Project Name: Pet Palace
Branch: DAC Mar-2024

Documentation On

"E-commerce application for pets"
DAC MARCH 2024

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Table of Contents

1. Introduction

Document Purpose

This document communicates the business requirements and scope for developing the Online Pet Shop System. The scope of this document is to define the functional and non-functional requirements, business rules, and other constraints.

Project Background

The current market lacks a centralized platform for pet enthusiasts to find, match, and purchase pets and related supplies. Pet owners and potential pet owners often face difficulties in locating authorized pet shops, finding pet matches, and purchasing specialized pet supplies. This system aims to streamline these processes, providing a user-friendly interface for finding pets, matching pets, purchasing supplies, and locating pet clinics.

Goals of the Project

The main objectives of this project are:

- To develop a website that allows users to find pets based on their city and preferences.
- To implement a matching system for pet owners seeking to match their pets with others.
- To provide a platform for purchasing pet supplies tailored to specific pets.
- To help users locate pet clinics in their city.

2. Business Requirements Overview

The Online Pet Shop System is a public web application.

Initially, the system will target users within a specific geographic region, but it will be scalable for a wider audience.

There are three main user types:

1. General Users (pet buyers and owners)
2. Admins
3. Sellers

The system will connect these users efficiently, providing an easy-to-use platform for all pet-related needs.

3. Functional Requirements Overview

The Online Pet Shop System consists of seven modules described below:

1. **User Module**
2. **Seller Module**
3. **Find a Pet Module**
4. **Pet Match Module**
5. **Pet Supplies Module**
6. **Find a Pet Clinic Module**
7. **Admin Module**

3.1 User Module

User Registration and Login:

- Users can register for an account using email or phone number.
- Users can log in using their credentials.

Profile Management:

- Users can create and manage their profiles, including personal information and pet preferences.

Order History:

- Users can view their past orders and transactions.

Wishlist:

- Users can add pets or pet supplies to their wish list for future reference.

3.2 Seller Module

Seller Registration and Login:

- Sellers (supply vendors) can register for an account using business details.
- Sellers can log in using their credentials.

Product Management:

- Sellers can add, edit, and remove products they are selling.
- Sellers can manage product categories and inventory levels.

Order Management:

- Sellers can view and manage orders placed by users, including order status updates.

Profile Management:

- Sellers can update their business information and profile details.

3.3 Find a Pet Module

User Login:

- Users can log in to their accounts.

City Selection:

- Users can choose their city from a dropdown menu or map interface.

Pet Selection:

- Users can select the type of pet they are interested in (e.g., dog, cat, fish) and refine their choice by breed (e.g., Labrador Retriever, Siamese).

Authorized Pet Shops:

- Based on the chosen city and pet, the system will display a list of authorized pet shops in the area.

3.6 Find a Pet Clinic Module

City Selection:

- Users can choose their city from a dropdown menu or map interface.

Pet Clinic List:

- The system displays a comprehensive list of pet clinics located in the chosen city.
- Features like clinic information, user reviews.

3.7 Admin Module

Admin Login:

- Admins can log in to their accounts with elevated privileges.

User Management:

- Admins can view, add, edit, and delete user accounts.
- Admins can manage user roles and permissions.

Pet Shop Management:

- Admins can update pet shop details and ensure they meet the required standards.

Product Management:

- Admins can add, edit, and remove products from the pet supplies inventory.
- Admins can categorize products and manage stock levels.

Pet Clinic Management:

- Admins can manage pet clinic listings, ensuring all necessary information is accurate.
- Admins can handle user reviews and feedback regarding pet clinics.

System Monitoring:

- Admins can monitor system performance and user activity to ensure smooth operation.
- Admins can address any technical issues or user complaints promptly.

4. Non-functional Requirements

- The website should have a professional design with a consistent look and feel.
- Users should have no limitations for accessing the application through the Internet.
- The system should be designed to support scalability, targeting up to 10 million users.
- The site must follow general usability guidelines for menus, navigation, colors, links, and other actions provided on the screens.
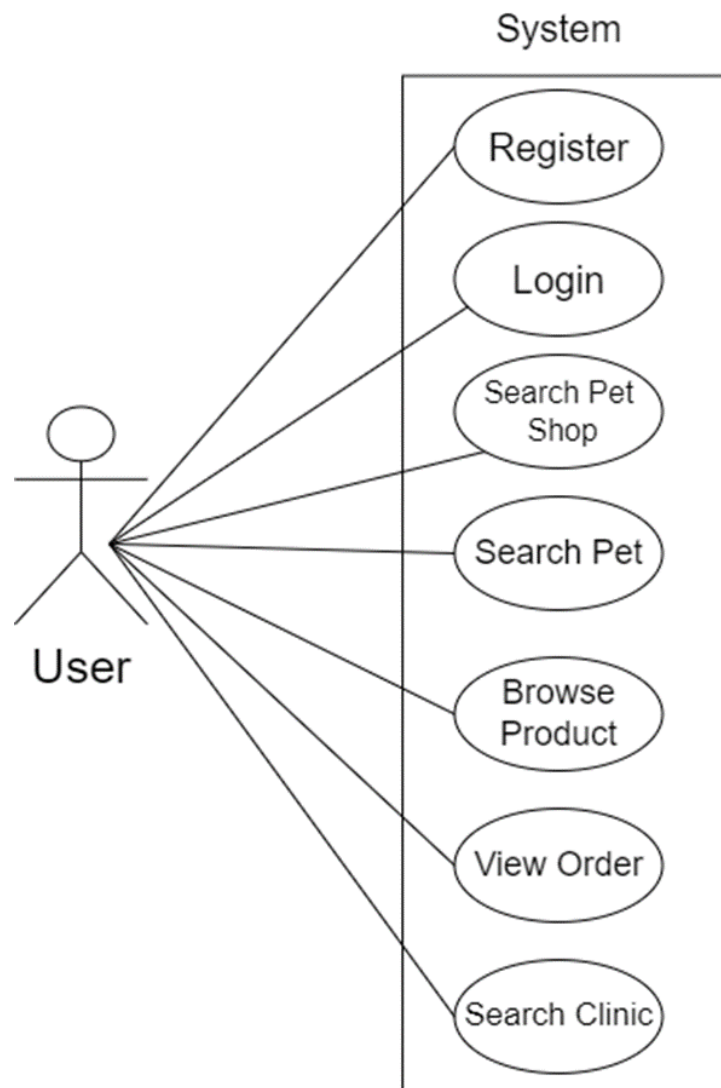- The system should enable users to complete tasks with a minimal number of steps.

Use case for user:
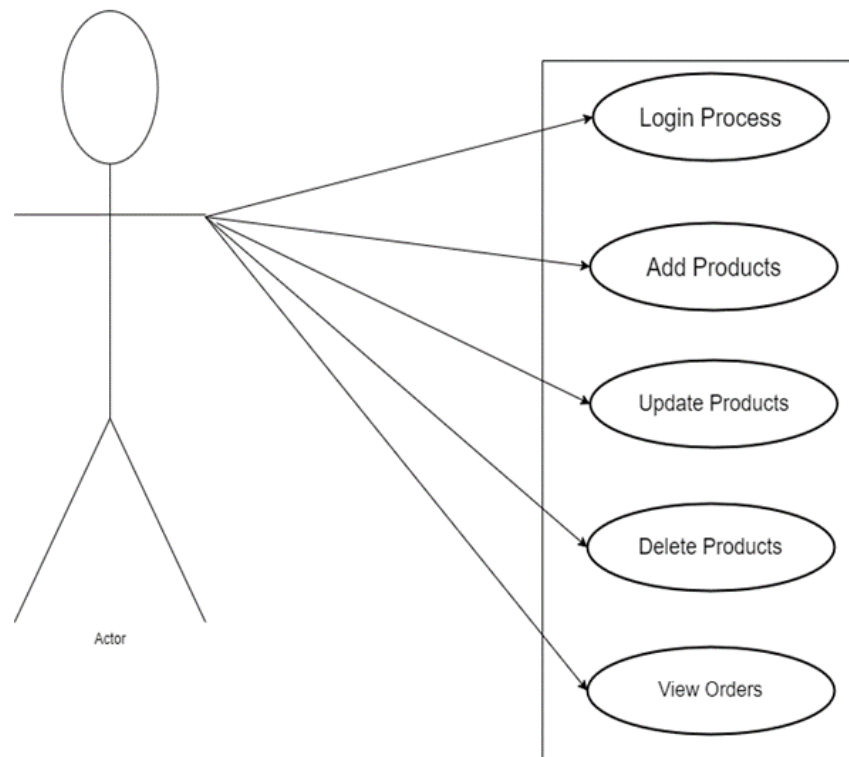

Fig.Use Case Diagram For User
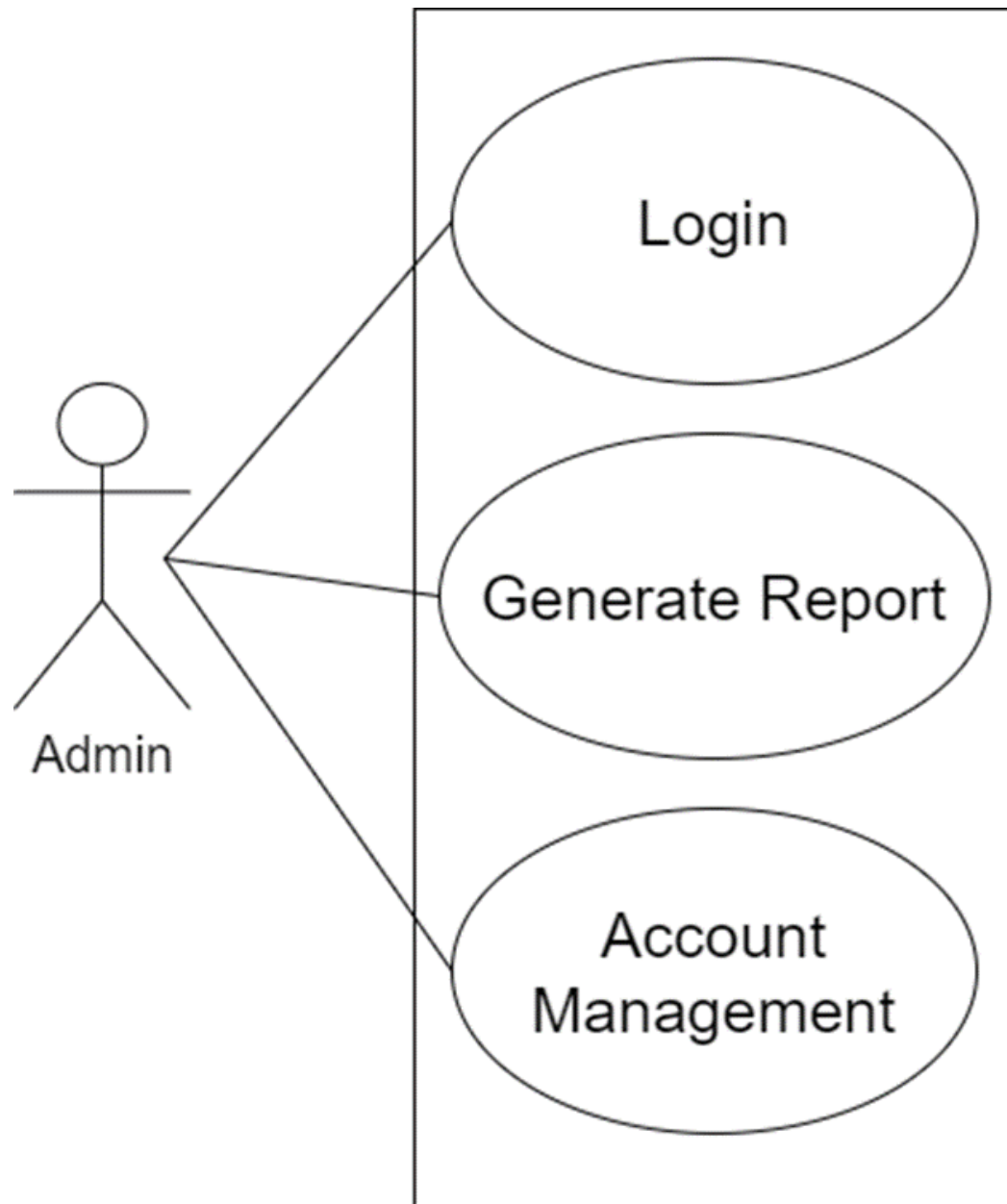
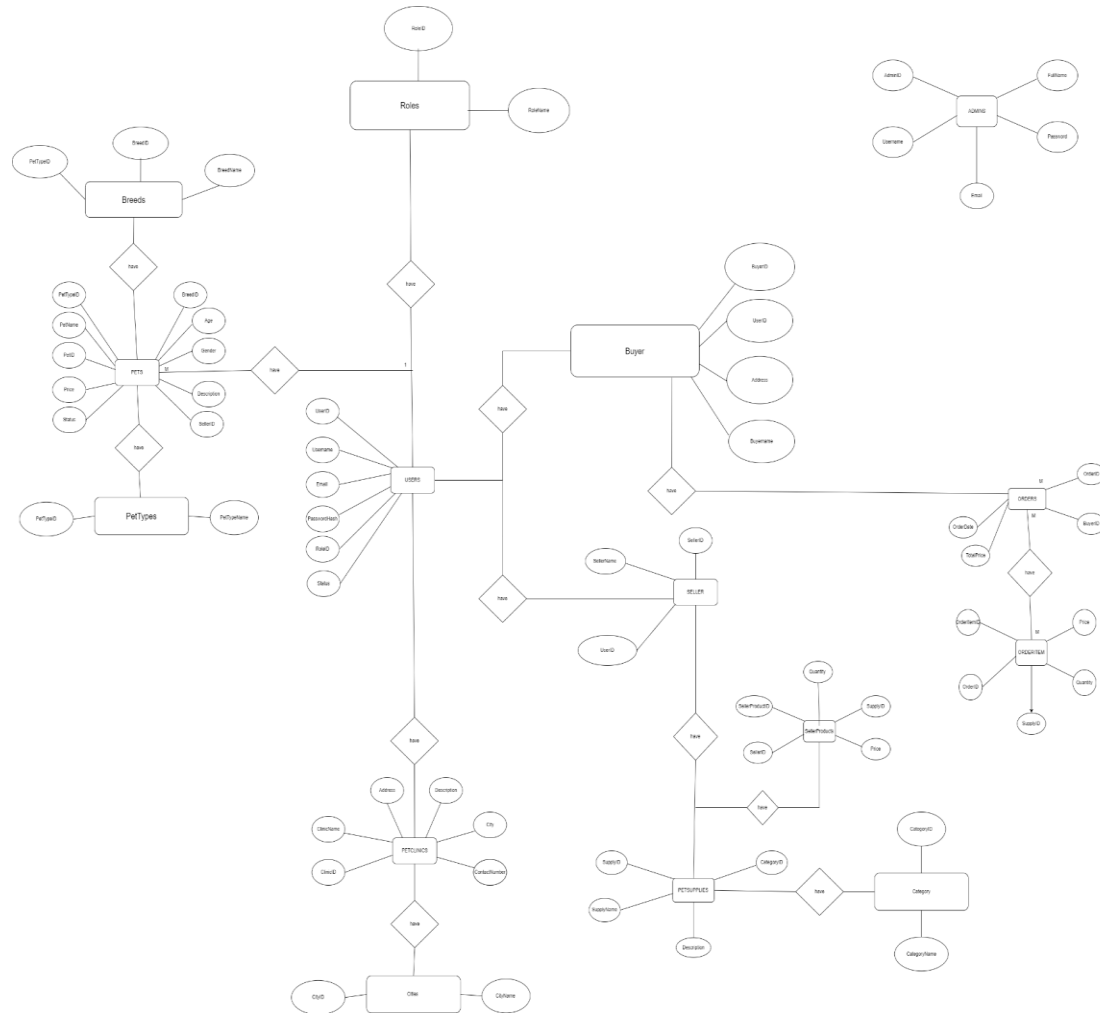# Use case for seller:

Fig. Use case diagram for seller

Use case for admin:

Fig.Use case diagram for Admin

ER diagram of Pet Palace:

Database design:

1. Users table

Column Name	Data Type	Attributes
user_id	int	AUTO_INCREMENT, PRIMARY KEY
user_name	varchar(255)	
email	varchar(255)	
passwordhash	varchar(255)	
role_id	int	
status	bit(1)	
createdat	timestamp	
updatedat	timestamp	
first_name	varchar(255)	
last_name	varchar(255)	
address	varchar(255)	
contact	varchar(255)	
aadharnumber	varchar(255)	

2. Breed Table

Column Name	Data Type	Attributes
breed_id	int	AUTO_INCREMENT, PRIMARY KEY
breed_name	varchar(255)	
pettype_id	int	

3. Buyer Table

Column Name	Data Type	Attributes
buyer_id	int	AUTO_INCREMENT, PRIMARY KEY
user_id	int	
buyer_name	varchar(255)	
address	varchar(255)	

4. Categories Table

Column Name	Data Type	Attributes
category_id	int	AUTO_INCREMENT, PRIMARY KEY
category_name	varchar(255)	

5. Cities Table

Column Name	Data Type	Attributes
city_id	int	AUTO_INCREMENT, PRIMARY KEY
city_name	varchar(255)	

6. Order Items Table

Column Name	Data Type	Attributes
order_item_id	int	AUTO_INCREMENT, PRIMARY KEY
price	decimal(38,2)	
quantity	int	
order_id	int	
supply_id	int	

7. Orders Table

Column Name	Data Type	Attributes
order_id	int	AUTO_INCREMENT, PRIMARY KEY
totalprice	decimal(38,2)	
order_date	datetime(6)	
buyer_id	int	

8. Pet Clinics Table

Column Name	Data Type	Attributes
clinic_id	int	AUTO_INCREMENT, PRIMARY KEY
address	varchar(255)	
contact_number	varchar(255)	
description	varchar(255)	
name	varchar(255)	
city_id	int	

9. Pet Supplies Table

Column Name	Data Type	Attributes
supply_id	int	AUTO_INCREMENT, PRIMARY KEY
description	varchar(255)	
image	longblob	
price	decimal(38,2)	
quantity	int	
supply_name	varchar(255)	

category_id	int	

10.   Pets Table

Column Name	Data Type	Attributes
pet_id	int	AUTO_INCREMENT, PRIMARY KEY
name	varchar(255)	
pettype_id	int	
breed_id	int	
age	int	
gender	enum('Male','Female')	
description	varchar(255)	
price	decimal(38,2)	
status	enum('Available','Adopted')	
seller_id	int	
image	longblob	
pet_type_id	int	

11.   Roles Table

Column Name	Data Type	Attributes
role_id	int	AUTO_INCREMENT, PRIMARY KEY
role_name	varchar(255)	

12.   Seller Table

Column Name	Data Type	Attributes
seller_id	int	AUTO_INCREMENT, PRIMARY KEY
user_id	int	
seller_name	varchar(255)	

13.   Seller Products Table

Column Name	Data Type	Attributes
seller_product_id	int	AUTO_INCREMENT, PRIMARY KEY

price	decimal(38,2)	
quantity	int	
supply_id	int	
seller_id	int	

8. Snapshots
8.1 Home Page
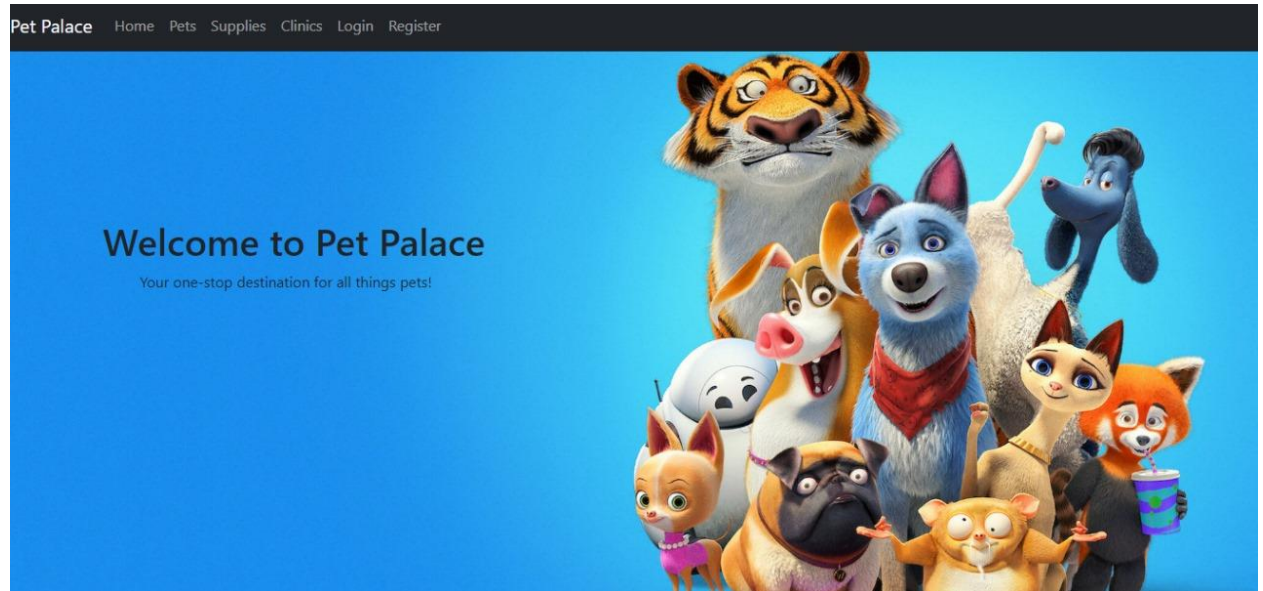
8.2 Login Page
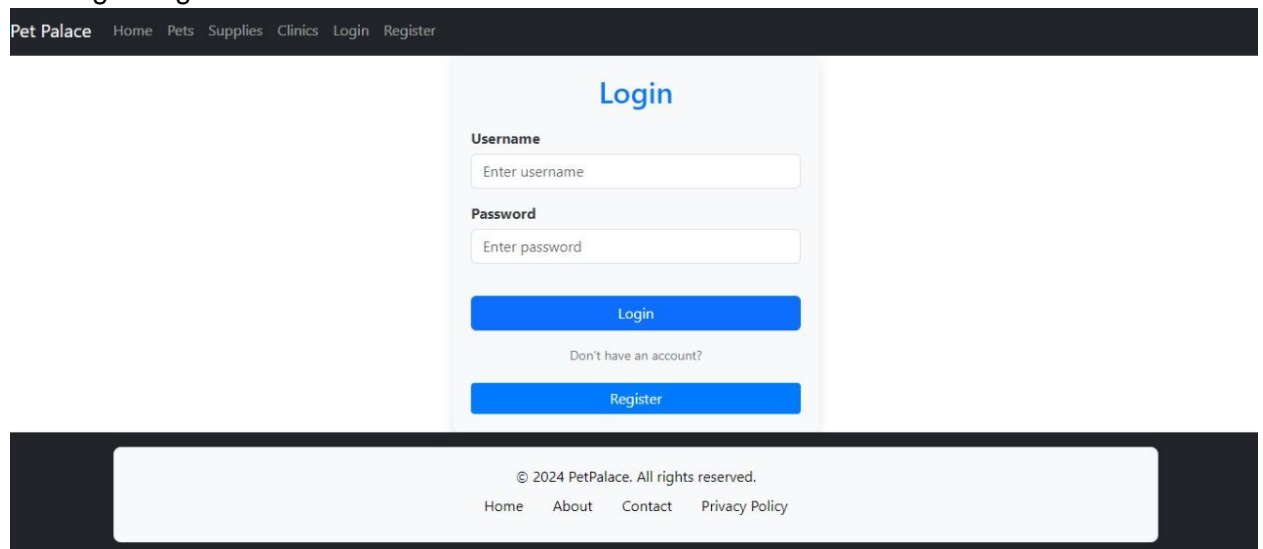
8.3 User Registration Page

8.4 Find Pet Clinics Page

8.5 Buyer Dashboard

8.6 Find Pets Page

8.7 Buy Pet Supplies Page

Buyer Dashboard   Cart   Log Out

Pet Supplies

Discover high-quality supplies for your pets, from food to accessories.

pedigree

Empty

₹10000.00

Ball

Ball

₹500.00

supply 3

testdesc

₹10000.00

8.8 Seller Dashboard

Seller Dashboard   Logout

Add Product

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8.9 Add Products As A Seller Page

Add Product

Product Type:

Pet	⌄

Pet Name:

Pet Name

Price:

Price

Quantity:

Quantity

Image:

Choose File	No file chosen

Description:

8.10 Admin Dashboard

Admin Dashboard   View Users   View Sellers   Add User   [Logout]

User Management

ID	Name	Email	Role	Actions
1	John Doe	john@example.com	Seller	Edit / Delete
2	Jane Smith	jane@example.com	Buyer	Edit / Delete

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Conclusion

PetPalace is a comprehensive and innovative platform designed to cater to the diverse needs of pet owners, sellers, and service providers. It integrates various functionalities such as pet and pet supply purchases, pet clinic services, and user management into a unified system. By leveraging modern technologies like .NET, RESTful APIs, and relational databases, PetPalace offers a seamless and user-friendly experience for all stakeholders involved.

Key Features:
1. Pet and Pet Supply Purchases:
   - Users can easily browse and purchase pets and related supplies, with detailed filters ensuring they find exactly what they need for their specific pet type and breed.
   - Sellers can manage their inventory, including adding, updating, and deleting products, ensuring that the platform always reflects accurate product availability.

2. Pet Clinic Services:
   - Pet owners can find and book appointments with local pet clinics, enhancing the well-being of their pets with easy access to professional care.
   - The system provides a robust backend for clinics to manage appointments and services offered.

3. User Management:
   - The platform supports distinct roles such as buyers, sellers, and admins, with each role having access to tailored functionalities and privileges.
   - A secure and efficient user authentication process ensures that data is protected, and users can easily manage their accounts.

Technical Excellence:
- Backend: Built with a focus on scalability and security using .NET and Entity Framework, ensuring that the platform can handle a growing user base and data load.
- Frontend: The user interface is designed to be intuitive, ensuring a smooth user experience across different devices and browsers.
- Database Design: A well-structured relational database ensures data integrity and efficient querying, with tables designed to support the platform's diverse functionality.
- API Integration: RESTful APIs facilitate seamless communication between the frontend and backend, enabling real-time data updates and interactions.

Business Impact:

PetPalace is not just a marketplace but a complete ecosystem for pet care, connecting pet owners with the products and services they need while providing sellers and service providers with the tools to reach and manage their customers effectively. This platform has the potential to revolutionize how pet care is accessed and delivered, making it easier, faster, and more convenient for everyone involved.

In conclusion, PetPalace stands as a testament to the power of technology in enhancing the pet care industry, providing a robust solution that meets the needs of modern pet owners and businesses alike.