Introduction

The mobile app for dog nutrition seeks to provide dog owners with a comprehensive platform for managing their pets' nutritional requirements in an increasingly interconnected world. As more people rely on smartphones and tablets for everyday tasks, including pet care, this software appears as an essential tool. It bridges the gap between traditional pet care methods and modern convenience by ensuring easy access to high-quality goods and nutritional advice. This report describes a systematic strategy to designing such an application, focusing on essential steps such as system comparison, design, development, testing, and documentation.

The growing awareness of pet nutrition shows a larger social shift toward holistic pet care. With pet owners increasingly looking for specific items and trustworthy information, this app is a valuable resource. In addition to facilitating easy purchases of high-quality dog food, it educates owners on all aspects of dog nutrition, from breed-specific nutritional requirements to the influence of age and health conditions. By combining reliable purchasing features with educational information, the app intends to promote better lifestyles for dogs, helping owners to make informed decisions that benefit their pets' well-being.

Designing User Interfaces

The WoofWellness app is designed to be simple and attractive. Its user-friendly layout features a bottom navigation bar for easy access to key functions: Home, Profile, Products, Cart, and Educational Content. The welcoming splash screen sets a pleasant tone from the start. The design uses clear, high-quality icons and a consistent color scheme to make everything look good and work well together.

On the home page, you'll find a friendly message and easy access to main areas like Featured Products and Latest News, with clear headings and well-organized content. Each product and news item is shown with good images, text, and spacing to make it easy to read and look nice. Smooth animations and transitions help the app feel responsive and interactive.
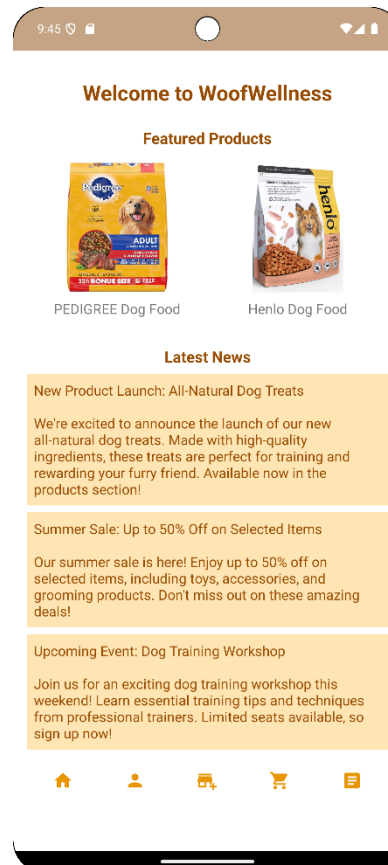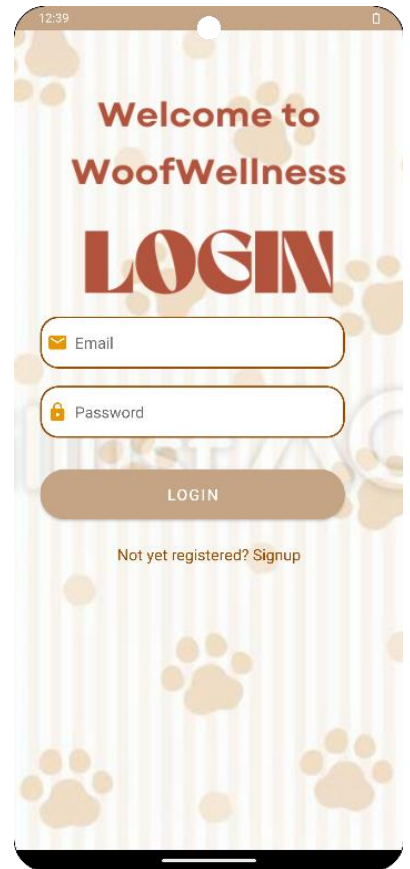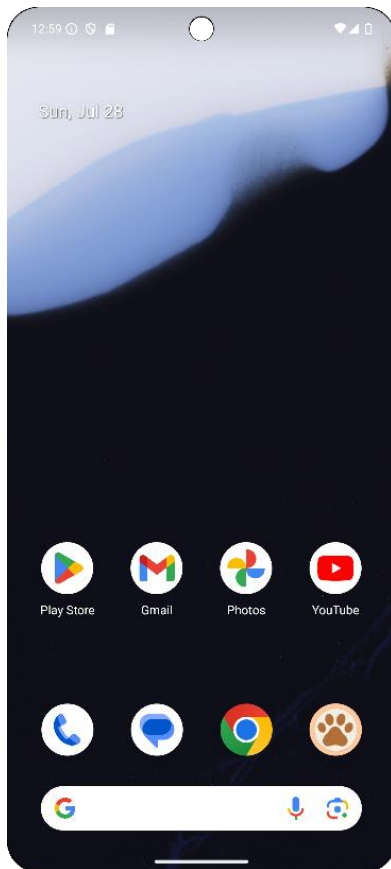
The Products page includes an 'Add to Cart' button for each item, allowing users to easily add products to their cart. The Cart page displays cart details, including product information, quantities, and total price. Users can adjust quantities, remove items, and view the subtotal.

The Profile page allows users to view and update their personal information, manage their account settings, and view their order history. It is designed to be straightforward and easy to navigate, with clear options and user-friendly forms.

Buttons, dropdown menus, and forms throughout the app are placed thoughtfully to make them easy to use, and gestures like tapping and swiping help you navigate the app smoothly. The education section is designed to be easy to scroll through, so you can easily find and engage with the information you need.

Multimedia elements are placed to enhance the text, and the font is clear and consistent for comfortable reading. Error messages are helpful and unobtrusive. The footer contains icons for Home, Profile, Products, Cart, and Educational Content, providing easy navigation.

Overall, the WoofWellness app combines style and functionality to ensure a pleasant and effective user experience.
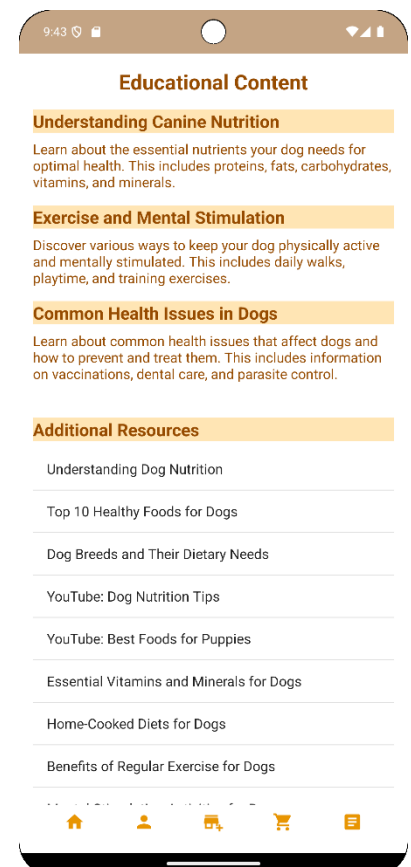
Welcome to WoofWellness

LOGIN

Email

Password

LOGIN

Not yet registered? Signup

Welcome to WoofWellness

SIGN UP

Email

Password

Confirm Password

SIGN UP

Already an user? Login

Welcome to WoofWellness

Featured Products

PEDIGREE Dog Food

Henlo Dog Food

Latest News

New Product Launch: All-Natural Dog Treats

We're excited to announce the launch of our new all-natural dog treats. Made with high-quality ingredients, these treats are perfect for training and rewarding your furry friend. Available now in the products section!

Summer Sale: Up to 50% Off on Selected Items

Our summer sale is here! Enjoy up to 50% off on selected items, including toys, accessories, and grooming products. Don't miss out on these amazing deals!

Upcoming Event: Dog Training Workshop

Join us for an exciting dog training workshop this weekend! Learn essential training tips and techniques from professional trainers. Limited seats available, so sign up now!

3

Profile

Personal Information

Humaira Azwar

humi@gmail.com

Delivery Address

324/1/1,Old Tangalle Rd, Matara

Payment Methods

BOC Card

SAVE

Products

Brand

Enter search query

SEARCH

PEDIGREE Dog Food
Brand: PEDIGREE, Type:
Food, Age: Adult
$20.99
4.5

Royal Canin Puppy Food
Brand: Royal Canin, Type:
Food, Age: Puppy
$25.99
4.8

Blue Buffalo Adult Dog Food
Brand: Blue Buffalo, Type:
Food, Age: Adult
$30.49

Hill's Science Diet
Brand: Hill's, Type: Food,
Age: Adult
$28.99
4.6

Products

Brand

Type

Age

Food
Brand: Blue Buffalo, Type:
Food, Age: Adult
$30.49
4.7

Brand: Hill's, Type: Food,
Age: Adult
$28.99
4.6

Purina Pro Plan
Brand: Purina, Type: Food,
Age: Adult
$22.49
4.4

Nutro Wholesome Essentials
Brand: Nutro, Type: Food,
Age: Senior
$24.99
4.3

Products

Brand

Enter search query

SEARCH

Canidae RawRev
Brand: Canidae, Type:
Food, Age: Adult
$32.99
4.5

Orijen Original
Brand: Orijen, Type: Food,
Age: Adult
$34.99
4.8

Taste of the Wild
Brand: Taste of the Wild,
Type: Food, Age: Adult
$29.99
4.7

Merrick Grain Free
Brand: Merrick, Type: Food,
Age: Adult
$31.99
4.6

Cart

PEDIGREE Dog Food
Brand: PEDIGREE, Type: Food, Age: Adult
$20.99
Rating: 4.5

+   1   -

REMOVE

Royal Canin Puppy Food
Brand: Royal Canin, Type: Food, Age: Puppy
$25.99
Rating: 4.8

+   1   -

REMOVE

Hill's Science Diet
Brand: Hill's, Type: Food, Age: Adult
$28.99
Rating: 4.6

+   1   -

REMOVE

Total Price: $75.97

Educational Content

Understanding Canine Nutrition

Learn about the essential nutrients your dog needs for
optimal health. This includes proteins, fats, carbohydrates,
vitamins, and minerals.

Exercise and Mental Stimulation

Discover various ways to keep your dog physically active
and mentally stimulated. This includes daily walks,
playtime, and training exercises.

Common Health Issues in Dogs

Learn about common health issues that affect dogs and
how to prevent and treat them. This includes information
on vaccinations, dental care, and parasite control.

Additional Resources

Understanding Dog Nutrition

Top 10 Healthy Foods for Dogs

Dog Breeds and Their Dietary Needs

YouTube: Dog Nutrition Tips

YouTube: Best Foods for Puppies

Essential Vitamins and Minerals for Dogs

Home-Cooked Diets for Dogs
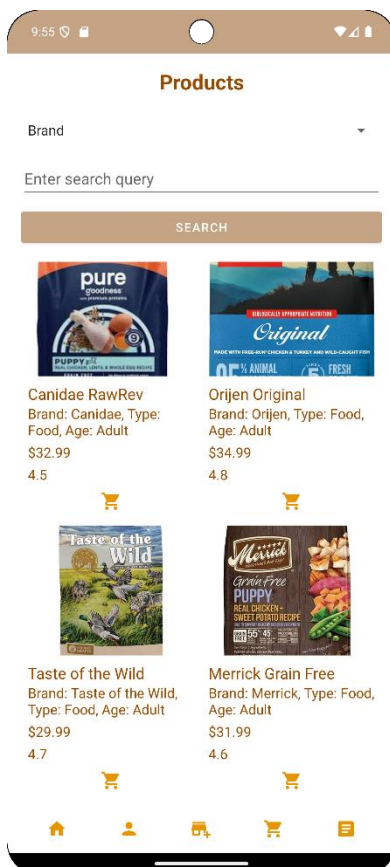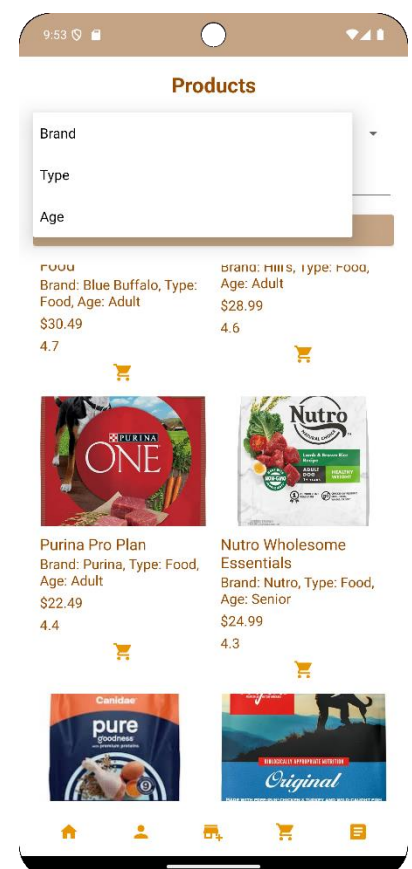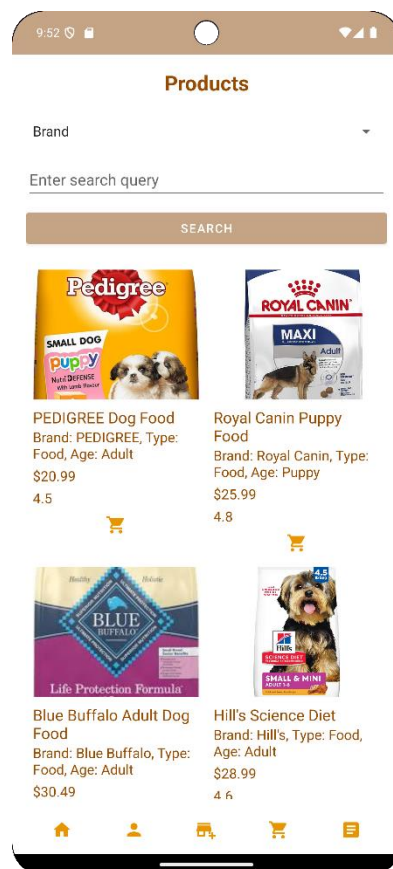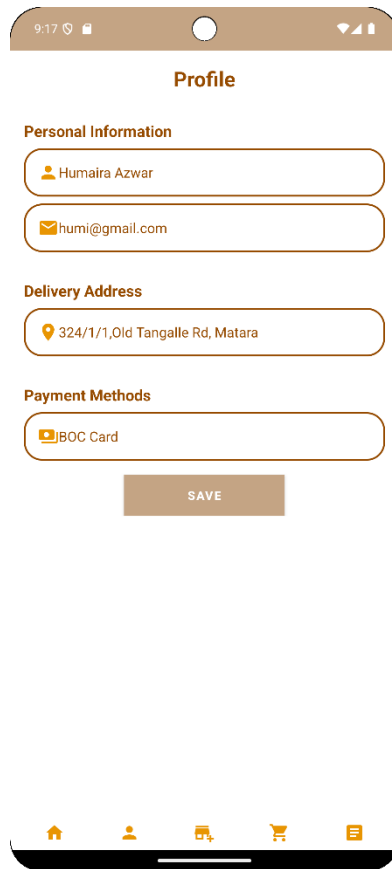
Benefits of Regular Exercise for Dogs

Figure 1 User Interfaces

4

Developing the Mobile App

WoofWellness Application

To download the Mobile App simply install the .apk file below.

app-debug.apk

Please Find the Android Studio Project from the below link.

https://drive.google.com/file/d/1T64M456YN9zdkeuJX40615HzlUePFQk1/view?usp=sharing

User and Technical Documentation

User Documentation

Introduction

Welcome to the WoofWellness mobile application! This guide will help you navigate and make the most out of the app, ensuring you can easily manage your dog's wellness.

Features

1. **User Registration and Login**
2. **User Profile Management**
3. **Product Catalog**
4. **Shopping Cart**
5. **Educational Content**

---

1. User Registration and Login

- **Registering a New Account**
    - Open the app and click on the "Signup" button.
    - Fill in your email, password, and confirm password.
    - Click "Submit" to create your account.
- **Logging In**
    - Enter your registered email and password.
    - Click "Login" to access your account.
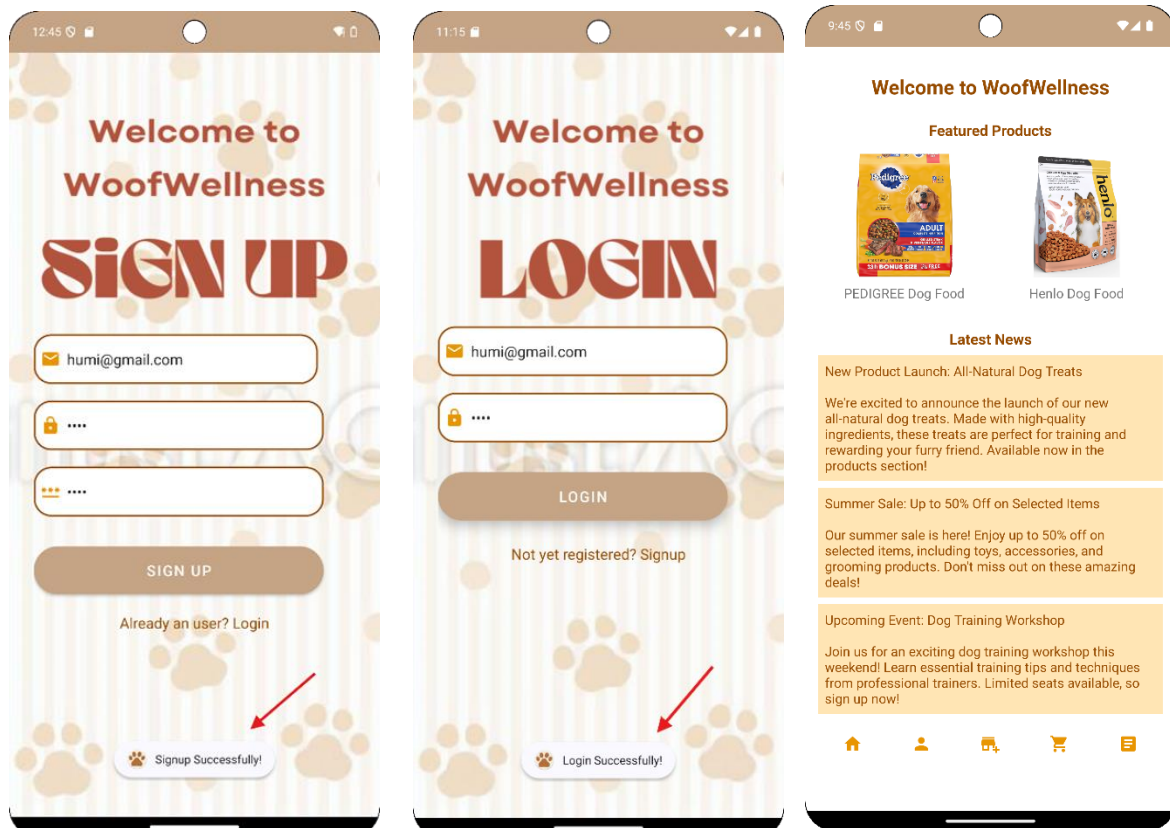
2. User Profile Management

- **View Profile**
  - o Navigate to the "Profile" section using the footer icon.
  - o Your profile details will be displayed.
- **Edit Profile**
  - o Click to update your profile information.
 - o Make the necessary changes and click "Save".
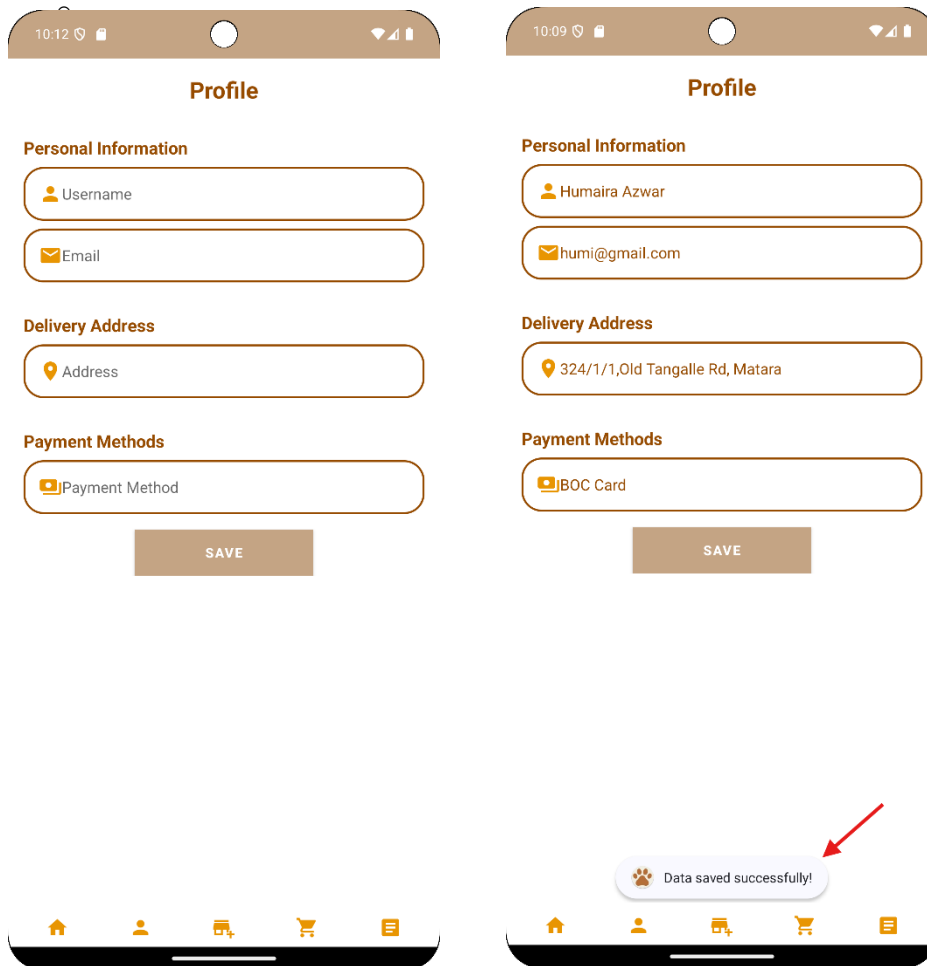
3. Product Catalog

- **View Products**
  - o Click on the "Products" icon in the footer to see the list of available products.
  - o You can filter products by brand, type, and age, and sort them as needed.
- **Product Details**
  - o Click on a product to view its detailed description, price, and customer reviews.
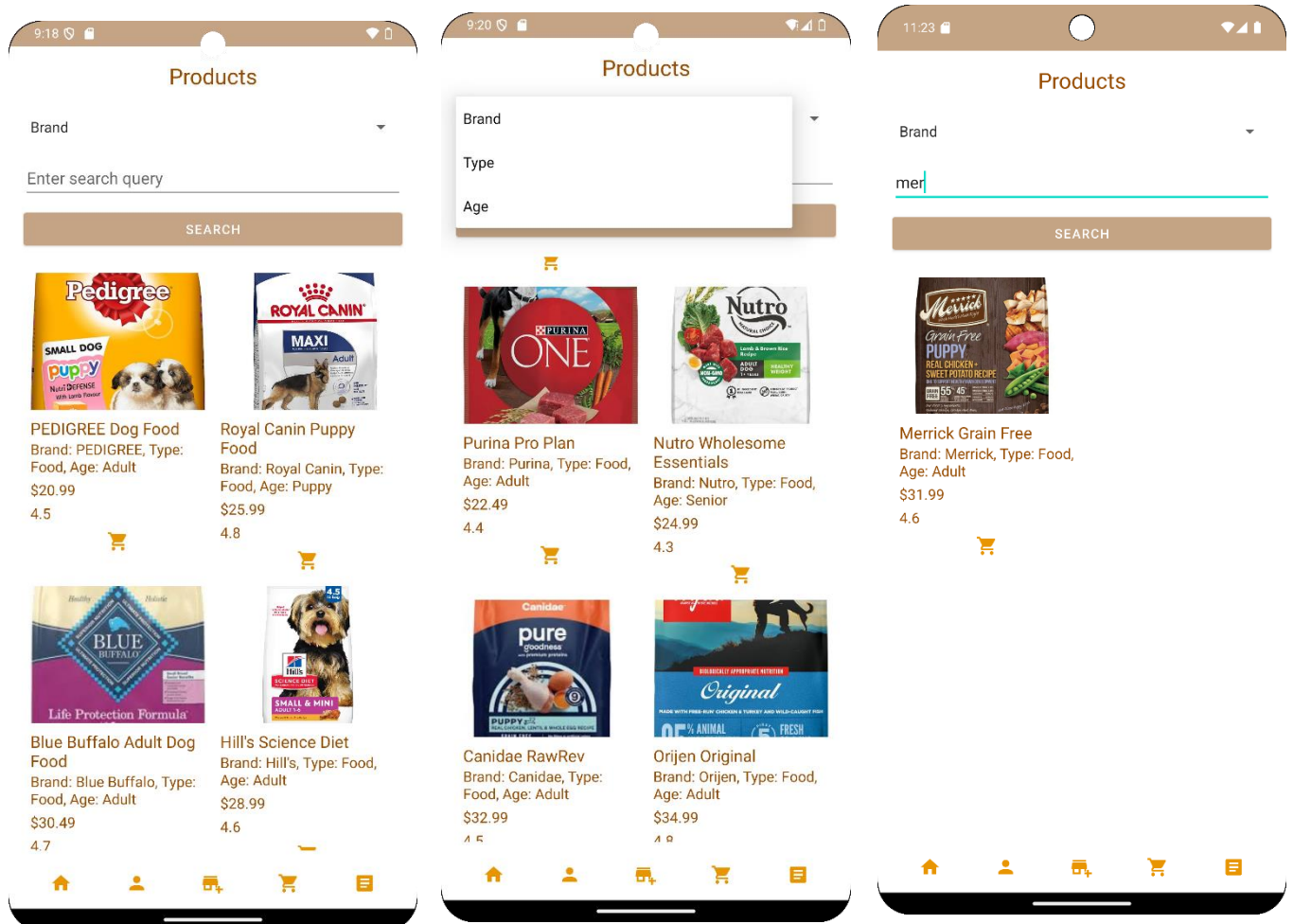
4. Shopping Cart

- **Add to Cart**
  - o Click on cart icon in products page for any product you want to purchase.
- **View Cart**
  - o Click on the "Cart" icon in the footer to see your cart's contents.
  - o You can adjust quantities, remove items, and view the total price.
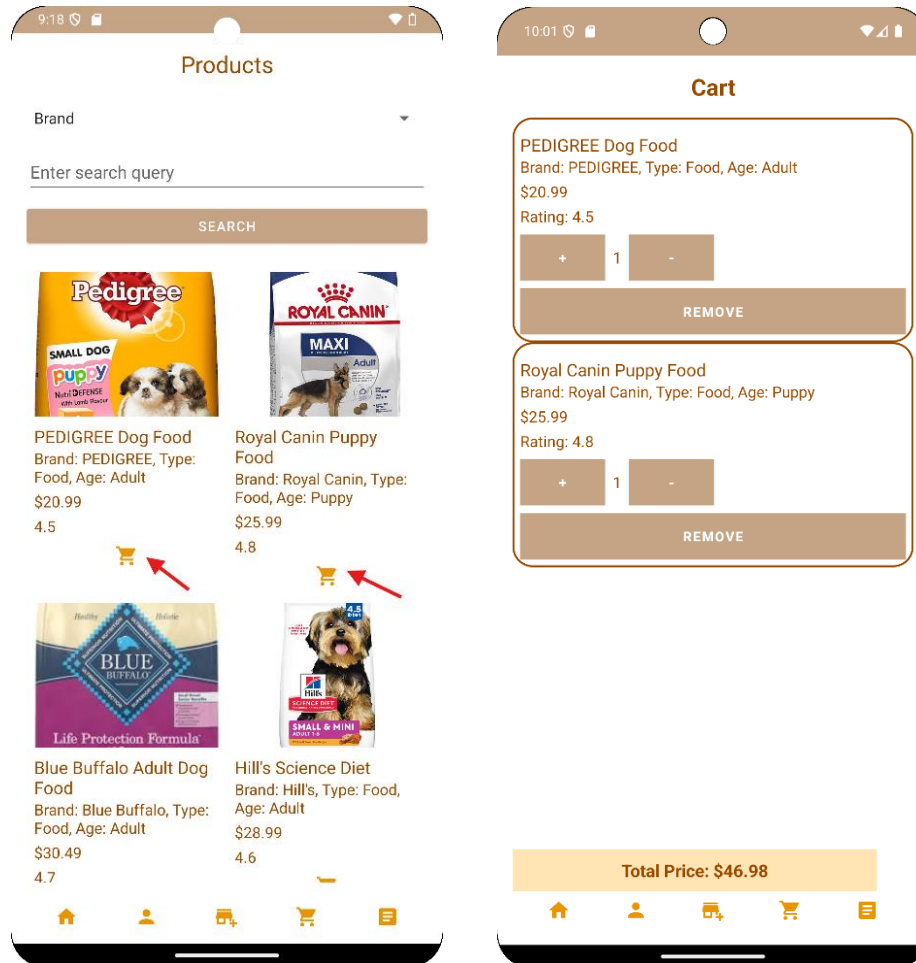
5. Educational Content

- **Access Educational Content**
  - o Click on the "Education" icon in the footer to access articles, videos, and guides about dog nutrition and care.
  - o External links to articles and videos are provided for detailed information.
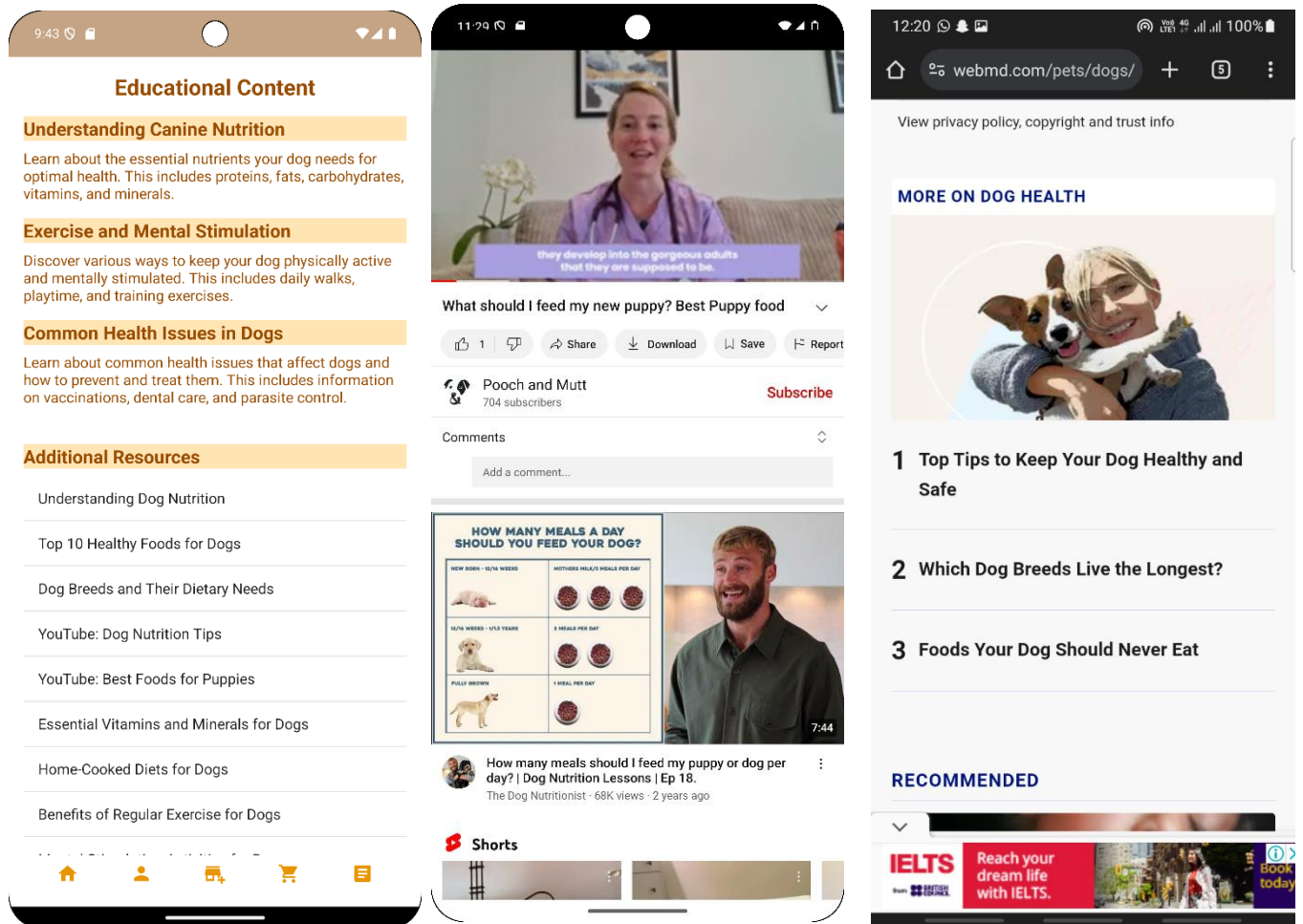
Support

For any issues or questions, please contact our support team at support@woofwellness.com.

Technical Documentation

---

1. Introduction

This technical documentation provides an overview of the WoofWellness mobile application, including its architecture, components, and integration details.

2. Architecture

The application follows the Model-View-Controller (MVC) architecture, ensuring separation of concerns and facilitating maintainability.

- **Model:** Handles data and business logic (e.g., Product, Cart).
- **View:** UI components (e.g., activity_products.xml, activity_cart.xml).
- **Controller:** Manages user inputs and updates the model and view accordingly (e.g., ProductsActivity, CartActivity).

3. Components

- **Activities:**
    - MainActivity: Entry point of the app.
    - RegisterActivity: Handles user registration.
    - LoginActivity: Manages user login.
    - ProfileActivity: Displays and edits user profile.
    - ProductsActivity: Shows the product catalog.
    - CartActivity: Manages the shopping cart.
    - EducationActivity: Provides educational content.
- **Adapters:**
    - ProductAdapter: Binds product data to the product list view.
    - CartAdapter: Binds cart data to the cart list view.
- **Models:**
    - Product: Represents product details.
    - Cart: Manages cart operations.

4. Integration Details

- **External Libraries:**
    - **RecyclerView:** Used for displaying product and cart lists.
    - **Glide:** For loading images efficiently.
    - **Firebase Authentication:** For user registration and login.
    - **Firebase Firestore:** For storing and retrieving product and user data.

5. Key Classes and Methods

- **ProductsActivity.java**
    - loadProducts(): Populates the product list.
    - addToCart(Product product): Adds a product to the cart.
- **CartActivity.java**
    - updateCart(): Updates the cart view.
    - calculateTotal(): Calculates the total price of items in the cart.

6. Testing

Refer to the test plan and test cases document for detailed testing strategy and test case descriptions.

7. Deployment

- **Build and Release:**
    - Use Android Studio to build the APK.
    - Ensure all dependencies are included and the app is signed with the release key.
    - Upload the APK to the Google Play Store for distribution.

8. Maintenance

- **Bug Fixes:**
    - o Track issues using a bug tracking tool (e.g., Jira).
    - o Prioritize and resolve bugs based on severity.
- **Updates:**
    - o Regularly update dependencies to the latest versions.
    - o Implement new features based on user feedback.

9. Contact Information

For technical support and queries, please contact the development team at dev@woofwellness.com.

This documentation provides a guide for both users and developers to ensure a smooth experience and effective maintenance of the WoofWellness mobile application.

Conclusion

The development of a mobile application for dog nutrition is a comprehensive process that requires careful consideration of operating systems, design, development, testing, and documentation. By thoroughly addressing each area, this report offers a comprehensive approach to developing a user-friendly, informative, and reliable application that satisfies the expectations of dog owners.

The thorough UML diagrams provided clear advice on the system's design, while the appealing user interfaces and powerful validation methods ensures a smooth secure user experience. Also, the complete test plan and user documentation ensured that the program met the highest reliability and usability criteria. Having developed a user-friendly platform that not only simplifies the purchasing of high-quality dog food and nutrition-related products, but also educates dog owners on critical nutritional information. This app is a helpful tool to improve the health and well-being of dogs, giving pet owners the information they need to make informed nutrition decisions for their pets.