



## CIS423-Web-based System

### Final Report

## Pets Heaven E-Commerce Website

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[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

CIS– Section 4 – Group 3

Submitted To Dr.Ghadah Alrugaib

Submission date 04/05/2025



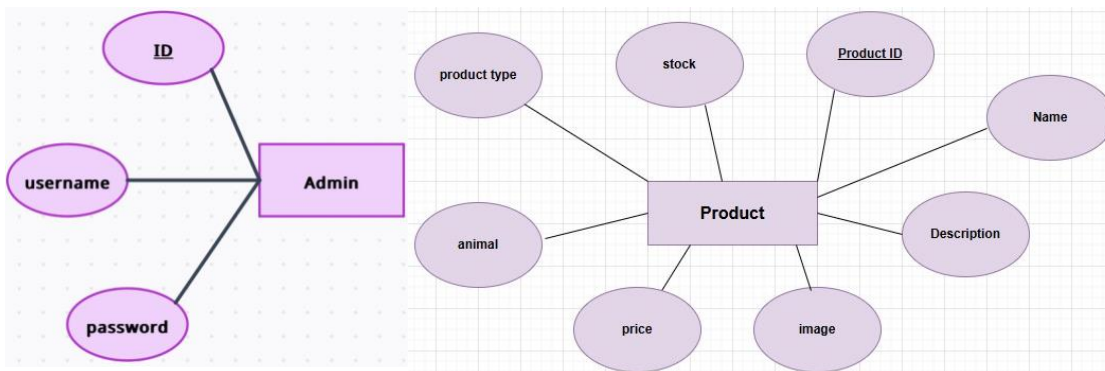
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# 1. Database Design

## 1.1.ER Diagram



## 1.2.Tables

### 1.2.1. Admin Table

“ID” field is the primary key, and “username” is set to be unique.

id	username	password
1	Shahad	password123
2	Danah	securepass456
3	Darah	mypassword789
4	Raghad	123pass
5	Albandari	my4567password
6	Donia	987654321
7	Reef	password987

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)			No	None		
2	username	varchar(50)	utf8mb4_general_ci		No	None		
3	password	varchar(255)	utf8mb4_general_ci		No	None		

### 1.2.2. Product Table

“ProductID” field is the primary key, and “Name” is set to be unique.

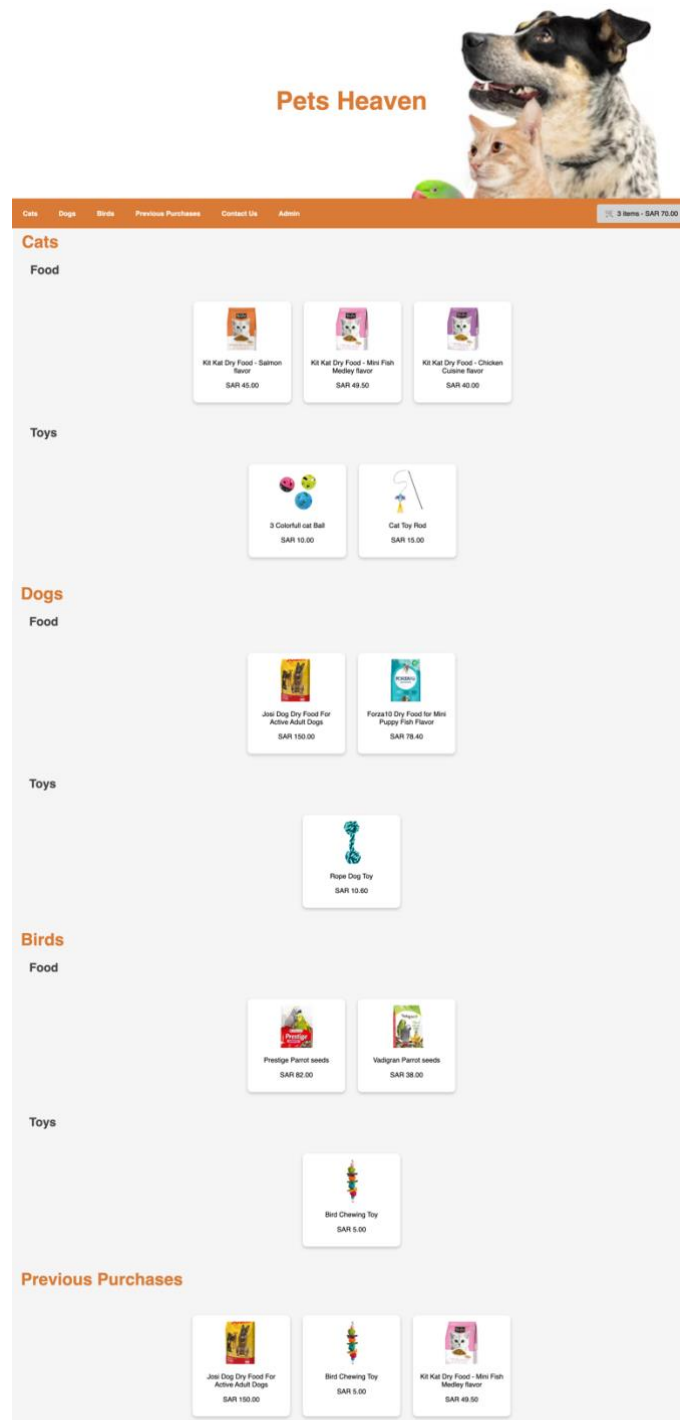
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ProductID	int(11)			No	None		AUTO_INCREMENT
2	Name	varchar(255)	utf8mb4_general_ci		No	None		
3	AnimalType	varchar(100)	utf8mb4_general_ci		No	None		
4	ProductType	varchar(100)	utf8mb4_general_ci		No	None		
5	Price	decimal(10,2)			No	None		
6	Stock	int(11)			No	None		
7	Description	varchar(255)	utf8mb4_general_ci		No	None		
8	Image	varchar(255)	utf8mb4_general_ci		No	None		

ProductID	Name	AnimalType	ProductType	Price	Stock	Description	Image
1	Kit Kat Dry Food - Salmon Flavor	Cat	Food	45.00	10	Nutritious salmon-flavored dry food for cats	cat-food1.png
2	Kit Kat Dry Food - Mini Fish Medley Flavor	Cat	Food	49.50	10	Mini fish medley-flavored dry food for cats	cat-food4.png
3	Kit Kat Dry Food - Chicken Cuisine Flavor	Cat	Food	40.00	10	Chicken cuisine-flavored dry food for cats	cat-food5.png
4	3 Colorful Cat Ball	Cat	Toy	10.00	15	Set of 3 colorful balls for cats to play with	cat-toy1.png
5	Cat Toy Rod	Cat	Toy	15.00	15	Interactive toy rod for cats	cat-toy3.png
6	Josi Dog Dry Food For Active Adult Dogs	Dog	Food	150.00	10	High-energy dry food for active dogs	dog-food1.png
7	Forza10 Dry Food for Mini Puppy Fish Flavor	Dog	Food	78.40	10	Special mini puppy dry food with fish flavor	dog-food2.png
8	Rope Toy	Dog	Toy	10.60	15	Durable rope toy for dogs	dog-toy1.png
9	Prestige Parrot Seeds	Bird	Food	82.00	10	High-quality parrot seed mix	bird-food1.png
10	Vadigran Parrot Seeds	Bird	Food	38.00	10	Premium Vadigran seed mix for parrots	bird-food2.png
11	Bird Chewing Toy	Bird	Toy	5.00	15	Chewing toy for birds	bird-toy1.png



## 2. Web Application Interface

### 2.1.Home Page






## 2.2.Product Details Page

### Pets Heaven



[Home](#) [Contact Us](#) [Admin](#)

 3 items - SAR 70.00



#### 3 Colorfull Cat Ball

Cat Toy

**SAR 10.00**

Quantity:

**Product Description:**

[For more details click here](#)

[Add to Cart](#)

[Checkout](#)



## 2.3.Cart Page

### Pets Heaven



← Leave Cart

Your cart is empty.

Total: SAR 0.00

Update Cart

Buy

Delete All Items



## 2.4.Thank You Page

### Pets Heaven



#### Thank You for Your Purchase!

Your order has been successfully placed. We appreciate your purchase and hope to see you again soon!

[Return to Home](#)



## 2.5.Contact Us Page

### Pets Heaven



Home Admin

3 items - SAR 70.00

#### Contact Us

Phone: 0138888888

Email: info@petsheaven.com

Location: Pets Heaven Store, Riyadh, Saudi Arabia



Open in Google Maps





## 2.6.Admin Authentication Page

### Pets Heaven



Welcome to Pets Heaven

Log In

Clear

Log In

Go to Home Page



## 2.7.Admin Home Page

### Pets Heaven



Add Product

Modify or Delete

Log Out



## 2.8.Add Product Page

### Pets Heaven



[← Back to Home Page](#)

### Add a Product

Name:

Animal Type:

Product Type:

Price:

Stock Available:

Description:

Image:

Clear

Submit



## 2.9.Modify Product Page

### Pets Heaven



[← Back to Home Page](#)

Search products...

Search

#### Modify or Delete Product

Name:

Enter product name

Animal Type:

Select Animal Type

Product Type:

Select Product Type

Price:

Enter price

Stock Available:

Enter stock quantity

Description:

Enter product description

Image:

Choose File no file selected

Modify

Clear

Delete Product



### 3. Fulfilled Requirements

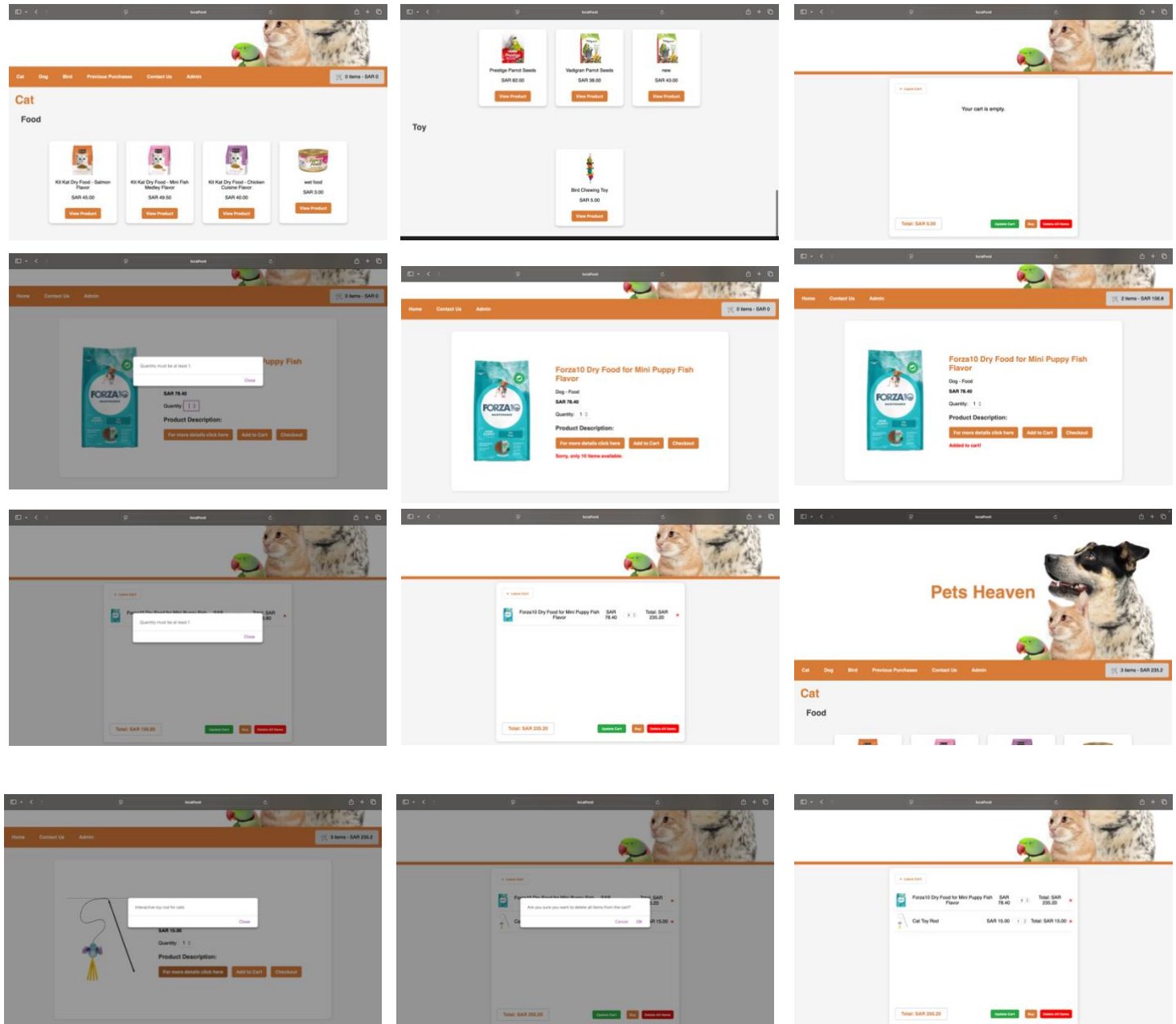
Task	Description	Status	Responsible Member
Task 1	Database Design	Done	All member
Task 2	Web Design	Done	All member
Task 3	Display Products	Done	Danah Alharbi
Task 4	Display Product Details	Done	Albandari Aldossary
Task 5	Add to Cart	Done	Albandari Aldossary Darah Al-Qahtani
Task 6	Checkout	Done	Darah Al-Qahtani
Task 7	Buy	Done	Darah Al-Qahtani
Task 8	Authenticate Managers	Done	Reef Alwarthan
Task 9	Add New Product	Done	Donia Alfarhan
Task 10	Search/Modify/Delete Product	Done	Raghad Lisloum
Task 11	Display Address & Map	Done	Shahad Almalki
Task 12	Past Purchases	Done	Danah Alharbi
Task 13	Form Validation	Done	All members
Task 14	Help Window	Done	Albandari Aldossary
Task 15	Accessibility	Done	All members
Task 16	Efficiency	Done	All members
Task 17	Project Implication	Done	All members

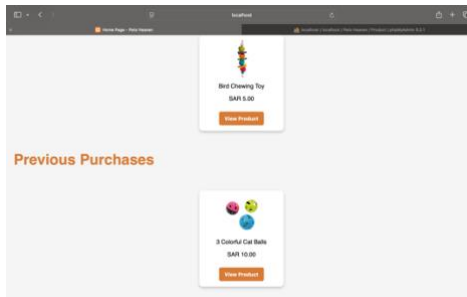
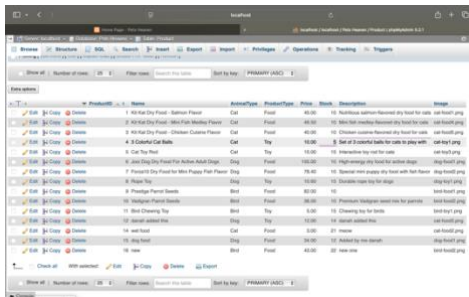
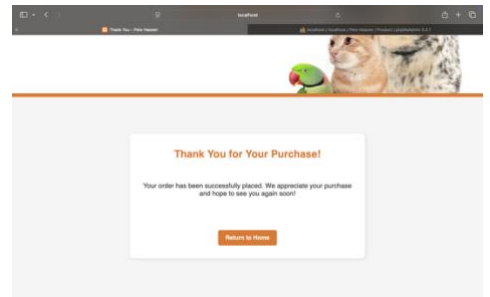
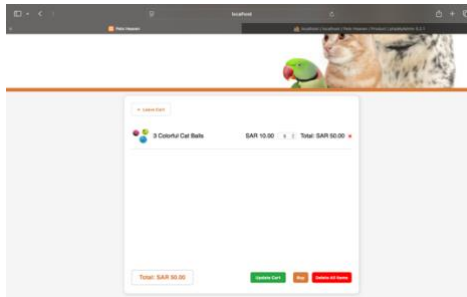
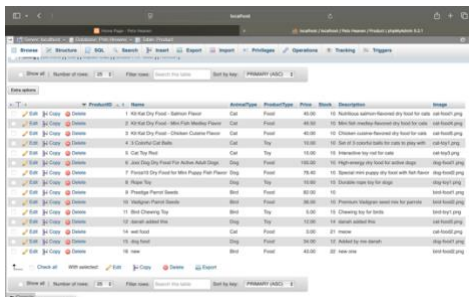
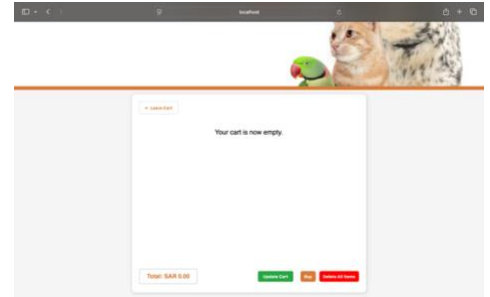
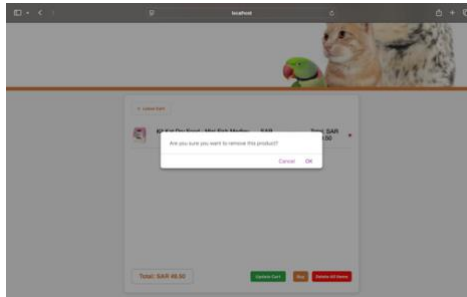
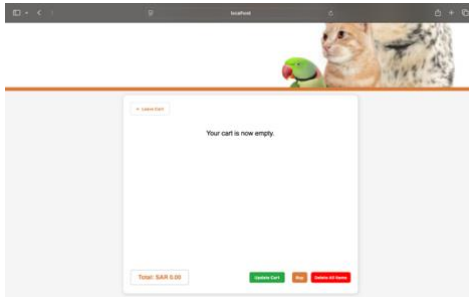


### 3. Test Cases

#### Buying a Product process

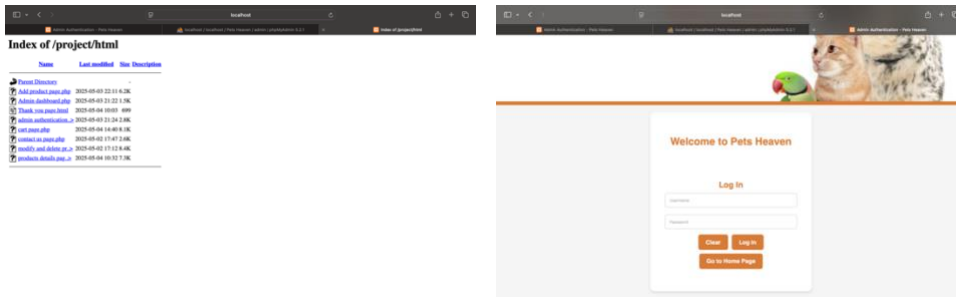
No product in the cart and no past purchases aren't displayed.



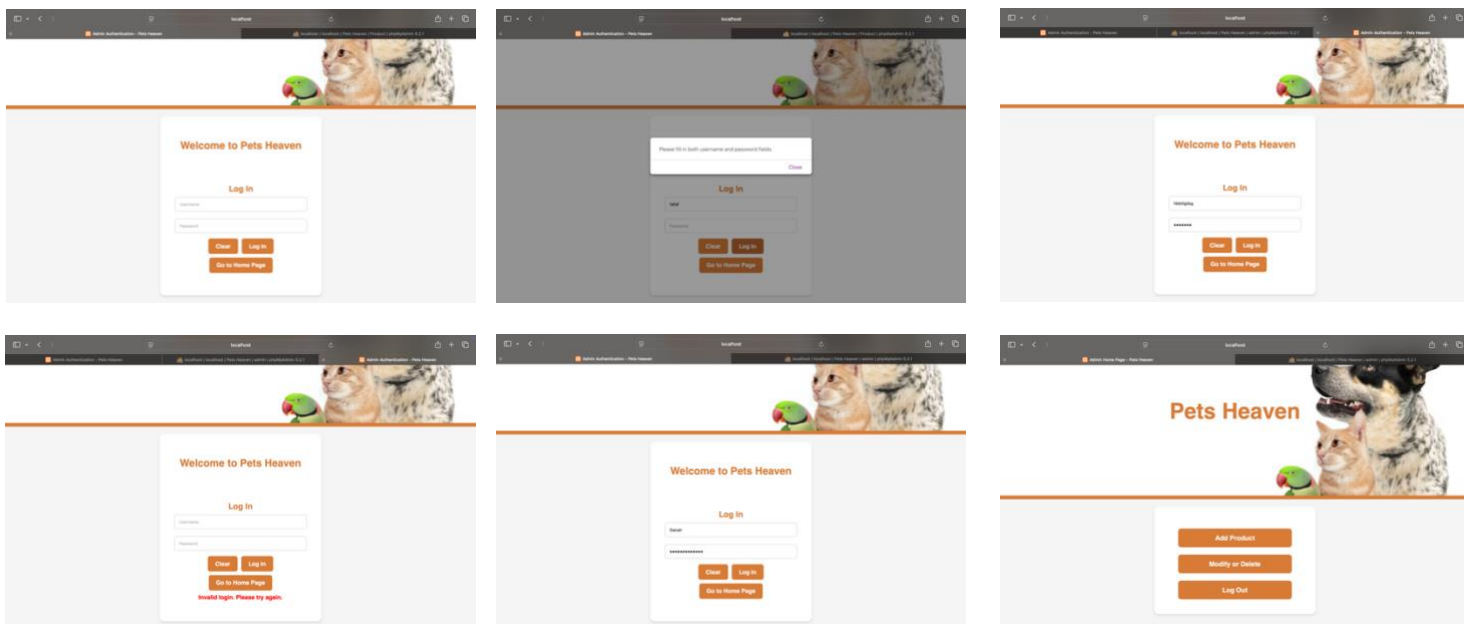


## Products Management Process

Trying to access the admin's account without authentication.



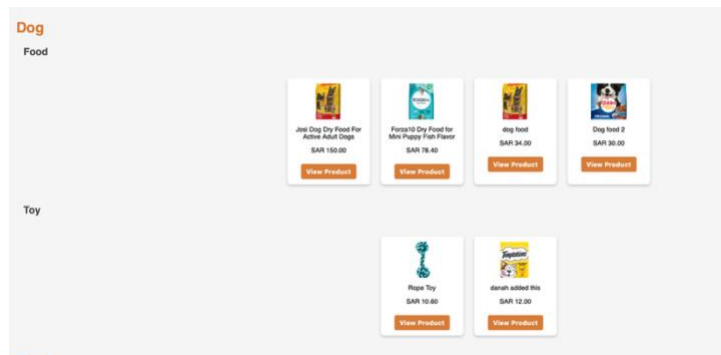
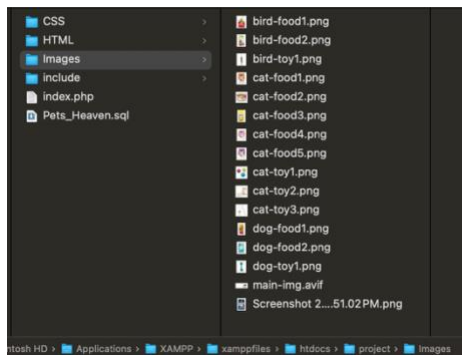
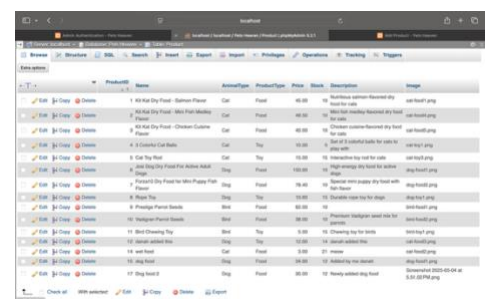
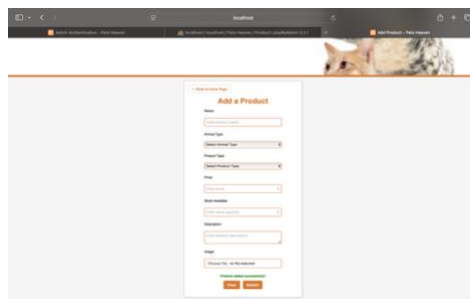
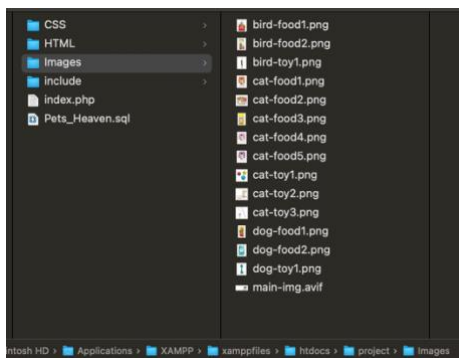
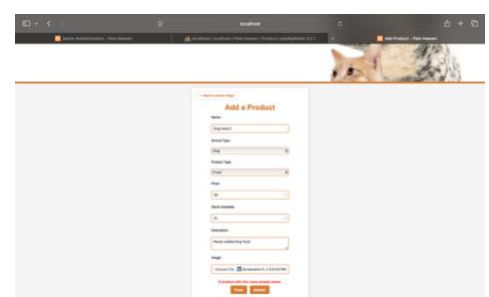
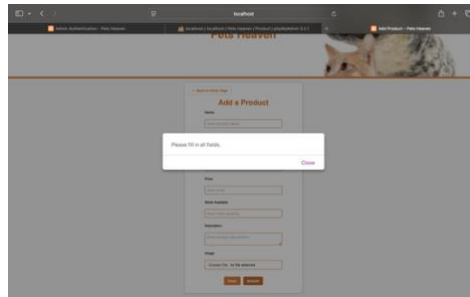
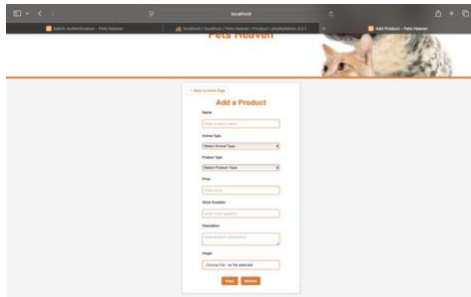
The process starts by logging in to the account.







## Adding a new product to the database



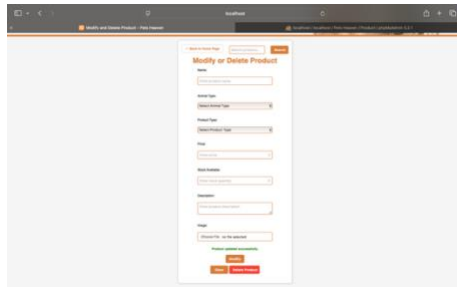
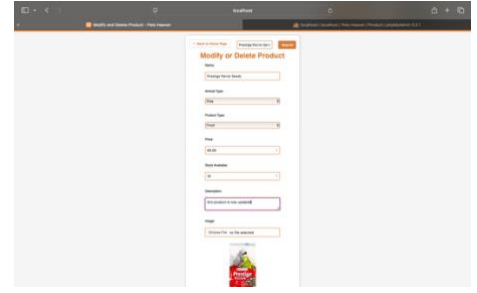
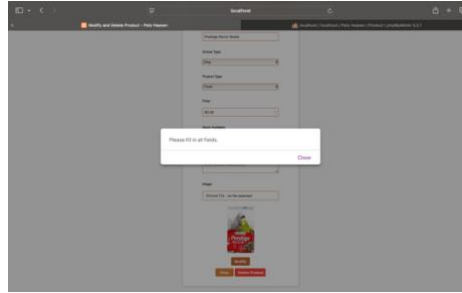
The screenshot shows the 'Modify or Delete Product' form in the Magento 2 admin interface. The form is titled 'Modify or Delete Product' and has a 'Save' button. The form contains the following fields:

- Name:** A text input field.
- Weight (kg):** A dropdown menu with '0.000000000000000000' selected.
- Product Type:** A dropdown menu with 'Simple Product Type' selected.
- Price:** A dropdown menu with '0.000000000000000000' selected.
- Stock:** A dropdown menu with '0.000000000000000000' selected.
- Website:** A dropdown menu with 'Default Website' selected.

At the bottom of the form, there is a 'Save' button and a 'Cancel' button.



	ProductID	Name	Amount/Type	Product/Type	Price	Stock	Description	Image
✓ Edit	3-000	1 1st Aid Dry Food - Salmon Flavour	Cat	Food	40.00	10	Nutritious salmon-flavoured dry food for cats.	cat-food1.png
✓ Edit	3-000	2 1st Aid Dry Food - Mini Fish Medley Flavour	Cat	Food	40.00	10	Mini fish medley-flavoured dry food for cats.	cat-food2.png
✓ Edit	3-000	3 1st Aid Dry Food - Chicken Chicken Flavour	Cat	Food	40.00	10	Chicken-savoured dry food for cats.	cat-food3.png
✓ Edit	3-000	4 3-Cooking Cat Bites	Cat	Toy	10.00	5	Set of 3 cookable/bites for cats to play with.	cat-toy1.png
✓ Edit	3-000	5 Cat Toy Ball	Cat	Toy	10.00	10	Interactive toy ball for cats.	cat-toy2.png
✓ Edit	3-000	6 Joint Dry Food For Active Adult Dogs	Dog	Food	100.00	10	High-intensity dry food for active dogs.	dog-food1.png
✓ Edit	3-000	7 Forward Dry Food For Mini Puppies Adult Puppies	Dog	Food	75.00	10	Special mini puppy dry food with fish-flavour.	dog-food2.png
✓ Edit	3-000	8 Puppy Toy	Dog	Toy	75.00	10	Interactive toy ball for dogs.	dog-toy1.png
✓ Edit	3-000	9 Puppies Pencil Snacks	Dog	Food	80.00	10	Snacks made up for dogs.	dog-food3.png
✓ Edit	3-000	10 Puppies Pencil Snacks	Dog	Food	80.00	10	Premium halogen-scent mix for puppies.	dog-food4.png
✓ Edit	3-000	11 Bird Cleaning Toy	Bird	Toy	5.00	10	Cleaning toy for birds.	bird-toy1.png
✓ Edit	3-000	12 Granish Adult Fish	Dog	Toy	10.00	14	Granish adult fish.	cat-food5.png
✓ Edit	3-000	14 cat food	Cat	Food	9.00	27	cat food	cat-food6.png
✓ Edit	3-000	17 Dog food 3	Dog	Food	34.00	20	Healthy adult dog food, new updated.	cat-food7.png



	ProductID	Name	Amount/Type	Product/Type	Price	Stock	Description	Image
✓ Edit	3-000	1 1st Aid Dry Food - Salmon Flavour	Cat	Food	40.00	10	Nutritious salmon-flavoured dry food for cats.	cat-food1.png
✓ Edit	3-000	2 1st Aid Dry Food - Mini Fish Medley Flavour	Cat	Food	40.00	10	Mini fish medley-flavoured dry food for cats.	cat-food2.png
✓ Edit	3-000	3 1st Aid Dry Food - Chicken Chicken Flavour	Cat	Food	40.00	10	Chicken-savoured dry food for cats.	cat-food3.png
✓ Edit	3-000	4 3-Cooking Cat Bites	Cat	Toy	10.00	5	Set of 3 cookable/bites for cats to play with.	cat-toy1.png
✓ Edit	3-000	5 Cat Toy Ball	Cat	Toy	10.00	10	Interactive toy ball for cats.	cat-toy2.png
✓ Edit	3-000	6 Joint Dry Food For Active Adult Dogs	Dog	Food	100.00	10	High-intensity dry food for active dogs.	dog-food1.png
✓ Edit	3-000	7 Forward Dry Food For Mini Puppies Adult Puppies	Dog	Food	75.00	10	Special mini puppy dry food with fish-flavour.	dog-food2.png
✓ Edit	3-000	8 Puppy Toy	Dog	Toy	75.00	10	Interactive toy ball for dogs.	dog-toy1.png
✓ Edit	3-000	9 Puppies Pencil Snacks	Dog	Food	80.00	10	Premium halogen-scent mix for puppies.	dog-food4.png
✓ Edit	3-000	10 Puppies Pencil Snacks	Dog	Food	80.00	10	Premium halogen-scent mix for puppies.	dog-food4.png
✓ Edit	3-000	11 Bird Cleaning Toy	Bird	Toy	5.00	10	Cleaning toy for birds.	bird-toy1.png
✓ Edit	3-000	12 Granish Adult Fish	Dog	Toy	10.00	14	Granish adult fish.	cat-food5.png
✓ Edit	3-000	14 cat food	Cat	Food	9.00	27	cat food	cat-food6.png



## 4. Project Implications

### a) What are the issues faced by that organization which are going to be solved through your website?

- **Manual inventory management with no digital tracking system**  
Product details like stock levels, prices, and descriptions had to be updated manually, which increased the chances of errors, delays, and inconsistencies in inventory management.
- **Lack of admin control for adding, editing, or removing products**  
There was no system for store admins to easily update product information. Any changes to the inventory or catalog had to be done manually, making it inefficient and unscalable.
- **No direct way for customers to view product details or images remotely**  
Without a website, customers had no convenient way to compare product options, see product images, or read descriptions before deciding to buy.
- **Difficulty in Tracking Customer Behavior**  
Without an e-commerce platform, it was challenging to analyze customer preferences, purchase history, and shopping patterns, which are essential for improving marketing strategies and personalizing the shopping experience.
- **Limited Business Reach**  
Operating without a website restricted the business to local customers only, missing opportunities to reach a wider audience and expand the customer base through online sales.

### b) What are the technological features that you have included on the website to solve these problems?

The Pets Heaven E-Commerce Website has incorporated a range of advanced technological features. A robust admin authentication system has been established to ensure that only authorized personnel can access and manage the product database. The admin interface facilitates the straightforward addition, modification, and deletion of products, thereby optimizing catalog management and minimizing reliance on manual updates. Additionally, real-time inventory tracking automatically refreshes stock levels and product details.

For customers, the website provides an intuitive interface that includes comprehensive product pages featuring images, pricing, and descriptions. An integrated shopping cart and streamlined checkout process enhance the purchasing experience, while a past purchases feature adds to customer convenience. Furthermore, the site contains a contact page equipped with a map, form validation to ensure accurate data entry, and accessibility options to accommodate all users. Collectively, these enhancements significantly improve the organization's workflow, transforming it into an efficient, precise, and scalable digital system.

**c) List down additional problems/challenges that may result due to your system.**

**Maintenance Requirements:**

As the system evolves, regular updates, bug fixes, and server maintenance are required, which can be time-consuming without proper planning or automation.

**Lack of Mobile Responsiveness:**

If the design isn't optimized for smartphones and tablets, mobile users may experience a poor interface or limited functionality.

**Scalability Limitations:**

As product and customer data grow, performance could degrade unless the system is optimized for larger-scale operations (e.g., indexing, caching).

**Data Loss or Corruption:**

If the database or server is not backed up regularly, a crash or error could result in the loss of all product and order information.

**d) How the tools used in project helped you to design an appropriate system?**

We used a variety of tools in our project, which helped us create a successful e-commerce platform for Pets Heaven. In order to visualize the user interface and user experience, we started by sketching the layout of each page. We used Google Docs for project management in order to keep everyone on the team in sync by tracking progress and organizing tasks. We used Visual Studio for coding during development because it offered helpful features for effective coding and debugging. We also carried out manual testing to ensure that every feature operated as planned. All things considered, these tools made our work process more efficient, which allowed us to develop a strong and intuitive system that solved the organization's problems.



## Work Distribution

Task	Team member
Database Design	All members
Home Page Cart Summary Past Purchases Database Connection	[Redacted]
Contact Us Page	[Redacted]
Product Details Page	[Redacted]
Cart Page	[Redacted]
Admin Authentication Page Admin Home Page	[Redacted]
Add Product Page	[Redacted]
Modify Product Page	[Redacted]