's primary interface, the user chooses the "Log out" feature.
  - **Step 2:** The system performs an audit, disconnects the account, and then reroutes to the login screen.
- **Result:** customer successfully logged out of the system

#### 5. Function of customer information management

- **Function name:** Management of customer information
- **Describe:** Customers or the admin can examine each other's personal information.
- **Object:** admin,khách hàng
- **Prerequisites:** needs to access the system with success.
- **Processing:**
  - **Step 1:** From the home page interface, choose "Profile"
- **Result:** Customer information will be displayed

#### 6. Order function

- **Function name:** order
- **Describe:** With the "Order" function, customers can manage the products they buy such as: price and quantity,...
- **Object:** Customer
- **Prerequisite:** must successfully log in to the system
- **Processing:**
  - **Step 1:** After choosing the item you wish to purchase, the system will take you to the shopping cart where clients may view prices and quantity photographs..
  - **Step 2:** The user completes the form request with all necessary details.
  - **Step 3: Order:**

- The customer can proceed to make an order once the quantity of the product has been agreed upon. The system will record the order information and the amount to be paid.
- **Result:** order success or failure

## 7. Product management function

- **Function name:** product management
- **Describe:** Admins can add, update, delete, hide, show, and more products with the "Product Management" tool.
- **Object:** admin
- **Prerequisite:** must successfully use an admin account to log into the system
- **Processing:**
  - **Step 1:** choose one of the add, edit, and delete functions on the home page interface
  - **Step 2:** Complete the matching function's form details.
- **Result:** admin successfully added, edited, deleted, information of a product

## 8. Function of managing product catalogs

- **Function name:** product catalog management
- **Describe:** With the "Manage product categories" function, admins can add, edit, delete, hide and show product categories.
- **Object:** admin
- **Prerequisite:** must successfully log in to the system with an admin account
- **Processing:**
  - **Step 1:** Select an option from the add, edit, delete, or conceal features available on the main screen.
  - **Step 2:** Complete the matching function's form details.

**Result:** admin successfully added, edited, deleted, hidden, and showed information of a product

## 9. Function for managing product comments

- **Function name:** comment management
- **Describe:** With the "Comment Management" function, admins can add, edit, delete, hide and show comments about products
- **Object:** admin
- **Prerequisite:** must successfully log in to the system with an admin account
- **Quá trình xử lí:**

- **Step 1:** Select a function from the list of add, modify, delete, hide, and show on the main interface functions.
- **Step 2:** Complete the matching function's form details.

**Result:** admin successfully adds, edits, deletes, hides, shows information of 1 product comment

## 10. Customer care function

- **Function name:** customer care
- **Describe:** Admins can reply to queries and grievances regarding the product from customers by using the "customer care" feature.
- **Object:** admin
- **Prerequisites:** Need to successfully use an admin account to log into the system
- **Processing:**
  - **Step 1:** choose one of the functions add, edit, delete, hide, show on the home page interface
  - **Step 2:** Complete the corresponding function's form information.

**Kết quả:** phản hồi thông tin đến khách hàng Success

## 11. Goods receipt management function

- **Function name:** Manage goods receipt
- **Describe:** Admin can create and update goods receipts using the "Manage goods receipt" function.
- **Object:** admin
- **Prerequisites:** Need to successfully use an admin account to log into the system
- **Processing:**
  - **Step 1:** Decide which item needs to be stored.
  - **Step 2:** Complete the corresponding function's form information.

**Result:** creating a new goods receipt successfully

## 12. Employee, customer, and individual account management functions

- **Function name:** quản lý tài khoản
- **Describe:** Administrators have the ability to add, edit, delete, hide, and show account information through the "Account Management" function.
- **Object:** admin
- **Prerequisites:** Need to successfully use an admin account to log into the system

- **Processing:**

- **Step 1:** Select the account to update or create a new account.
- **Step 2:** Complete the corresponding function's form information.

**Result:** Successfully updated or created new account information.

### 13. Statistics function

- **Function name:** Statistics.

- **Describe:** The administrator can view sales revenue and profits at any desired time and period using the "Statistics" function. In particular, the admin can view sales quantity and profits for each type of product.

- **Object:** admin.

- **Prerequisites:** must be able to access the system and log in with an admin account.

- **Processing:**

- **Step 1:** Decide which product or time period requires statistics.
- **Step 2:** Complete the relevant function's form with all the necessary data.

**Result:** successful display of profit information for the time or product.

### 14. Function of scheduling

- **Function name:** Set up veterinary care and checkups.

- **Describe:** Customers can make an appointment for their pet to come in for an examination by using the "book care and medical examination for pets" function. Administrators have the ability to update an appointment, regardless of its completion status..

- **Object:** admin, customer.

- **Prerequisites:** must be able to access the system and log in with an admin account and a user account.

- **Processing:**

- **Step 1:** Select "book pet" from the customer's menu.
- **Step 2:** Complete the relevant function's form with all the necessary data.
- **Step 3:** When a customer brings their pet into the pet shop, the administrator will adjust the appointment schedule.

**Result:** the appointment was successfully booked and the admin will be able to manage the scheduled appointment.

- **Wrap up:**

Create the system in accordance with the functions that are described, the user objects that are related, and the activities that correspond to each function of the system have been analyzed in the specification. Each function is demonstrated through text and diagrams.

## CHAPTER 3: OBTAINED OUTCOMES

### I. Customer interface

#### 1. The homepage both before and after logging in

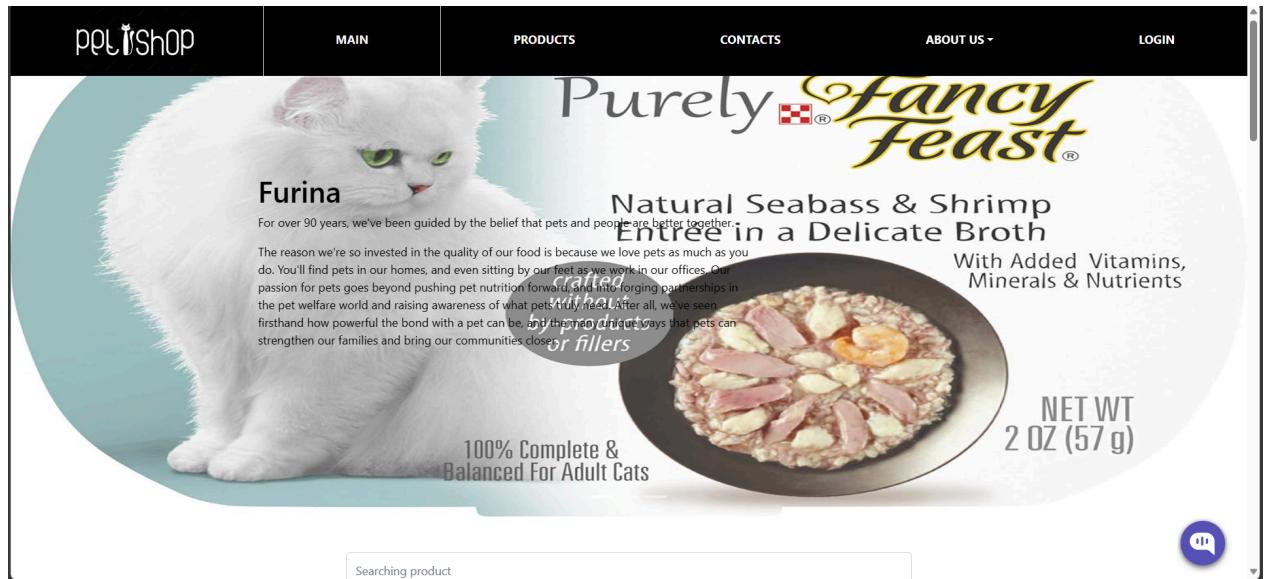


Figure 21: Home page interface without login

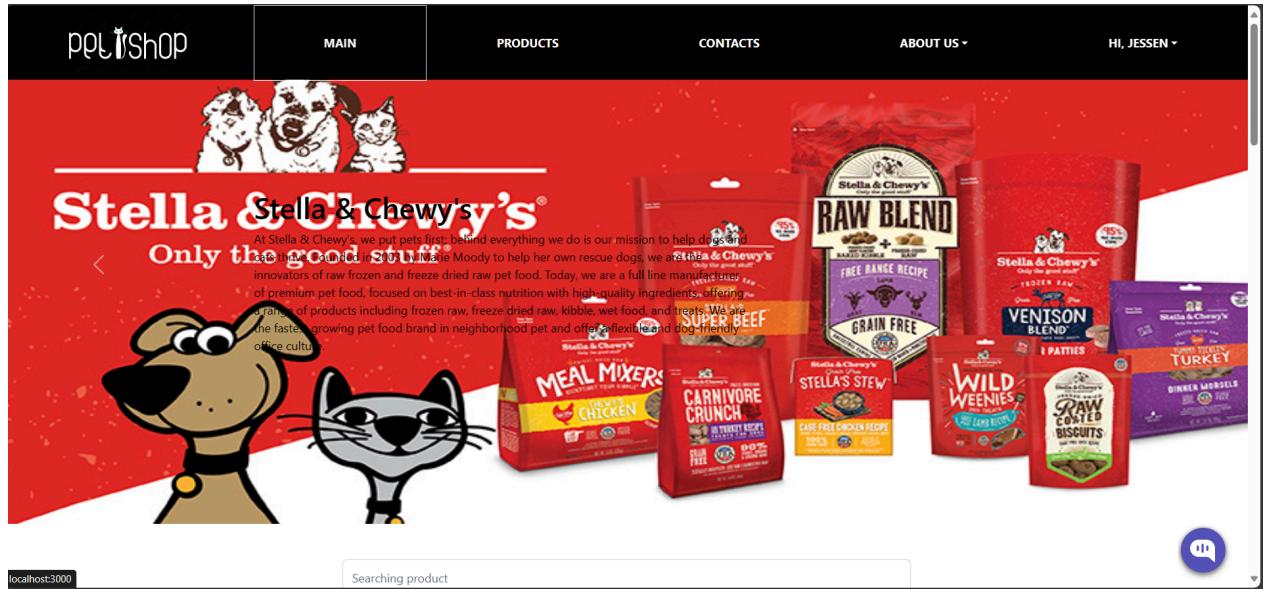


Figure 22: Home page interface after logging in

## NEW PRODUCTS



**Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats**

**17 \$**

Only ONE ingredient and ONE source of protein. Each Lamb Heart Treat is a generous, and always tasty, piece of freeze-dried raw nutrition. Made in the USA! High-protein, high-value training treats....

**Sold out**



**Dr. Marty Shine & Luster Dog Supplements**

**28 \$**

Canine Seasonal Allergy Support Antioxidants to help ease signs of seasonal allergies Omega-3s to support a healthy coat and skin

**Detail**



**Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray**

**36 \$**

A purely savory combination of natural seabass and shrimp, served in a delicate broth. Complete and balanced with vitamins and minerals. Never any by-products or fillers.

**Detail**

## HIGHLY RECOMMEND



**Fritz Aquatics Betta Water with Almond Leaf Extract**

**18 \$**

Fritz Betta Water is free of chlorine and chloramines and has been specifically formulated with the correct parameters for bettas. Fritz Betta Water contains a natural source of tannins extracted from Indian...

**Detail**



**Zupreem Sensible Seed Food for Small Birds**

**23 \$**

Sensible Seed for Small Birds is a premium blend of seeds and FruitBlend Flavor Smart Pellets to provide pet birds a sensible way to indulge in a seed mix. Suitable for Parakeets, Budgies, Parrots....

**Detail**



**A & E Happy Beaks The Voyager Black Soft Sided Bird Carrier**

**60 \$**

Lightweight, zip open carrier used for travel with your pet and includes an adjustable, padded shoulder strap, roomy and well ventilated carrier with mesh windows, easy removable perch with 2 perch placement...

**Detail**

localhost:3000/detail/25
SCIENCE
HOME

**petsShop**

Mauris sit amet quam congue, pulvinar urna et, congue diam. Suspendisse eu lorem massa. Integer sit amet posuere tellustea dictumst.

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<a href="#">Main</a>	<a href="#">About Us</a>
<a href="#">Products</a>	<a href="#">Blog</a>
<a href="#">Contacts</a>	<a href="#">Login</a>

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**Information**

Hàm liên tổ 19 - Xuân Khánh - Cần Thơ

Phone: [0912907682](tel:0912907682)

Email: [LongB1910403@student.ctu.edu.vn](mailto:LongB1910403@student.ctu.edu.vn)

**Figure 23: Home page interface**

Customers always find that the home page interface is crucial because it gives them a better understanding of the system. Customers can use the system to register, log in to their accounts, search for products they want, view their shopping carts quickly, and discover hot items, best-selling products, most viewed products, hot news from the system, and some featured products by category.

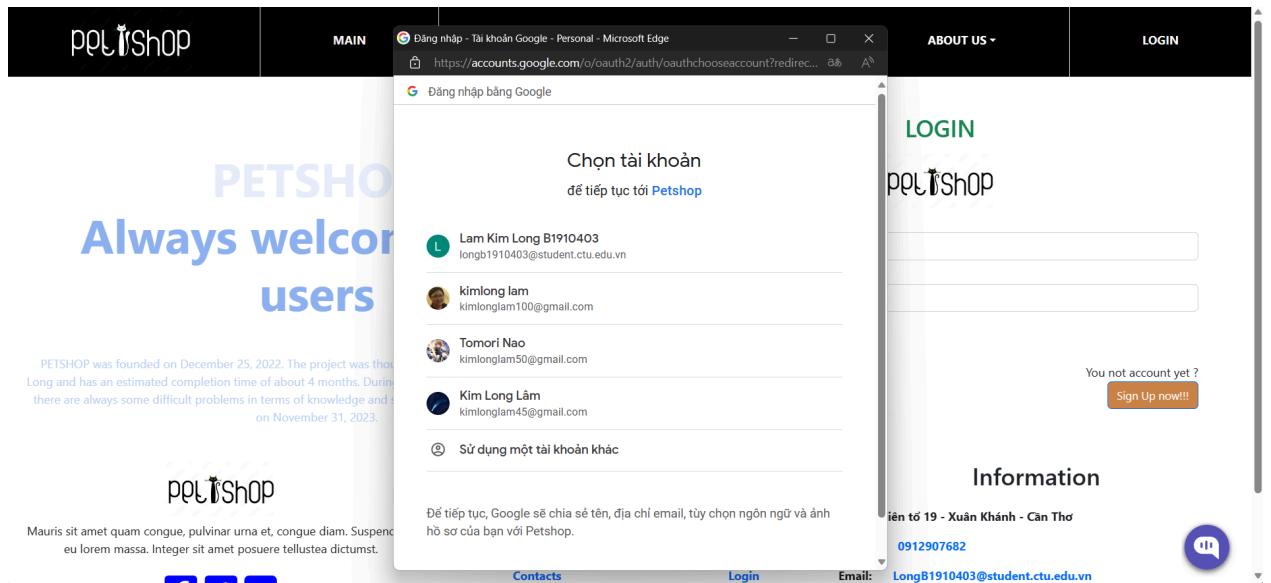
## 2. Login page interface

The screenshot shows the PetShop website's login page. At the top, there is a navigation bar with links for MAIN, PRODUCTS, CONTACTS, ABOUT US, and LOGIN. The LOGIN link is highlighted in green. Below the navigation bar, the page title "PETSHOP" is displayed in large blue letters, followed by the tagline "Always welcome new users". A small paragraph of text is present below the tagline. On the right side of the page, there is a login form with fields for User Name (Email), Password, and a "Forgot password ?" link. There are "Login" and "Google" buttons. To the right of the login form, there is a message "You not account yet?" and a "Sign Up now!!!" button. On the left side, there is a sidebar with the PetShop logo, social media icons (Facebook, Twitter, Email), and a "Helpful Information" section with links to Main, Products, and Contacts. On the right side, there is an "Information" section with address, phone number, and email details, along with a contact icon.

Figure 24: Login page interface

This screenshot shows the same PetShop login page as the previous one, but with a different background color. The layout and content are identical, including the navigation bar, main content area with the PetShop logo and tagline, the login form on the right, the sidebar on the left, and the information section on the right.

**Figure 25: Password reset page interface**



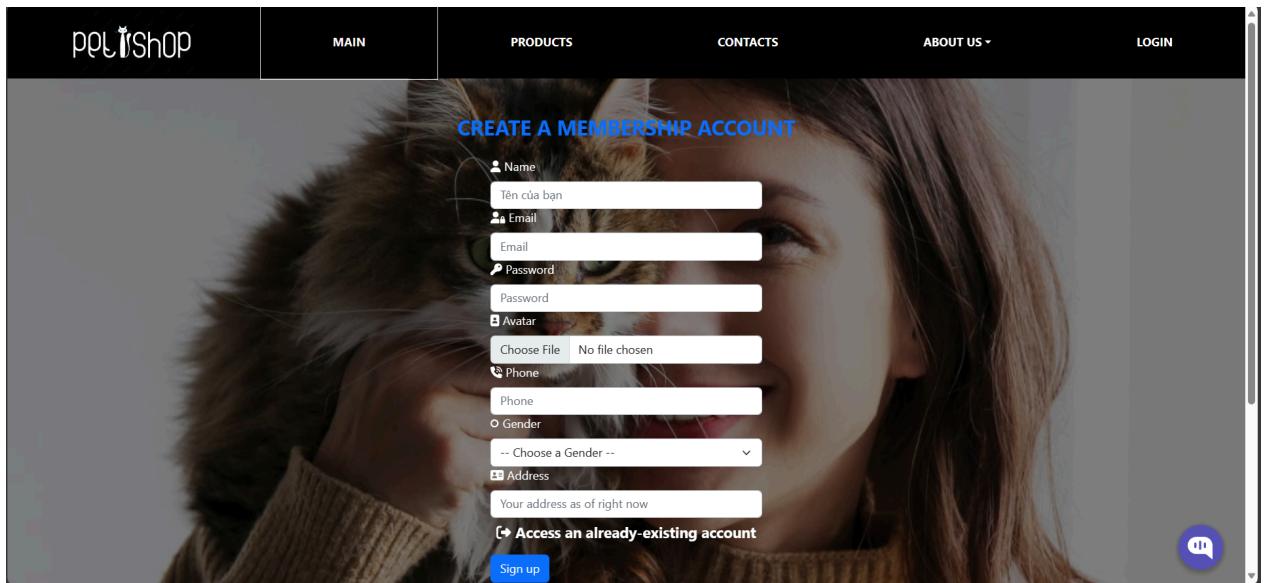
**Figure 26: Google login interface**

The login page interface includes 3 parts:

- Log in with your registered account and password
- Sign in with your Google account
- Reset password

There are two steps involved in the login process. The home page will load automatically and you will get a "successful login" message if you enter the correct account and password. If it is incorrect, on the other hand, it will print the message "wrong account or password" and force you to log in once more.

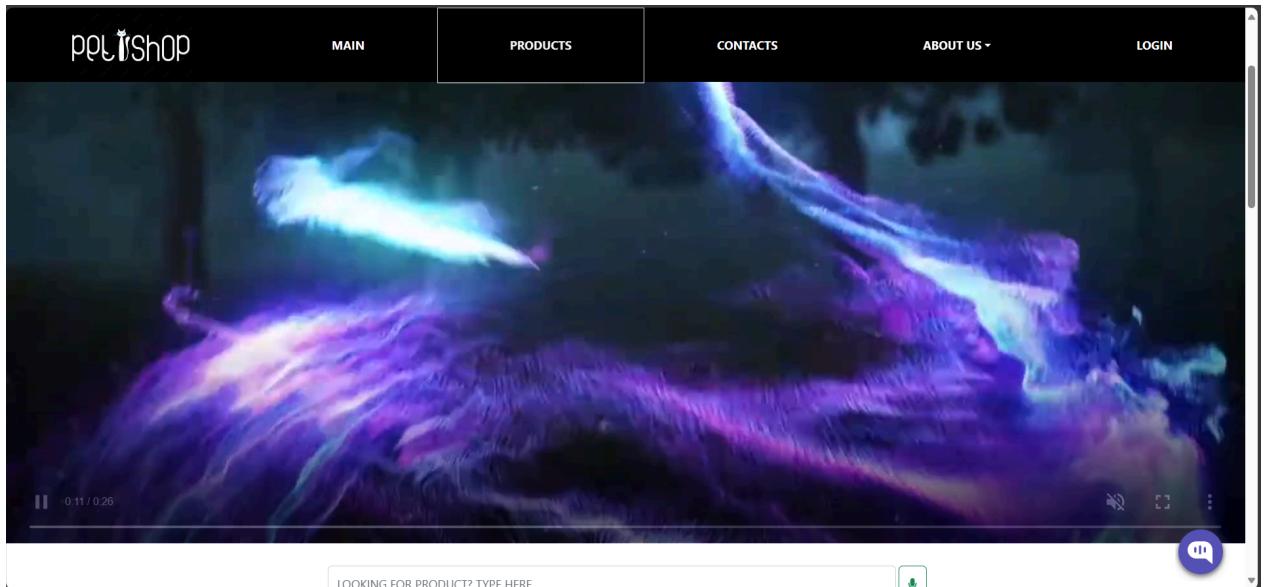
### 3. Account registration page interface



**Figure 27: Interface of member account registration page**

The member registration page interface requires entering all necessary information to register an account. After registering, you will be redirected to the login page

### 4. Product page interface



petShop MAIN PRODUCTS CONTACTS ABOUT US ▾ LOGIN

LOOKING FOR PRODUCT? TYPE HERE

**► SHOP BY PET**

- DOG
- CAT
- FISH
- BIRD
- OTHER

**► ALL PRODUCTS**

STELLA & CHEWY'S FREEZE-DRIED RAW LAMB HEART DOG TREATS

DR. MARTY SHINE & LUSTER DOG SUPPLEMENTS

petShop MAIN PRODUCTS CONTACTS ABOUT US ▾ LOGIN

**► PRICE**

- Low to high
- High to low
- Min 10\$
- Min 20\$
- Min 30\$
- Min 40\$
- Min 50\$
- Min 100\$

Only ONE ingredient and ONE source of protein. Each Lamb Heart Treat is a generous, and always tasty, piece of freeze-dried raw nutrition. Made in the...

sold out

Canine Seasonal Allergy Support Antioxidants to help ease signs of seasonal allergies Omega-3s to support a healthy coat and skin

Details

FANCY FEAST PURELY NATURAL SEABASS AND SHRIMP  
CRAFTED CAT FOOD TRAY

ETHICAL PET SPOT SKINNEEZ FOREST CREATURES CAT TOYS

Figure 28: Product page interface

Show all products available in the store

## 5. Search page interface

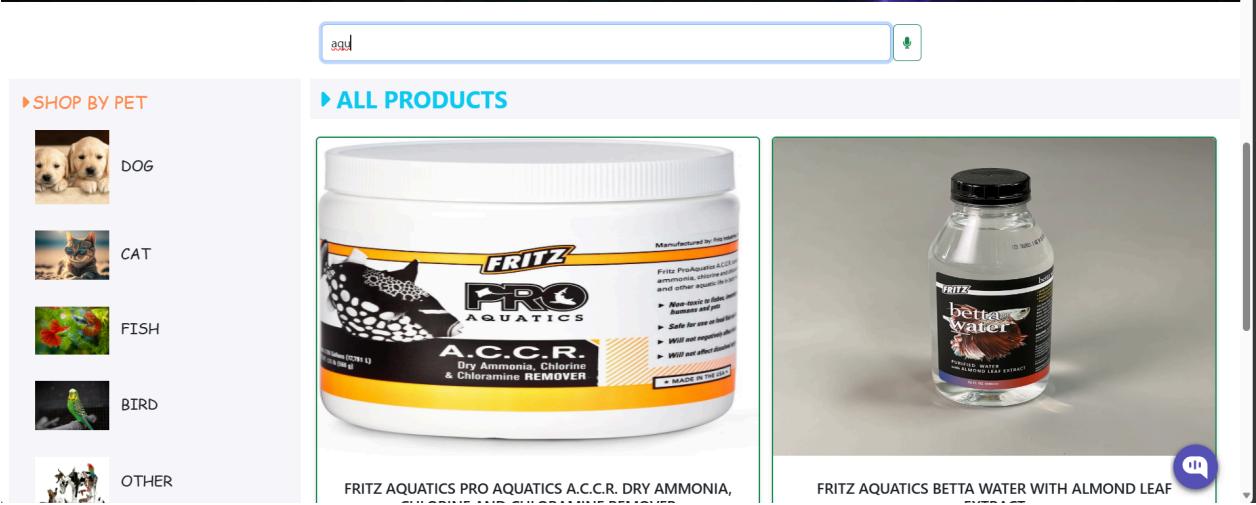


Figure 29: Product interface after searching

Display products according to the search request

## 6. Product price filter page interface

The screenshot shows the PetShop website's product page after applying a price filter. The left sidebar features categories: FISH, BIRD, OTHER, and a PRICE filter section. The PRICE filter shows 'Min 10\$' selected. The main content area displays a product titled 'ETHICAL PET SPOT SKINNEEZ FOREST CREATURES CAT TOYS' with a price of '\$5'. Below the product image is a descriptive text: 'Skinneez Forest Animals Cat Toys come in one of three animals; Skunk, Squirrel, or Mouse. \*\*Let us choose which forest creature your cat will enjoy!..'. A 'Details' button is present. At the bottom of the page are navigation links: 'Previous page', a page number '1' in a blue box, and 'Next page'.

This screenshot shows the PetShop website's product page after applying a price filter. The left sidebar features categories: FISH, BIRD, OTHER, and a PRICE filter section. The PRICE filter shows 'Min 10\$' selected. The main content area displays a product titled 'FRITZ AQUATICS BETTA WATER WITH ALMOND LEAF EXTRACT' with a price of '\$18'. Below the product image is a descriptive text: 'Fritz Betta Water is free of chlorine and chloramines and has been specifically formulated with the correct parameters for bettas. Fritz Betta Water contain...'. A 'Details' button is present. At the bottom of the page are navigation links: 'Main', 'About Us', and a footer note: 'Hệ thống quản lý bán hàng - Xuân Khanh - Cần Thơ'.

**Figure 30: Product page interface after filtering by price**

Display products according to the price selected by the customer

## 7. Product detail page interface

**petShop**

MAIN PRODUCTS CONTACTS ABOUT US LOGIN

**DETAIL PRODUCT**

ID:	850004357262
NAME:	Dr. Marty Shine & Luster Dog Supplements
TYPE:	Dog
PRICE:	28 \$
ORIGIN:	USA
DESCRIBE:	Canine Seasonal Allergy Support Antioxidants to help ease signs of seasonal allergies Omega-3s to support a healthy coat and skin

[Add to cart](#)

**Comment's product**

[Comment](#)

**Comments** 100

Nao
Very helpful

**petShop**

MAIN PRODUCTS CONTACTS ABOUT US LOGIN

**SAME PRODUCTS:**

**Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats**

**17 \$**

Only ONE ingredient and ONE source of protein. Each Lamb Heart Treat is a generous, and always tasty, piece of freeze-dried raw nutrition. Made in the USA...

[Detail](#)

**Dr. Marty Shine & Luster Dog Supplements**

**28 \$**

Canine Seasonal Allergy Support Antioxidants to help ease signs of seasonal allergies Omega-3s to support a healthy coat and skin

[Detail](#)

**Figure 31: Product detail page interface**

Display detailed product information, display products of the same type, display product comments

## 8. Cart page interface

The screenshot shows the PetShop Cart page. On the left, there's a sidebar for 'CUSTOMER INFO' with fields for Name (Nao), Email (test@gmail.com), Phone (0912306415), Address (dropdown: Select Address), and buttons for 'Input your new address' and 'Keep buy'. The main area displays a table of ordered products:

No	Image	Products Name	Your quantity	Price	Sum	Delete
1		Ethical Pet SPOT Skinneez Forest Creatures Cat Toys	- [3] +	5	15	
2		Dr. Marty Shine & Luster Dog Supplements	- [2] +	28	56	
3		Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats	- [1] +	17	17	

Summary at the bottom: Sum quantity: 6 unit, Sum: 88 \$, Pay with: dropdown (Select), and a 'Pay' button.

Below the cart area, there are links for 'Helpful Information' and 'Information'.

Figure 32: Cart page interface

Display product information that customers ordered

## 9. Paypal payment interface

The screenshot shows a modal window for 'PayPal Checkout - Personal - Microsoft Edge' with the URL https://www.sandbox.paypal.com/webapps/hermes?flow=1-P&... . It displays a payment amount of \$88.88 and a 'Pay with' section. The 'PayPal balance' option is selected, with a checkbox 'Make this my preferred way to pay' and a 'Split' toggle switch. Other payment methods listed include 'CREDIT UNION 1 (AK)', 'Visa', and 'PayPal Credit'. At the bottom are 'Complete Purchase' and 'Payment method rights' buttons.

In the background, the PetShop cart page is visible with the same product list and summary.

Figure 33: Paypal payment interface

Display paypal account information

## 10. Order page interface

The screenshot shows the PetShop Order page interface. At the top, there is a navigation bar with links for MAIN, PRODUCTS, CONTACTS, ABOUT US, and a user profile (HI, NAO). Below the navigation bar is a section titled "BILL LIST" with a "FILTER" button. The filter section includes checkboxes for "All Bill", "Wait", "On going", "Has received products", and "Deleted". The main content area displays a table of bills with the following columns: No, PRODUCT NAME, IMAGE, QUANTITY, PRICE, CUSTOMER NAME, ADDRESS SHIP, CUSTOMER PHONE, TYPE BILL, STATUS BILL, DATE ORDER, SHIPPER, SHIPPER PHONE, and MOVE. There are three bills listed:

No	PRODUCT NAME	IMAGE	QUANTITY	PRICE	CUSTOMER NAME	ADDRESS SHIP	CUSTOMER PHONE	TYPE BILL	STATUS BILL	DATE ORDER	SHIPPER	SHIPPER PHONE	MOVE
1	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		3	5	Nao		0912306415	Pay online	Wait	11/26/2023, 8:21:01 AM	There is currently no delivery person	Empty	
2	Dr. Marty Shine & Luster Dog Supplements		2	28	Nao		0912306415	Pay online	Wait	11/26/2023, 8:21:01 AM	There is currently no delivery person	Empty	
3	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		1	17	Nao		0912306415	Pay online	Wait	11/26/2023, 8:21:01 AM	There is currently no delivery person	Empty	

Below the table, there is a summary row with "SUM QUANTITY: 6" and "SUM: 88 \$". The last row of the table shows a single bill for "Ethical Pet SPOT Skinneez Creatures Cat Toys" with quantity 3, price 5, customer name Nao, address ship Bạc Liêu, Việt Nam, phone 0912306415, type bill Pay when products arrive, status bill Wait, date order 10/30/2023, 11:33:57 PM, shipper There is currently no delivery person, and shipper phone Empty. To the right of this row are three small icons: a green square with a white checkmark, a red square with a white minus sign, and a blue circle with a white speech bubble.

Figure 34: Order page interface

Display order list

## 11. Order page interface after filtering

BILL LIST														
FILTER ▼		All Bill <input type="checkbox"/>			Wait <input checked="" type="checkbox"/>			On going <input type="checkbox"/>			Has received products <input type="checkbox"/>			Deleted <input type="checkbox"/>
No	PRODUCT NAME	IMAGE	QUANTITY	PRICE	CUSTOMER NAME	ADDRESS SHIP	CUSTOMER PHONE	TYPE BILL	STATUS BILL	DATE ORDER	SHIPPER	SHIPPER PHONE	MOVE	
1	Prevue Small Animal Cage with Stand		2	170	Lam Kim Long B1910403	Binh Thuy, Can Tho, Viet Nam	0912306415	Pay online	Wait	11/26/2023, 9:22:48 AM	There is currently no delivery person	Empty		
2	Zupreem Sensible Seed Food for Small Birds		2	23	Lam Kim Long B1910403	Binh Thuy, Can Tho, Viet Nam	0912306415	Pay online	Wait	11/26/2023, 9:22:48 AM	There is currently no delivery person	Empty		
SUM QUANTITY:		4											SUM: 386 \$	 

Figure 35: Order page interface after filtering "Wait" status

BILL LIST														
FILTER ▼		All Bill <input type="checkbox"/>			Wait <input checked="" type="checkbox"/>			On going <input type="checkbox"/>			Has received products <input type="checkbox"/>			Deleted <input type="checkbox"/>
No	PRODUCT NAME	IMAGE	QUANTITY	PRICE	CUSTOMER NAME	ADDRESS SHIP	CUSTOMER PHONE	TYPE BILL	STATUS BILL	DATE ORDER	SHIPPER	SHIPPER PHONE	MOVE	
1	Royal Canin Feline Health Nutrition Aging 12 Loaf In Sauce Canned Cat Food		2	70	sydas dan'	CanTho, Vietnam	0123456789	Pay when products arrive	On Shipping	11/7/2023, 2:25:52 PM	Long (admin)	0912907682		
2	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray		1	36	sydas dan'	CanTho, Vietnam	0123456789	Pay when products arrive	On Shipping	11/7/2023, 2:25:52 PM	Long (admin)	0912907682		
SUM QUANTITY:		3											SUM: 176 \$	 

Figure 36: Order page interface after filtering "On Shipping" status

The screenshot shows the 'Order' page with a filter bar at the top. The filter dropdown is set to 'Has received products'. The main table displays three orders that have been received:

No	PRODUCT NAME	IMAGE	QUANTITY	PRICE	CUSTOMER NAME	ADDRESS SHIP	CUSTOMER PHONE	TYPE BILL	STATUS BILL	DATE ORDER	SHIPPER	SHIPPER PHONE	MOVE
1	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		4	17	sylas dan`	CanTho, Vietnam	0123456789	Pay when products arrive	Has received products	11/7/2023, 2:23:35 PM	Nhân viên 1	0912306415	
2	Fritz Aquatics Pro Aquatics A.C.C.R. Dry Ammonia, Chlorine and Chloramine Remover		3	51	sylas dan`	CanTho, Vietnam	0123456789	Pay when products arrive	Has received products	11/7/2023, 2:23:35 PM	Nhân viên 1	0912306415	
3	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		1	5	sylas dan`	CanTho, Vietnam	0123456789	Pay when products arrive	Has received products	11/7/2023, 2:23:35 PM	Nhân viên 1	0912306415	

At the bottom, there is a summary: SUM QUANTITY: 8 and SUM: 226 \$. There are also green and red circular buttons.

Figure 37: Order page interface after filtering the status "Goods received"

The screenshot shows the 'Order' page with a filter bar at the top. The filter dropdown is set to 'Cancelled'. The main table displays three orders that are currently cancelled:

No	PRODUCT NAME	IMAGE	QUANTITY	PRICE	CUSTOMER NAME	ADDRESS SHIP	CUSTOMER PHONE	TYPE BILL	STATUS BILL	DATE ORDER	SHIPPER	SHIPPER PHONE	MOVE
1	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		3	5	Nao	cantho, vietnam	0912306415	Pay online	Wait	11/26/2023, 8:21:01 AM	There is currently no delivery person	Empty	
2	Dr. Marty Shine & Luster Dog Supplements		2	28	Nao	cantho, vietnam	0912306415	Pay online	Wait	11/26/2023, 8:21:01 AM	There is currently no delivery person	Empty	
3	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		1	17	Nao	cantho, vietnam	0912306415	Pay online	Wait	11/26/2023, 8:21:01 AM	There is currently no delivery person	Empty	

At the bottom, there is a summary: SUM QUANTITY: 6 and SUM: 88 \$. There are also green and red circular buttons.

Figure 38: Order page interface after filtering "Cancelled" status

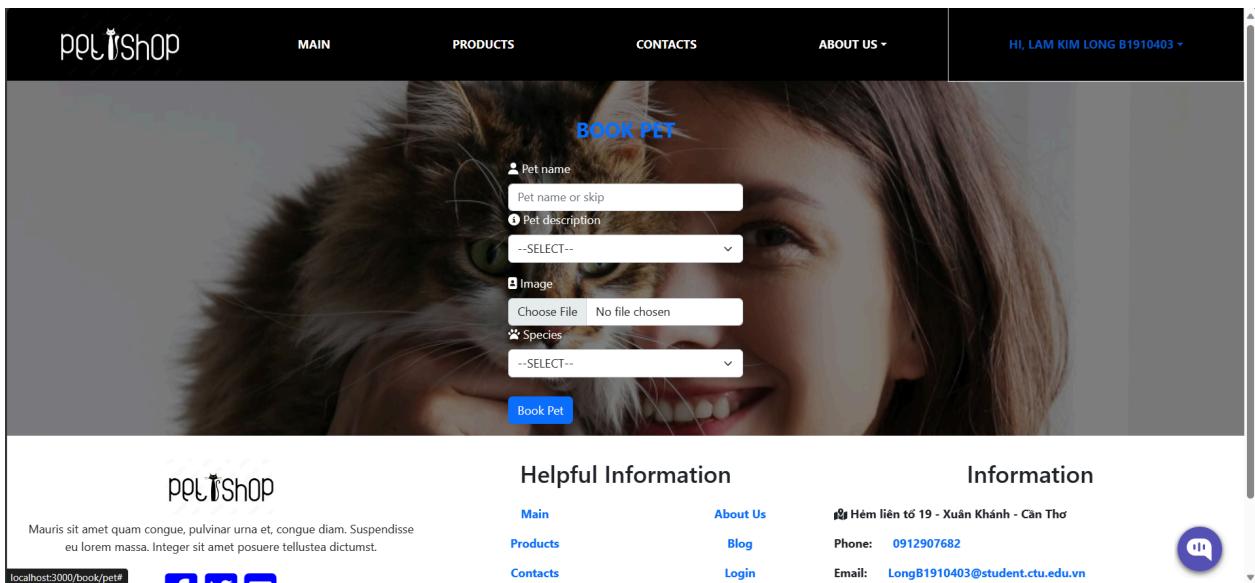


Figure 39: Pet appointment booking page interface

## 12. News page interface



Figure 40: News page interface

Displays news about the store.

## 13. About us page interface

The screenshot shows the 'ABOUT US' page of the PetShop website. At the top, there is a navigation bar with links for 'MAIN', 'PRODUCTS', 'CONTACTS', 'ABOUT US', and a user greeting 'HI, LAM KIM LONG B1910403'. The main content area features a large, blurred background image of a pet menu with the words 'PETSHOP' and 'ABOUT US' overlaid in red and white text. Below this, a section titled 'ABOUT US' is displayed. The page is organized into several sections:

- 1. PETSHOP**: A brief welcome message.
- 2. Who Are We?**: A section about the team of dedicated pet lovers.
- 3. Our Vision**: A statement about the vision of creating a strong and reliable community.
- 4. Our Services**: A description of the wide range of products and services offered.
- 5. Why Choose PetShop**: A list of four reasons: Quality Products, Dedicated Service, Pet-Loving Community, and Convenience.
- 6. Thank you**: A general thank you message.

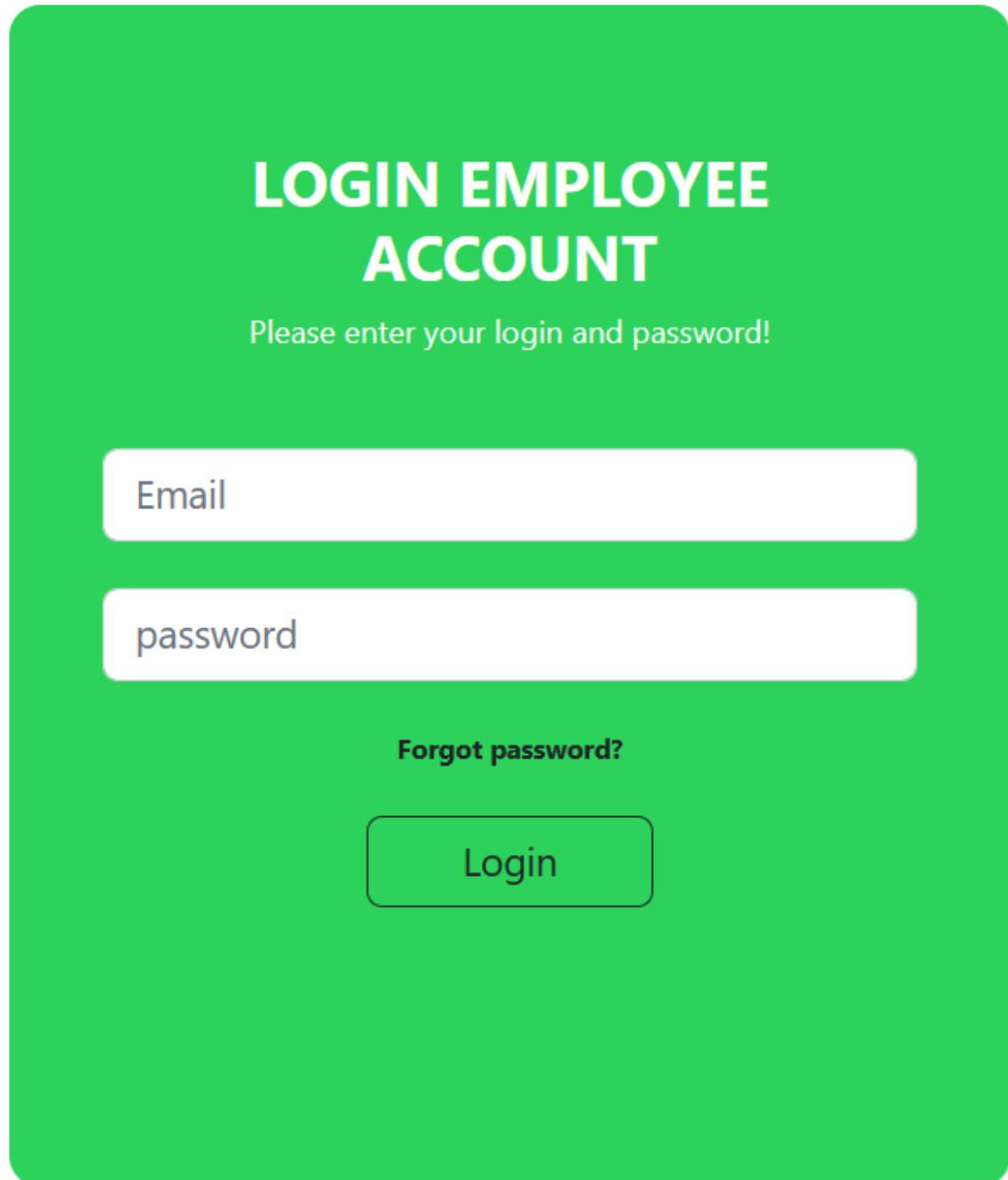
Each section contains a small blue circular icon with a white speech bubble and a downward arrow, likely indicating a dropdown or expandable content area. At the bottom of the page, there is a footer with the PetShop logo, some descriptive text, social media icons for Facebook, Twitter, and Email, and copyright information.

**Figure 41: About us page interface**

Introducing information about the store

II. Staff interface

1. Employee login page interface



**Figure 42: Employee login page interface**

Employees enter their account and password to log in

## 2. Interface of employee order list page



The screenshot shows the employee login interface. At the top right, it says "Hello! Nhân viên 1" with a small profile picture. On the left, there's a sidebar with the logo "OpenShop" and a user profile picture. Below the profile, the text "Name: Nhân viên 1" and "Email: kimlonglam50@gmail.com" is displayed. There are three filter options: "An order list" (selected), "Orders fulfilled", and "Orders were not delivered".

**ORDERS NEED TO DELIVER**

**FILTER ▾** **All Bills**

No	PRODUCTS NAME	IMAGES	QUANTITY	PRICE	CUSTOMER NAME	CUSTC
1	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray		2	36	Lam Kim Long B1910403	Cat
2	Dr. Marty Shine & Luster Dog Supplements		2	28	Lam Kim Long B1910403	Dog

SUM QUANTITY: 4

**Figure 43: Interface of all employee order list page**

All orders that an administrator has given an employee permission to complete. Workers are free to accept or reject directives that the administrator has approved.

### 3. Interface of employee's delivered orders page

No	PRODUCTS NAME	IMAGES	QUANTITY	PRICE	CUSTOMER NAME
1	Fritz Aquatics Pro Aquatics A.C.C.R. Dry Ammonia, Chlorine and Chloramine Remover		3	51	sylas dan`
2	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		4	17	sylas dan`
3	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		1	5	sylas dan`
				SUM QUANTITY:	8

Figure 44: Interface of the employee's successfully delivered orders page

Displays all orders that that employee successfully delivered to customers.

### 4. Interface of the employee's failed delivery order page

No	PRODUCTS NAME	IMAGES	QUANTITY	PRICE	CUSTOMER NAME	CUSTOMER'S ADDRESS
1	A & E Happy Beaks The Voyager Black Soft Sided Bird Carrier		3	60	Nao	CanTho, Vietnam
2	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		1	17	Nao	CanTho, Vietnam
3	Dr. Marty Shine & Luster Dog Supplements		2	28	Nao	CanTho, Vietnam
4	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		3	5	Nao	CanTho, Vietnam

Figure 45: Interface of the employee's failed delivery order page

Displays all orders that the employee failed to deliver.

III. Administrator interface

1. Administrator login page interface

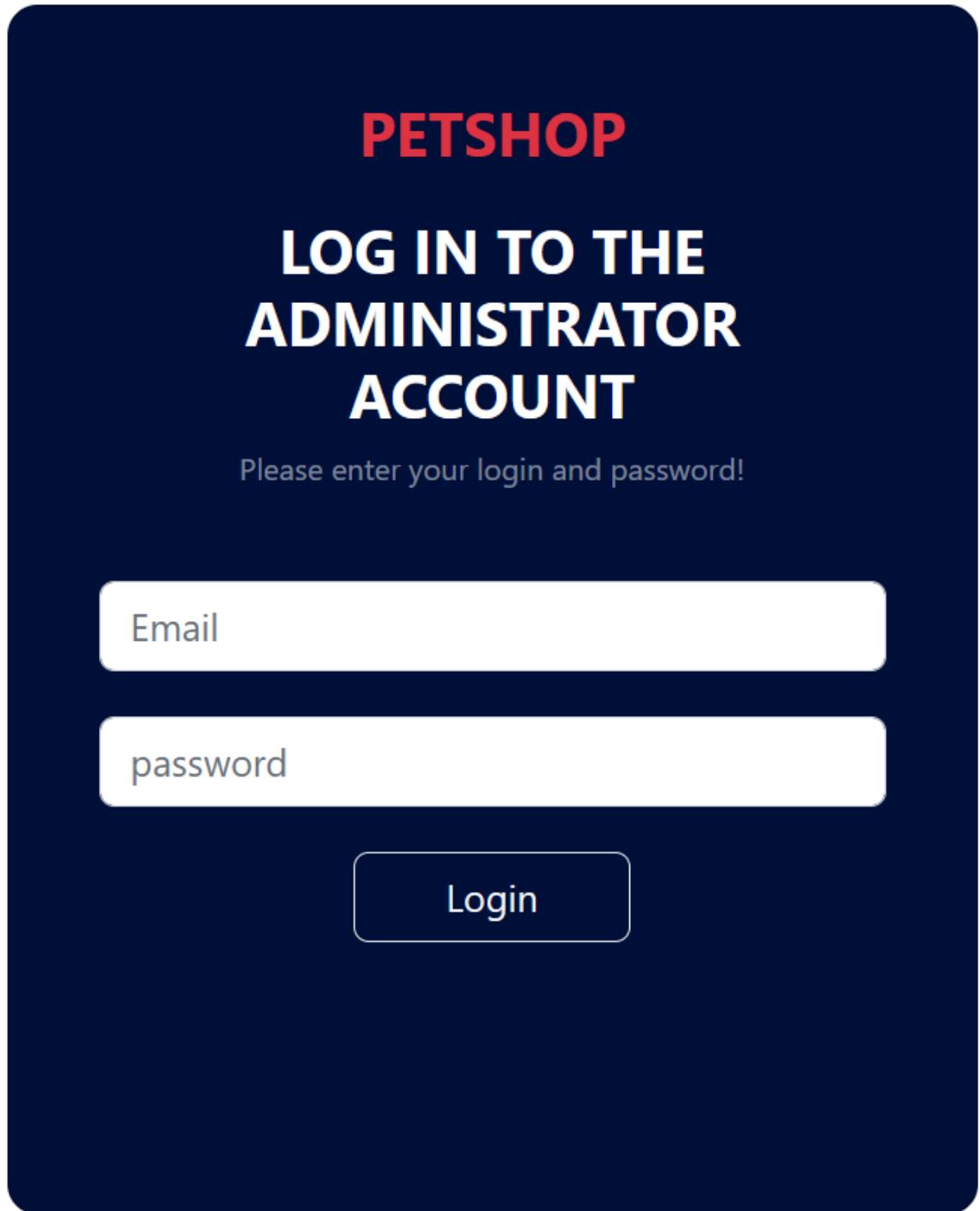
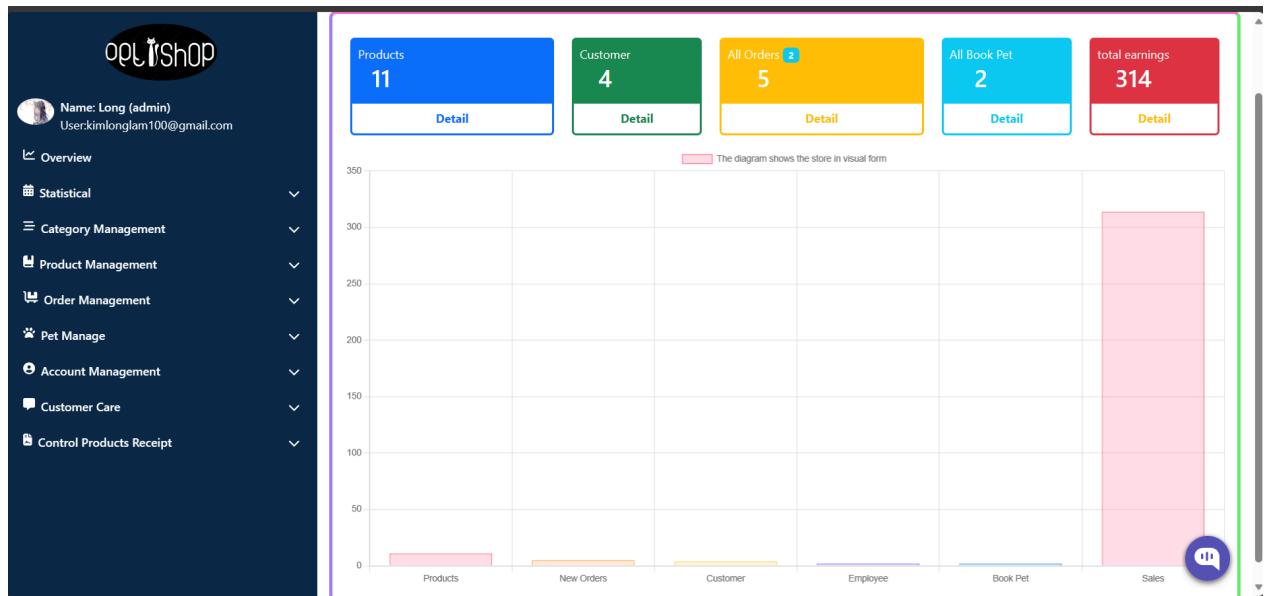


Figure 46: Admin login page interface

Admin enters account and password to log in to the store management system

## 2. Store dashboard interface



**Figure 47: Store dashboard interface**

Present data about the store in a visual manner, such as the total number of items, the number of patrons, the number of staff members, the number of orders, the number of new orders, and the total sales income.

### 3. Interface of profit statistics page for all products over time

The screenshot shows a dashboard titled 'SALES' with a filter bar at the top: 'From Date: 11/06/2023' and 'To date: 11/26/2023'. Below is a table titled 'SOLD PRODUCTS' with the following data:

No	Date	Product Name	Image	Number Sales	Price
1	2023-11-07	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		4	17
1	2023-11-07	Fritz Aquatics Pro Aquatics A.C.C.R. Dry Ammonia, Chlorine and Chloramine Remover		3	51
1	2023-11-07	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		1	5

At the bottom right, there are buttons for 'SUM: 8' and '226'.

Figure 48: Interface of profit statistics page over time

Display information about sold products and profits within the required time period.

(eg: June 11, 2023 – November 26, 2023)

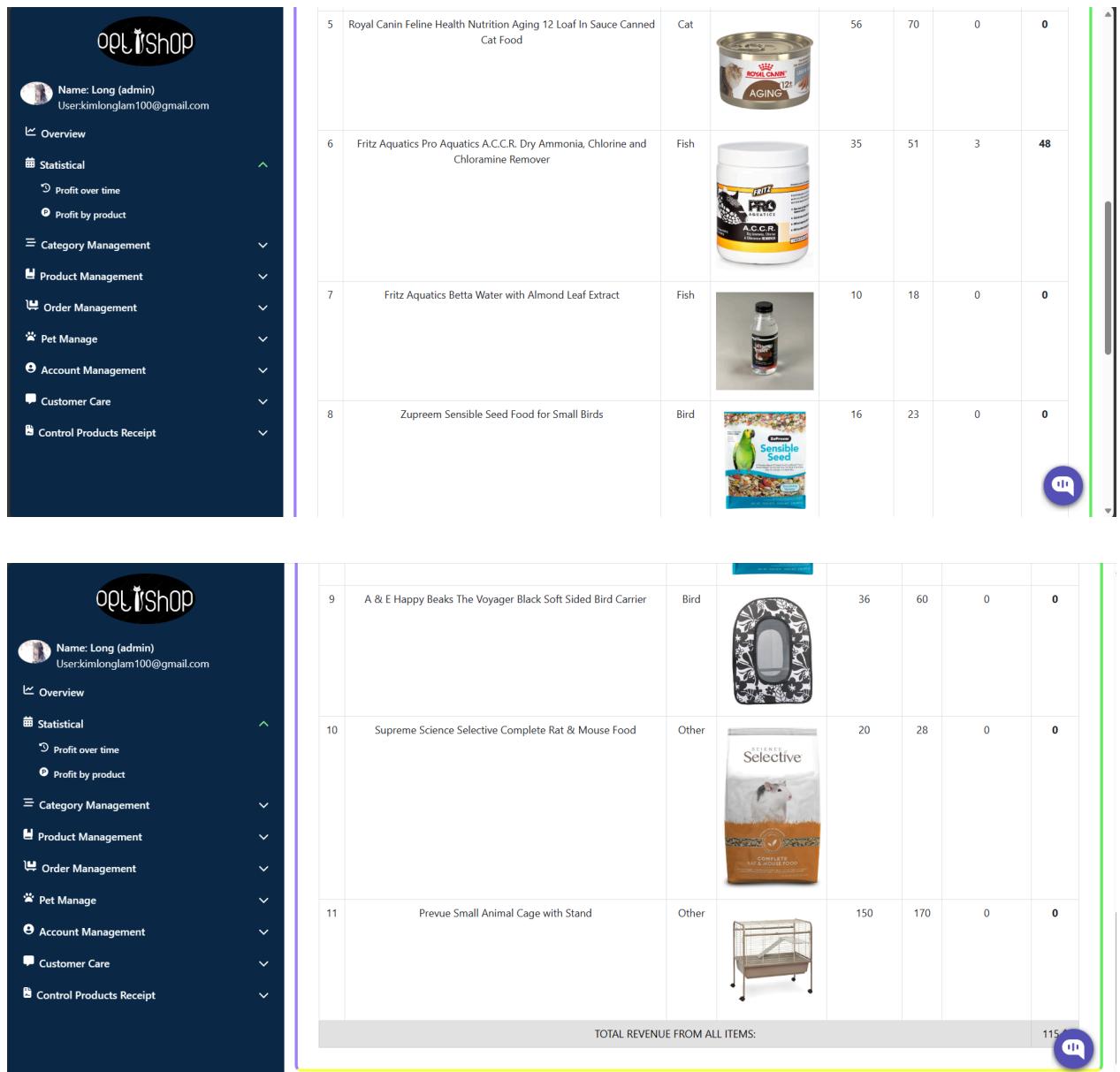
### 4. Interface of profit statistics page for each product

The screenshot shows a dashboard titled 'REVENUE BY PRODUCT' with a search bar: 'Type to find products'.

Below is a table titled 'PRODUCTS NAME' with the following data:

No	PRODUCTS NAME	SPECIES	IMAGE	IMPORT PRICE	PRICE	QUANTITY SALES	PROFIT
1	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats	Dog		10	17	5	35
2	Dr. Marty Shine & Luster Dog Supplements	Dog		18	28	2	20
3	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray	Cat		11	36	0	0
4	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys	Cat		2	5	4	12

# BUILDING A SYSTEM FOR SELLING PET CARE PRODUCTS AND SERVICES



**Figure 49: Total profit of all products**

shows product profits as well as the amount sold, the selling price, and the profit margin for each individual product. Lastly, show the overall profit from all of the store's sales.

## 5. Product catalog management page interface

CATEGORY LIST				
No	CATEGORY NAME	IMAGE	ON SCREEN	MOVE
1	DOG		<input checked="" type="checkbox"/>	<span style="color: green;">Edit</span> <span style="color: red;">Delete</span>
2	CAT		<input checked="" type="checkbox"/>	<span style="color: green;">Edit</span> <span style="color: red;">Delete</span>
3	FISH		<input checked="" type="checkbox"/>	<span style="color: green;">Edit</span> <span style="color: red;">Delete</span>
4	BIRD		<input checked="" type="checkbox"/>	<span style="color: green;">Edit</span> <span style="color: red;">Delete</span>
5	OTHER		<input checked="" type="checkbox"/>	<span style="color: green;">Edit</span> <span style="color: red;">Delete</span> <span style="color: blue;">Comment</span>

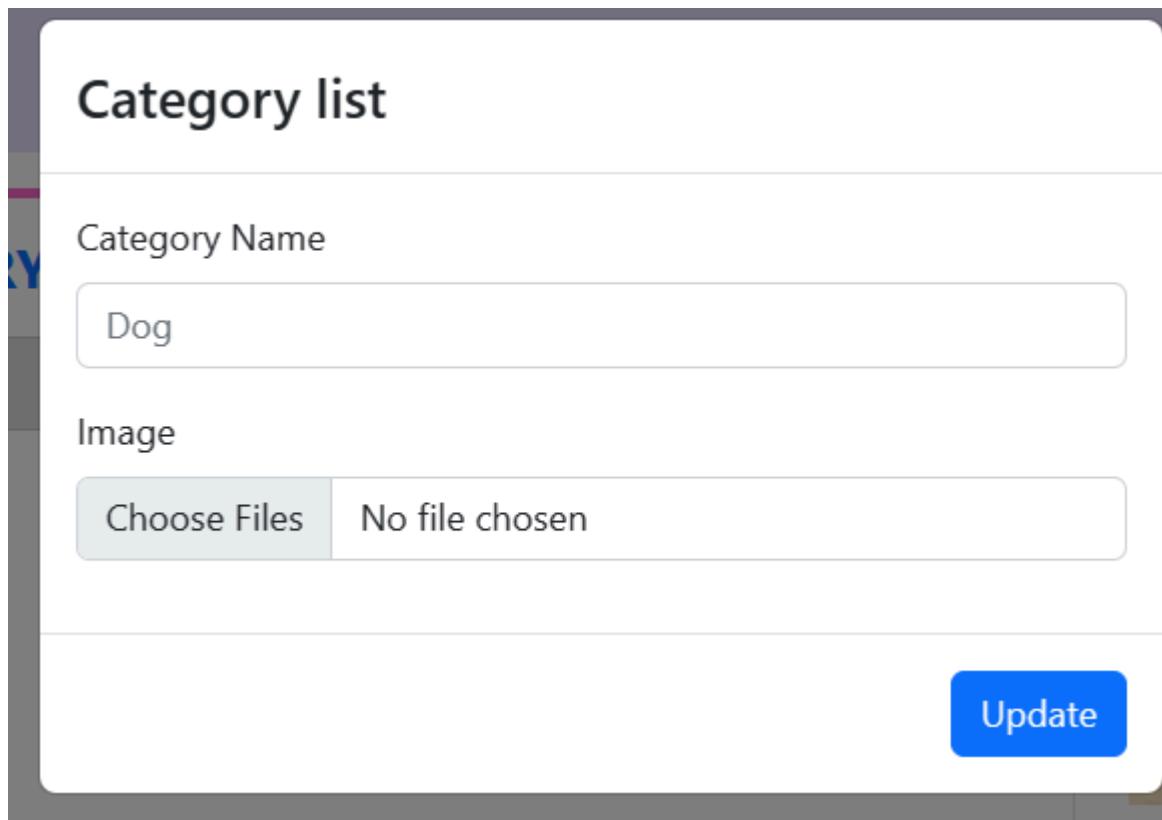
**Figure 50: Product category management page interface**

Shows every category of products that the store sells.

The screenshot shows a user interface for adding a new category. At the top, the title "Category list" is displayed. Below it, there is a field labeled "Category Name" containing the placeholder text "Category Name". Underneath this is a section labeled "Image" which includes a "Choose Files" button and a file input field showing "No file chosen". In the bottom right corner of the form area, there is a green "Add" button.

**Figure 51: Adding a new category**

Admin enters information and presses the add button to add a new category



**Figure 52: Editing category information**

Admin presses the update button to update the category information

## 6. Product management page interface

The screenshot displays the 'PRODUCTS LIST' section of the Pet Shop system. At the top, there is a search bar labeled 'Search products' and a green button labeled 'add new product'. The table below has the following columns: No, NAME PRODUCT, SPECIES, IMAGE, IMPORT PRICE, PRICE, QUANTITY, ON SCREEN, and MOVE.

No	NAME PRODUCT	SPECIES	IMAGE	IMPORT PRICE	PRICE	QUANTITY	ON SCREEN	MOVE		
1	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats	DOG		10	17	73	<input checked="" type="checkbox"/>			
2	Dr. Marty Shine & Luster Dog Supplements	DOG		18	28	72	<input checked="" type="checkbox"/>			
3	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray	CAT		11	36	84	<input checked="" type="checkbox"/>			
4	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys	CAT		2	5	75	<input checked="" type="checkbox"/>			

Figure 53: Product management page interface

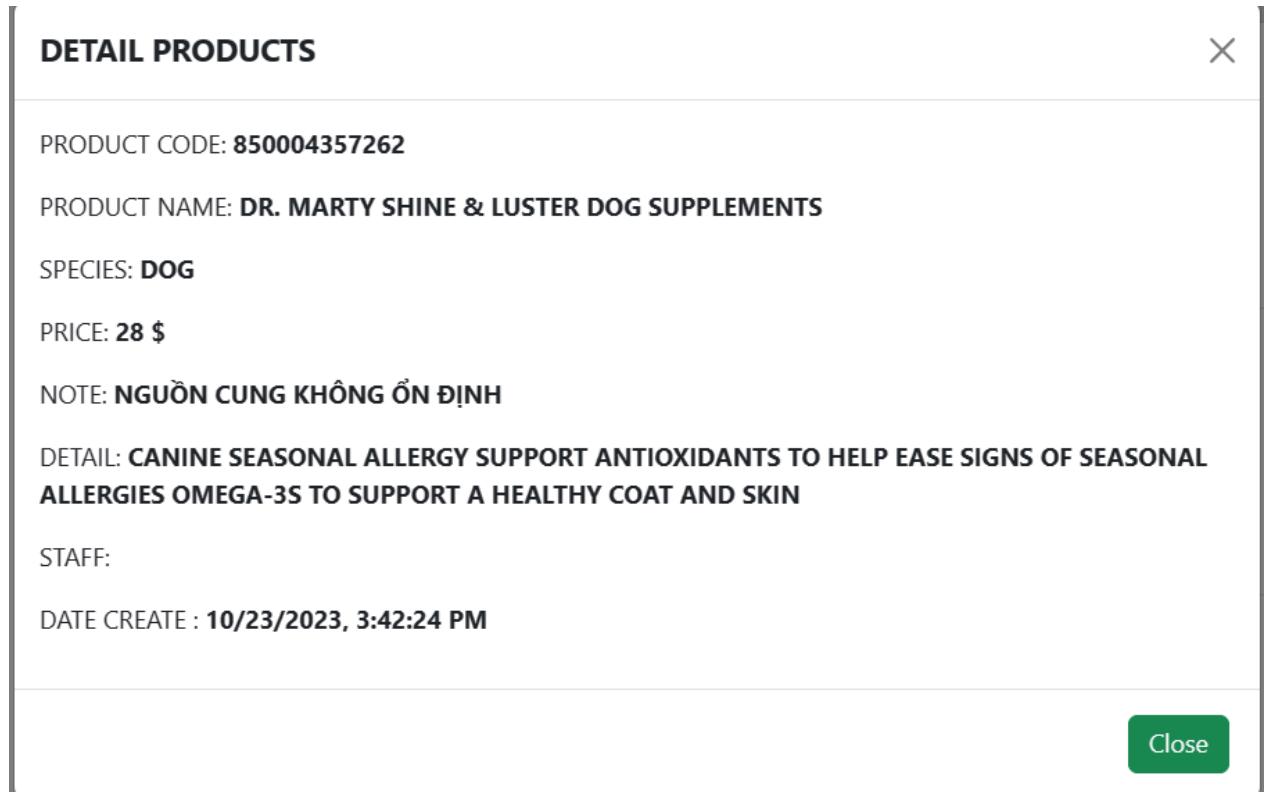
## Add new product X

PRODUCT CODE	PRODUCT NAME
<input type="text" value="product code"/>	<input type="text" value="product name"/>
IMPORT PRICE	QUANTITY
<input type="text" value="import price"/>	<input type="text" value="quantity"/>
SUM	SPECIES
<input type="text" value="0"/>	--SELECT-- <span style="font-size: small;">▼</span>
IMAGE	describe
<input type="button" value="Choose Files"/> <span style="border: 1px solid #ccc; padding: 2px;">No fi...osen</span>	<input type="text" value="add some describe"/>
DETAIL PRODUCT:	
ORIGIN	PRICE
<input type="text" value="origin"/>	<input type="text" value="price"/>
Note	
<input type="text" value="Take some note if need"/>	

ADD

**Figure 54: Product adding page interface**

Admin enters all information and presses the add button to add the product



**Figure 55: Image interface to view product details**

Show product details

## Update product X

PRODUCT CODE	PRODUCT NAME
850004357262	Dr. Marty Shine & Luster Dc
IMPORT PRICE	QUANTITY
18	72
SUM	SPECIES
1296	--SELECT--
IMAGE	describe
Choose Files	No fi...osen
Canine Seasonal Allergy Sup	
DETAIL PRODUCT:	
ORIGIN	PRICE
USA	28
Note	Nguồn cung không ổn định
<span style="background-color: blue; color: white; padding: 5px 10px; border-radius: 5px;">UPDATE</span>	

Figure 56: Product information update interface

Admin enters the information that needs to be updated then presses the update button to update the product information

## 7. Product comment management page interface

No	Customer	User name	Comment	Product name	Image	Status	Delete
1	Nao	test@gmail.com	Very helpful	Dr. Marty Shine & Luster Dog Supplements		<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
2	Nao	test@gmail.com	Good	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
3	Nao	test@gmail.com	Rất tốt	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray		<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
4	Nao	test@gmail.com	ovaggs	Dr. Marty Shine & Luster Dog Supplements		<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>
5	Nao	test@gmail.com	Goods	Zupreem Sensible Seed Food for Small Birds		<input checked="" type="checkbox"/>	<input type="button" value="Delete"/>

Figure 57: Product comment management page interface

## 8. Customer care page interface

No	Customer or Guest Name:	Email	Phone	Address	Content	Image	Status	Feedback
1	Việt	kimlonglam50@gmail.com	0516645331	ARAC	tư vấn giúp tôi sản phẩm này		feedbacked	<input type="button" value="Feedback"/>
2	Việt	kimlonglam50@gmail.com	0516645331	ARAC	kvagfqg		feedbacked	<input type="button" value="Feedback"/>
3	Nao	kimlonglam50@gmail.com	0912306415	Can Tho	Hàng tốt		feedbacked	<input type="button" value="Feedback"/>
4	sylas dan`vl	danchuyennnsu6@gmail.com	0123456789	Can Tho	Hang ko tot		feedbacked	<input type="button" value="Feedback"/>

Figure 58: Customer care page interface

Admin responds to customers' questions, requests for information, and customer reviews about service or product quality.

## 9. Order management page interface

The screenshot shows the 'ORDER MANAGEMENT' page of a web application. On the left is a dark sidebar menu with the logo 'petishop'. The menu items include: Overview, Statistical, Category Management, Product Management, Order Management (selected), Orders, Bills, Pet Manage, Account Management, Customer Care, and Control Products Receipt. The URL 'localhost:3000/admin' is visible at the bottom of the sidebar.

The main content area has a header 'FILTER ▼' with four filter buttons: 'All Orders' (red), 'Wait' (orange), 'On Shipping' (blue), and 'Delete' (grey). Below the filters is a search bar 'Type customer'. The main table has columns: No, Name Product, Image, Quantity, Price, Customer Name, Address, and Custc. The table contains the following data:

No	Name Product	Image	Quantity	Price	Customer Name	Address	Custc
1	Prevue Small Animal Cage with Stand		2	170	Lam Kim Long B1910403	Binh Thuy, Can Tho, Viet Nam	09'
2	Zupreem Sensible Seed Food for Small Birds		2	23	Lam Kim Long B1910403	Binh Thuy, Can Tho, Viet Nam	09'
<b>SUM QUANTITY:</b> 4							
1	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys		3	5	Nao	cantho, vietnam	09'
2	Dr. Marty Shine & Luster Dog Supplements		2	28	Nao	cantho, vietnam	09'
3	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		1	17	Nao	cantho, vietnam	

Figure 59: Order management page interface

Display all newly arrived orders, awaiting confirmation, in progress, and canceled orders for admin to divide work

## 10. PDF invoice export interface

The screenshot displays two views of the PetShop software. On the left is the main application window with a dark blue header and sidebar. The sidebar contains navigation links such as Overview, Statistical, Category Management, Product Management, Order Management (Orders, Bills), Pet Manage, Account Management, Customer Care, and Control Products Receipt. The main area shows a user profile for 'Long (admin)' and the email 'Userkimlonglam100@gmail.com'. On the right is a detailed view of a PDF invoice titled 'INVOICE PETSHOP' for 'Cần Thơ, Date 26 month 11 years 2023'. The invoice includes customer information: 'Customer: sylas dan', 'Customer's Phone: 0123456789', 'Customer's Address: CanTho, Vietnam', 'Email: danchuyennnsu6@gmail.com', and 'Payments: Pay when products arrive'. It also lists three product items in a table:

STT	PRODUCTS NAME	QUANTITY	PRICE	SUM	STAFF	STAFF'S PHONE
1	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats	4	17	68	Nhân viên 1	0912306415
2	Fritz Aquatics Pro Aquatics A.C.C.R. Dry Ammonia, Chlorine and Chloramine Remover	3	51	153	Nhân viên 1	0912306415
3	Ethical Pet SPOT Skinneez Forest Creatures Cat Toys	1	5	5	Nhân viên 1	0912306415

The total sum quantity is 8. At the bottom of the PDF view, there are sections for 'Customer' (Sign, write full name), 'Staff sales:' (Sign, write full name), and 'Verification of the manager' (Sign, write full name). A note at the bottom states: '(A dedication to abiding by legal requirements and sample standards for printing at retail establishments.)' and a blue 'Export file' button.

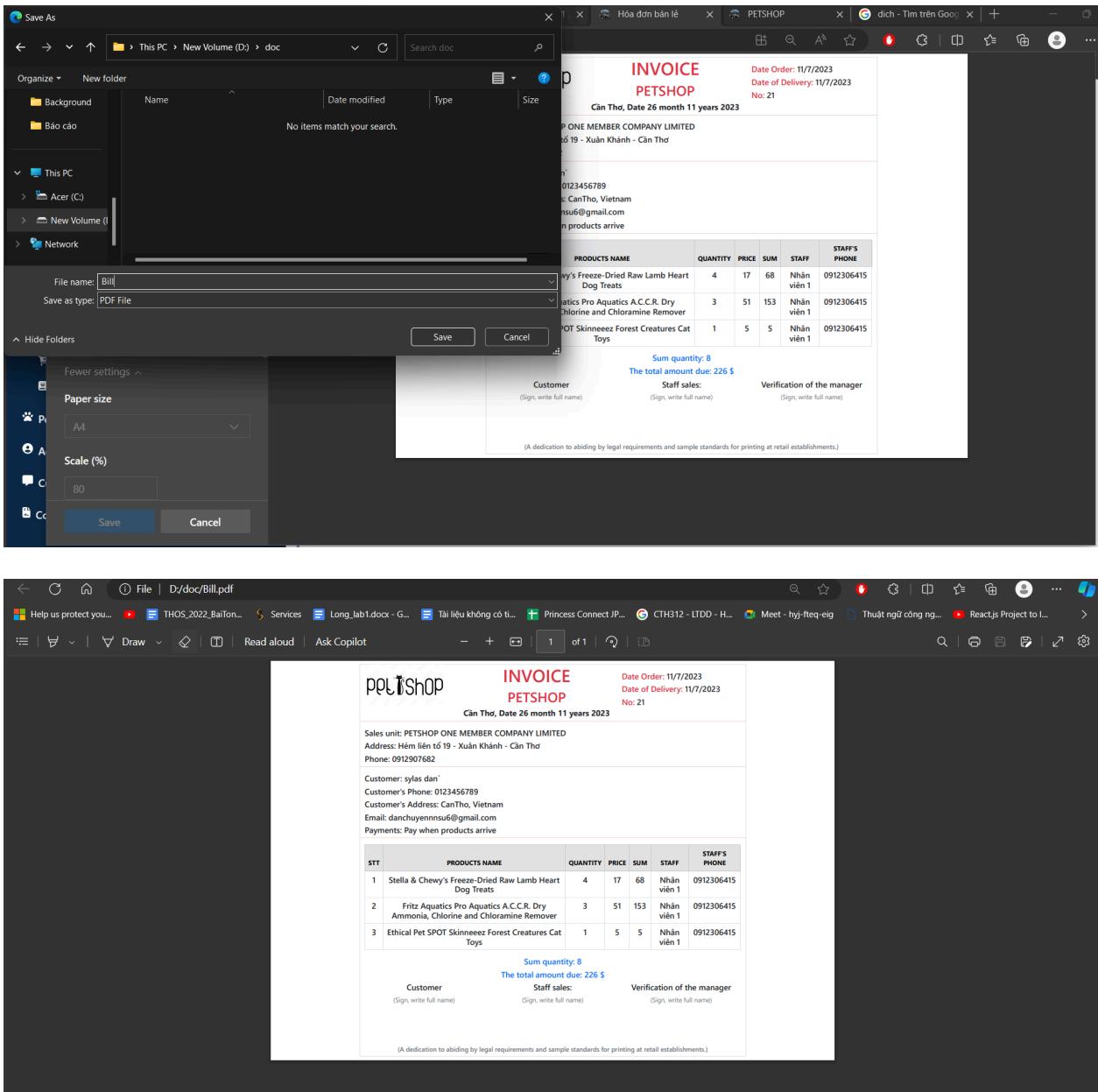
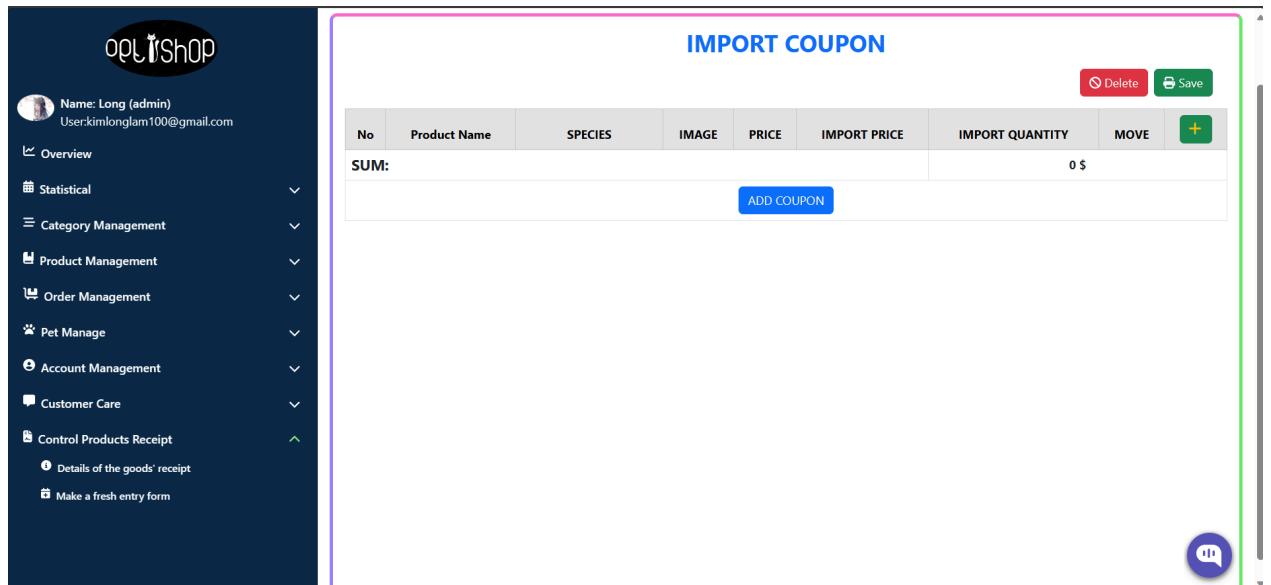


Figure 60: PDF invoice export interface for requesting customers

## 11. Interface of adding warehouse receipt page



**Figure 61: Interface of adding warehouse receipt page**

Admin, click the + button, choose the item you wish to stock, enter the required details, and then click the add ticket button.

## 12. All warehouse receipts are listed on the page interface

NO	PROVIDER	DATE OF ISSUE	SUM IN TOTAL	TASK
1	Long (admin)	11/8/2023, 10:48:56 PM	840	
2	Long (admin)	11/7/2023, 3:03:24 PM	820	
3	Long (admin)	10/28/2023, 8:14:56 AM	4015	
4	Long (admin)	10/26/2023, 5:51:46 PM	5980	
5	Long (admin)	10/23/2023, 6:15:34 PM	4130	

**Figure 62: Interface of goods receipt information page**

Displays a list of all store receipts.

### 13. The goods receipt details page's interface

No	NAME PRODUCT	IMAGE	PRICE	IMPORT PRICE	NUMBER	TOTAL
1	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats		17	20	20	400
2	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray		36	11	40	440
<b>SUM:</b>						<b>840 \$</b>

sp_code	sp_name	ctpn_sl	ctpn_gian	sp_price
85230100	Stella & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats	20	20	17
00050000	Fancy Feast Purely Natural Seabass and Shrimp Entree Cat Food Tray	40	11	36

Figure 63: Interface of goods receipt details page

Show the receipt of the goods in full and export the data to an Excel file.

## 14. Employee account management page interface

No	Name	Gender	Date Born	Email	Image	Phone	Move	
1	Long (admin)	nam	09/09/2000	TK: kimlonglam100@gmail.com		0912907682		
2	Nhân viên 1	nữ	09/09/2003	TK: kimlonglam50@gmail.com		0912306415		

**Figure 64: Employee account management page interface**

Displays a list of employees available in the store

## Account

Name:

Email:

Password

Phone

Address

Gender

Position

Date Born

The screenshot shows a user interface for editing account information. It features a light gray background with dark gray vertical borders on the left and right sides. At the top, the word "Position" is displayed above a dropdown menu containing the placeholder text "-- Choose Position --". Below this is a section labeled "Date Born" with a text input field showing the date "09/09/2000". Underneath is an "Avatar" section with a file upload button labeled "Choose Files" and a message "No file chosen". In the bottom right corner of the form area, there is a blue rectangular button with the word "Update" in white.

**Figure 65: Interface for editing account information**

Admin has the right to update and edit account information of employees and customers.

## Account

Name:

Email:

Password

Phone

Address

Gender

Position

Date Born

**Position**

-- Choose Position --
 ▼

**Date Born**

dd/mm/yyyy

**Avatar**

Choose Files
No file chosen

Add

**Figure 66: New account addition interface.**

Admin can create a new employee or customer account

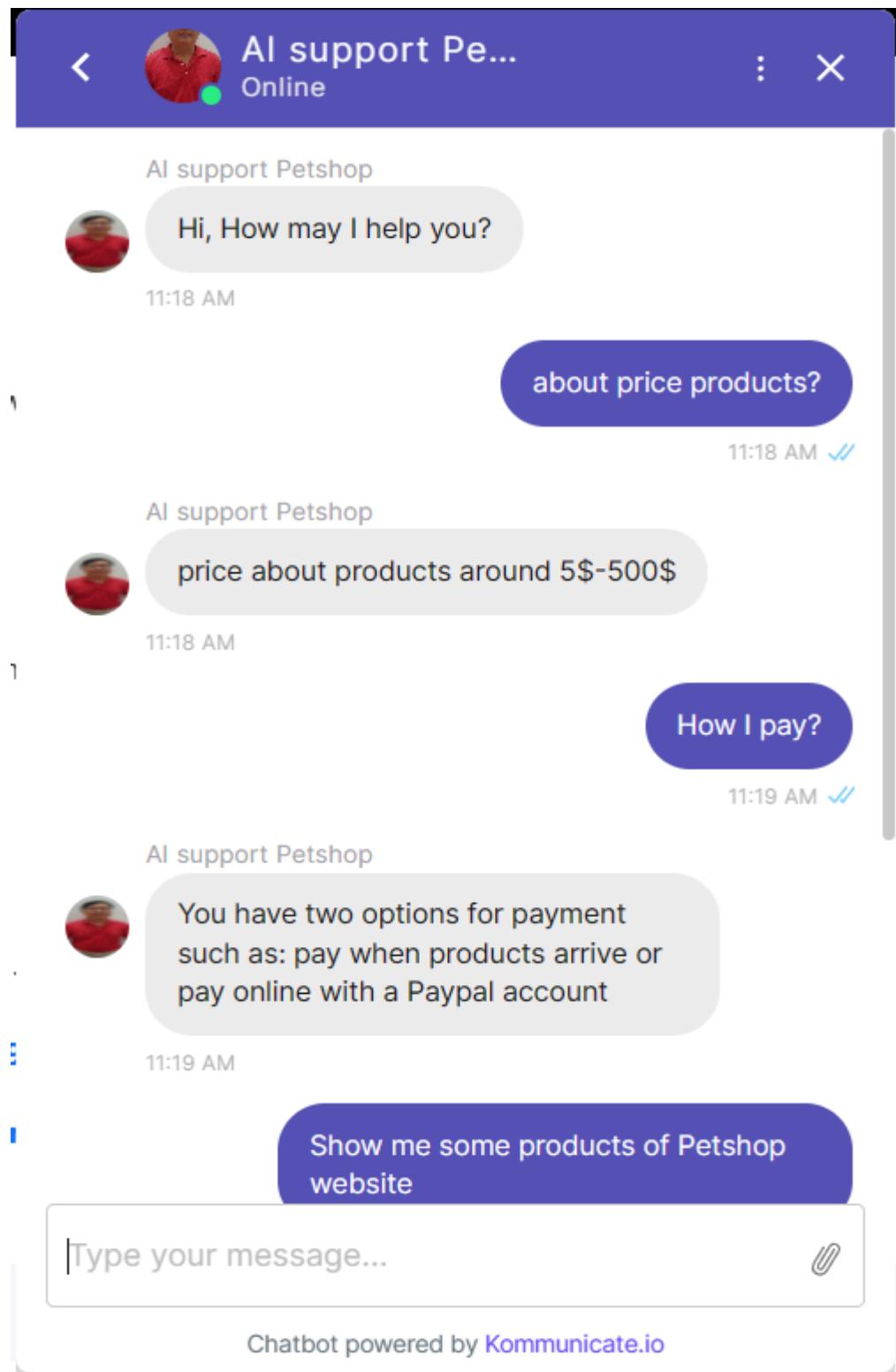
### 15. Customer account management page interface

CUSTOMER ACCOUNT LIST							
Type name customer						Add new account	
No	Name	Email:	Image	Phone	Address	Move	
1	Nao	Email: test@gmail.com		0912306415	Can Tho		
2	sylas dan'	Email: danchuyennnsu6@gmail.com		0123456789	Can Tho		
3	Lam Kim Long B1910403	Email: longb1910403@student.ctu.edu.vn		0912306415			
4	Jessen	Email: kimlonglam50@gmail.com		0912306415	CanTho, Vietnam		

**Figure 67: List of store customer accounts**

Show all customers of the store.

## 16. Interface of a chatbot



AI support Pe...  
Online

How I pay?  
11:19 AM ✓

AI support Petshop  
You have two options for payment such as: pay when products arrive or pay online with a Paypal account  
11:19 AM

Show me some products of Petshop website  
11:19 AM ✓

AI support Petshop  
Sure, all products of Petshop are here:  
Illa & Chewy's Freeze-Dried Raw Lamb Heart Dog Treats, Dr. Marty Shine & Luster Dog Supplements, Fritz Aquatics Pro Aquatics A.C.C.R. Dry Ammonia, Chlorine and Chloramine Remover,...  
11:19 AM

Type your message... 

Chatbot powered by [Kommunicate.io](#)

**Figure 68: Chatbot**

Chatbot automatically responds and guides customers

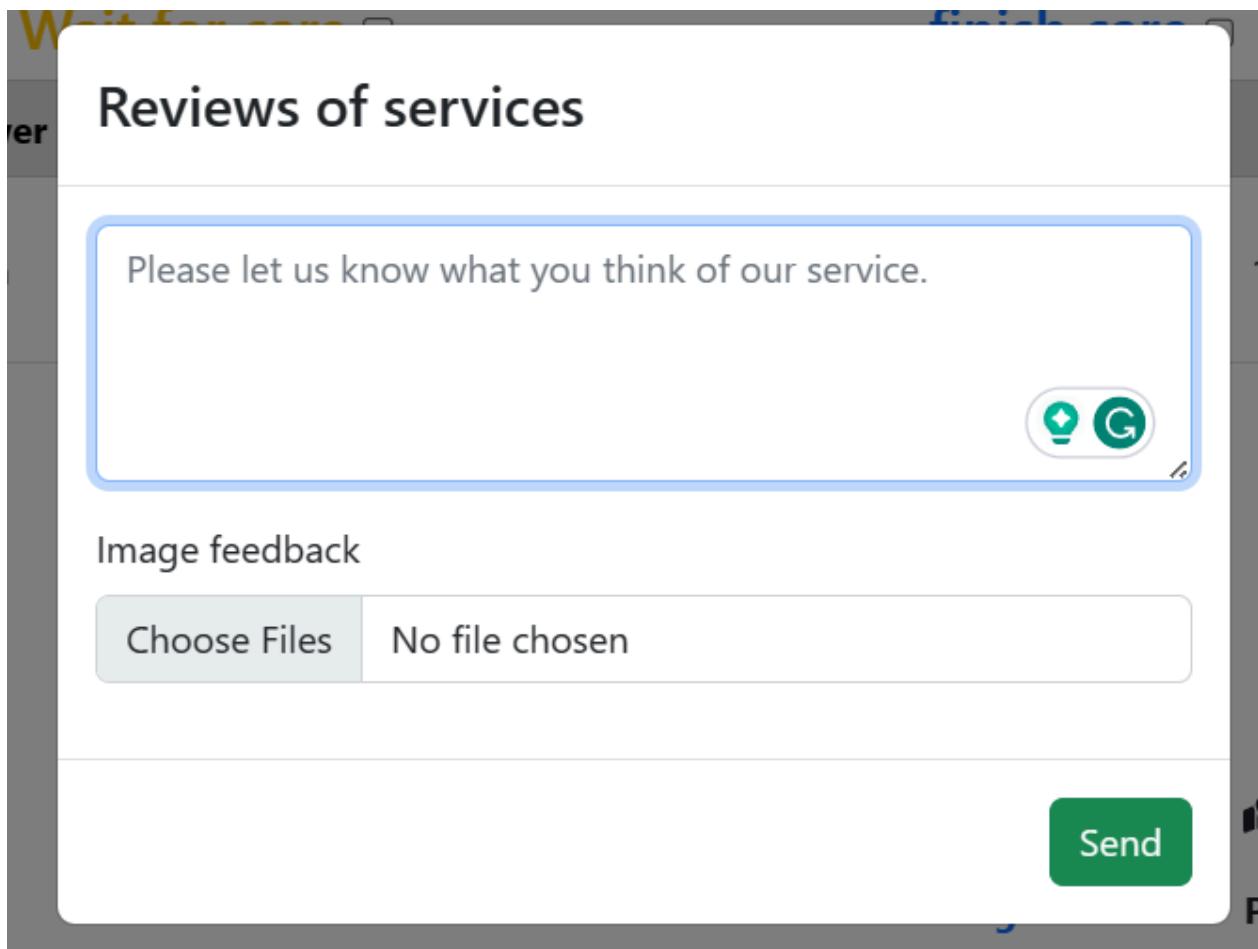
## 17. Pet care interface

The screenshot displays the 'PET MANAGEMENT' section of a pet care system. On the left, a dark sidebar menu titled 'petShop' lists various administrative functions: Overview, Statistical, Category Management, Product Management, Order Management, Pet Manage (selected), View Pet, Account Management, Customer Care, and Control Products Receipt. The main area is titled 'PET MANAGEMENT' and features a 'FILTER' section with checkboxes for 'All pets' (selected), 'Wait' (unchecked), 'Finish' (unchecked), and 'Deleted' (unchecked). Below the filter is a search bar labeled 'Nhập tên khách hàng'. The central part of the screen shows a table with columns: t name, Image, Pet des, Pet's owner, Pet loai, Date book, Pet service fee, Pet service date, Status, and Move. Two rows of data are listed:

t name	Image	Pet des	Pet's owner	Pet loai	Date book	Pet service fee	Pet service date	Status	Move
Ngáo		medical	Nao	Dog	11/17/2023, 4:21:07 PM	100 \$	till waiting	Wait	<span style="border: 1px solid green; padding: 2px;">✓</span> <span style="border: 1px solid red; padding: 2px;">✖</span>
Lu		vaccinate	Nao	Cat	11/16/2023, 10:24:32 AM	70 \$	till waiting	Wait	<span style="border: 1px solid green; padding: 2px;">✓</span> <span style="border: 1px solid red; padding: 2px;">✖</span>

At the bottom, there are navigation buttons for 'Previous page', a page number '1' (highlighted in blue), and 'Next page'. A blue circular icon with a white speech bubble is located in the bottom right corner of the main area.

**Figure 69: Schedule of appointments for pet care**



**Figure 70: User comments following service completion**

## CHAPTER 4: TESTING AND EVALUATION

### I. INTRODUCTION

#### 1. Goals

To locate potential system faults. Verify whether the system satisfies the predetermined requirements. Before delivering the product to the customer, make sure the system is complete. Functional testing, database testing, and usability testing are all part of the testing process.

- Possibility:

- + Is the purpose of usability testing to determine how user-friendly an application is? Whether or not users find the application easy to use.

- + There are no typographical or grammatical errors in the content.

- + Notification of confirmation for update operations.

- Function:

- + The purpose of functional testing is to confirm if the application satisfies the functional and business requirements specified in the specification.

- + Verify the email function (enter the incorrect email if you registered using the same email address).

- + Verify if you can constrain data, force data entry, empty data, and display a message when incorrect data is entered.

- + When a field in an application reaches its limit, check the display.

- Database

- + Database testing involves determining whether the information in the application and the database match. if the application-manipulated data is accurately added to the database.

- + The information in the database and the information shown to the user are identical.

- + Entering invalid data will allow you to verify the data's validity.

## 2. Test range

Test case specifications that match some of the functions this document describes.

## II. TEST MANAGEMENT

### 1. Testing is done and work activities are scheduled.

The system testing process will be conducted according to the following steps:

**Step 1:** Make a test plan

**Step 2:** Report test results

### 2. Environment

#### – Hardware:

- + Processor: Intel core I5 8250U
- + RAM: 8GB + Hard drive: SSD 128GB
- + Network configuration: Internet connection

#### – Software:

- + Operating system: Windows 10
- + Browser: Google Chrome, Microsoft Edge
- + Database management system: MySQL

### 3 Resources and resource allocation

- Testing resources: Laptop 3.

## III. TEST PLAN DETAILS

### 1. Functions will be tested

- Function testing script

No	Describe	Date
1	Login function	11/27/2023
2	Order function	11/27/2023

3	Product search and filter function	11/27/2023
4	Order management function	11/27/2023
5	Product management function	11/27/2023
6	Warehouse management function	11/27/2023
7	Online chat function	11/27/2023

**Table 15: Functional testing scenarios**

– Usability testing scenario

No	Describe	Date
1	Check the contents	11/27/2023
2	Links between activities	11/27/2023
3	Notifications when updates are performed	11/27/2023

**Table 16: usability testing scenarios**

- DB testing scenario

No	Describe	Date
1	Data displayed	11/27/2023
2	Data size	11/27/2023
3	Validity of data	11/27/2023

**Table 17: DB testing scenario**

## 2. Functions will not be tested

Simple functions with straightforward processing, functions that are similar to functions that have already been tested, and incomplete functions are examples of functions that shouldn't be tested.

## 3. Criteria for test success or failure

When functional performance meets expectations and the requirements specification is followed, testing is considered successful. Results that don't match expectations, show errors, or don't follow the requirements specification are considered test failure criteria.

## 4. Test cases

### 1. Login function

No	Test cases	Testing steps	Expected results	Actual results	Success/ Failure
1	The customer logs in with valid information	Step 1: Select login. Step 2: Log in with the email test@gmail.com and password 123456	Logged in successfully	As expected	Success
2	Administrator logs in with valid credentials	Step 1: Go to the admin login page. Step 2: Log in with email kimlonglam100@gmail.com and password 123456	Logged in successfully	As expected	Success

3	The employee logs in with valid information	Step 1: Go to the employee login page. Step 2: Log in with email kimlonglam50@gmail.com and password 123456	Logged in successfully	As expected	Success
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**Table 18: Description of testing the login function****2. Ordering function**

No	Test case	Testing steps	Expected results	Actual results	Success/ Failure
1	Order with complete and valid information	Step 1: Select login. and add products to the cart Step 2: Enter full information and select a payment method Step 3: send a purchase request	Order Success	As expected	Success
2	Order with incomplete valid information	Step 1: Select login. and add products to the cart Step 2: Enter full information and select a payment method Step 3: send a purchase request	Error	As expected	Not Success
3	Order paid with an invalid card	Step 1: Select login. and add products to the cart Step 2: Select online payment. Step 3: Enter a card number that does not exist	Error	As expected	Success
4	To enter a product purchase quantity that is greater than the	Step 1: Select login. and add products to the cart Step 2: Update the purchase quantity, which is substantial.	Error	As expected	Success

	amount in stock, place an order.			
--	-------------------------------------	--	--	--

**Table 19: Description of testing the ordering function**

### 3. Product search and filtering function

No	Test case	Testing steps	Expected results	Actual results	Success/Failure
1	Enter a product name that is not in the system	Step 1: Type in a product name that isn't already in the database.	No products found	No products found	Success
2	Enter a product name in the system	Step 1: Type in a product name that is already in the database.	Found product	Found product	Success

**Table 20: Description of testing the search function**

### 4. Order management function

No	Test case	Testing steps	Expected results	Actual results	Success/Failure
1	Browse order status from "Waiting for confirmation" to "Delivering"	Step 1: Log in to the admin page. Click to select order management Step 2: Find the order whose status needs to be updated and select update. Step 3: Success update notification	Update success	As expected	Success
2	If the order status is "Delivery failed"	Step 1: Log in to the admin page. Click to select order management Step 2: Find the order whose status needs to be updated and select update. Step 3: Success update notification	Update success	As expected	Success

3	Order cancellation when not in the "Wait" state	<p>Step 1: Log in to the customer page. Click select order</p> <p>Step 2: Find the order that needs to update its status and choose to cancel the order.</p> <p>Step 3: Success update notification</p>	Update success	As expected	Success
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**Table 21: Description of testing the order management function****5. Chatbot function**

No	Test case	Testing steps	Expected results	Actual results	Success/Failure
1	The customer does not have an internet connection	<p>Step 1: Go to the website home page</p> <p>Step 2: Choose "chatbot"</p>	Send message Success	As expected	Success
2	Chat information is invalid	<p>Step 1: Go to the website home page</p> <p>Step 2: Choose "chatbot"</p>	Send a Success message and reply "I don't understand what you said"	No, As expected	Failure

**Table 22: An explanation of the Chatbot function test**

## Section III: Conclusion and future work

### I. Conclude

"Building a system for selling pet care products and services" was successfully designed and built, meeting the majority of the requirements and features. Customers without accounts, members (customers with registered accounts), employees, and administrators make up the four main user groups on the website.

- Clients who don't have an account: Look up products by price, category, or name... View product details, but your ability to rate and comment on it is restricted. In order to access the system, create an account. System consulting is supported by the Chatbox system.

- Members are clients who have set up an account: Additional advantages for members include the ability to schedule a pet care appointment, rate products, make payments, leave comments on news articles, and use the system's chat feature.

- Admin: Control orders, goods, articles, manufacturers, suppliers, warehouse receipts, shipping costs, and categories.

- The worker observes the delivery of the order, verifies the contact, and modifies the order's status.

### II. Limitations

The system could not help but have certain limitations because of the project's time constraints and the learning curve associated with writing the program while studying web design and programming languages. There are other insignificant functions absent. The database isn't rich and diverse yet. The user interface is still far too hazy..

### III. Future development

The system will have a more elegant design and function flawlessly on PC and mobile platforms in the future. Create fresh shopping features to satisfy the demands of your clientele. Upgrade the system to enable quick access. Increase the number of chatbox systems you create, as well as their security and overall performance.

## REFERENCES

- 1) Trần Cao Đệ, Đỗ Thanh Nghị (2012). Giáo trình kiểm thử phần mềm, NXB Đại học Cần Thơ.
- 2) Đỗ Thanh Nghị (2015), Giáo trình lập trình web, NXB Đại học Cần Thơ.
- 3) Refer to ReactJS: <https://legacy.reactjs.org/docs/getting-started.html>
- 4) Refer to Bootstrap: <https://getbootstrap.com/>
- 5) Refer to ReactBootstrap:  
<https://react-bootstrap.github.io/getting-started/introduction>
- 6) Refer to DB MySQL: [MySQL Introduction \(w3schools.com\)](#)
- 7) Refer to NodeJS: <https://nodejs.org/en>
- 8) Refer to NPM: <https://www.npmjs.com/>
- 9) Refer to axios: [Bắt đầu | Tài liệu Axios \(axios-http.com\)](#)
- 10) Refer to jsonwebtoken: [jsonwebtoken - npm \(npmjs.com\)](#)
- 11) Refer to communicate-chatbot: [AI Chatbot for Customer Service Automation | Kommunicate](#)
- 12) Refer to W3Schools: <https://www.w3schools.com/>
- 13) Refer to StackOverflow: <https://stackoverflow.com/>
- 14) Refer to PayPal: [https://developer.paypal.com/ docs/api/overview/](https://developer.paypal.com/docs/api/overview/)