

# **FLUTTER ASSIGNMENT**

## **Pet Care Hub Application**

**By : Anush Priya T**

# Introduction

- The Pet Care Hub is a mobile application designed to centralize essential pet care resources for pet owners.
- It aims to simplify pet management, connect owners with vital services, and foster a supportive community.
- Key functionalities include pet profiles, veterinary services, product purchases, community forums, and emergency contacts.

# **Pet Care Hub Core**

## **Features:**

### **1.User Authentication :**

1. Secure login and registration.

### **2.Pet Products & Services Listings:**

1. Listings fetched from integrated APIs or databases.

### **3.Local Database for Pet Profiles & Reports (SQLite):**

1. Local storage for user data.

### **4.Multi-language Support (Localization):**

1. Support for multiple languages.

### **5.Interactive UI with Maps & Calls:**

1. Map integration and direct call functionality.

# **Pet Care Hub Tech Stack**

## **Technologies:**

- 1.Flutter for Frontend
- 2.Firebase for Authentication
- 3.SQLite for Local Data Storage
- 4.API for Pet Services & Products
- 5.Dart Programming Language

# Pet Care Hub Code Structure

- GridItem Widget:**

Displays navigation options on the Home screen.

- Firestore Authentication:**

Implements user login and signup functionality.

- DBHelper Class:**

Manages SQLite database for local data storage.

- API Integration:**

Fetches data for services and products from external APIs.

# Pet Care Hub Development Challenges

- **API Data Integration:**

**Challenge:** Ensuring consistent and reliable data from external APIs.

**Solution:** Implemented robust error handling and data caching.

- **Local Data Management (SQLite):**

**Challenge:** Efficiently managing and querying local data.

**Solution:** Optimized database schemas and queries.

- **User Authentication:**

**Challenge:** Securely managing user authentication and data.

**Solution:** Utilized Firebase Authentication SDK and best practices.

- **UI Responsiveness:**

**Challenge:** Maintaining a smooth and responsive UI across different devices.

**Solution:** Implemented lazy loading and optimized widget rendering.

# **Pet Care Hub - Next Steps**

## **Future Enhancements:**

### **1.In-App Vet Consultations:**

1. Implement video or chat-based consultations with veterinarians.

### **2.Pet Tracking & Location Services:**

1. Integrate GPS tracking for pets and location-based services.

### **3.Personalized Pet Care Plans:**

1. Develop AI-driven personalized care plans based on pet profiles.

### **4.Community Events & Meetups:**

1. Add features for organizing and finding local pet-related events.

# **Pet Care Hub - Summary**

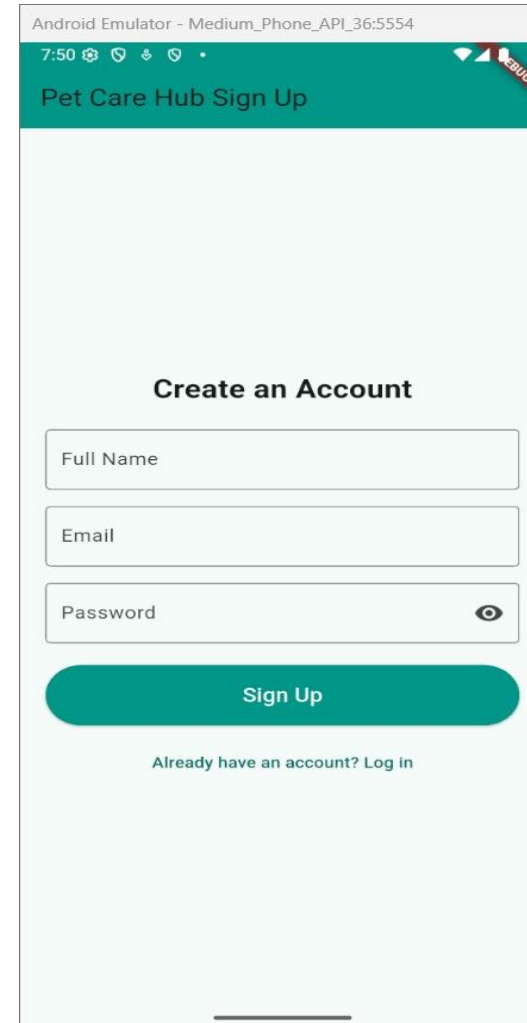
This project, Pet Care Hub, provides a comprehensive mobile solution for pet owners, integrating essential features such as pet profiles, veterinary services, product purchases, community forums, and emergency contacts. It demonstrates a well-structured Flutter application utilizing Firebase Authentication for secure user management, SQLite for efficient local data storage, and API integrations for dynamic content delivery. The application aims to enhance pet care management and foster a supportive community for pet owners.



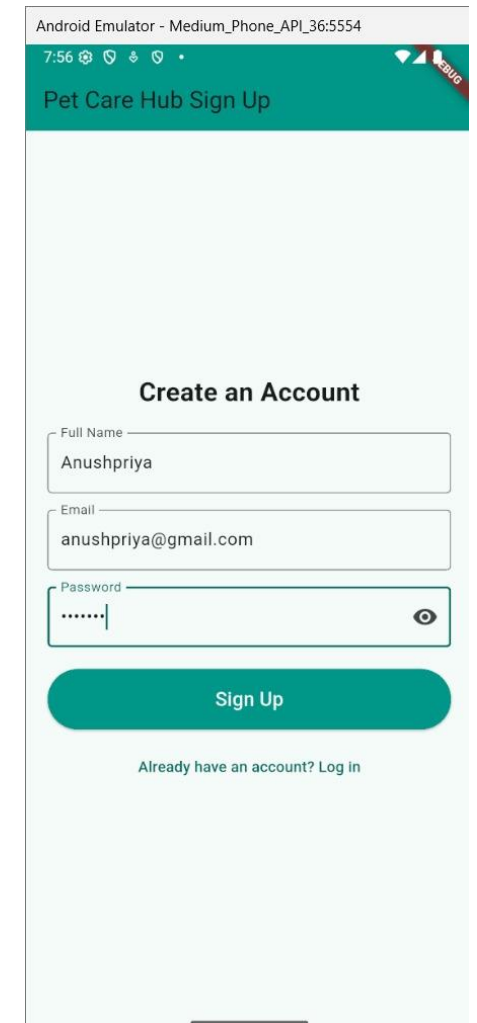
# Screenshots (Output)

## Sign-Up Page :

The Sign-Up Page in the Pet Care Hub app allows users to create an account using Firebase Authentication. This page consists of several key components that enhance usability and functionality.



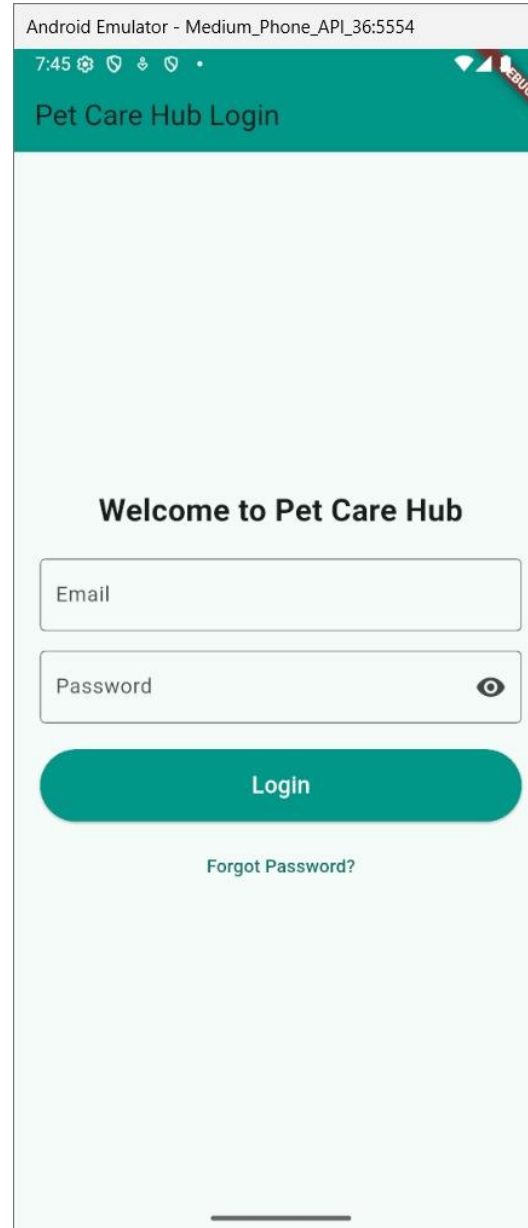
This screenshot shows the 'Pet Care Hub Sign Up' page in an Android emulator. The page has a teal header with the title 'Pet Care Hub Sign Up'. Below the header, the text 'Create an Account' is centered. There are three input fields: 'Full Name', 'Email', and 'Password'. The 'Password' field has a toggle icon (an eye) to the right. Below the input fields is a large teal button labeled 'Sign Up'. At the bottom, there is a link that says 'Already have an account? Log in'.



This screenshot shows the 'Pet Care Hub Sign Up' page in an Android emulator, similar to the first one but with sample data entered. The 'Full Name' field contains 'Anushpriya', the 'Email' field contains 'anushpriya@gmail.com', and the 'Password' field contains '.....'. The 'Sign Up' button and the 'Already have an account? Log in' link are also visible.

## Login Page

The Login Page in the Pet Care Hub app allows registered users to sign in using their email and password. It ensures a smooth and secure authentication process while maintaining a user friendly interface.



Android Emulator - Medium\_Phone\_API\_36:5554

7:45

Pet Care Hub Login

Welcome to Pet Care Hub

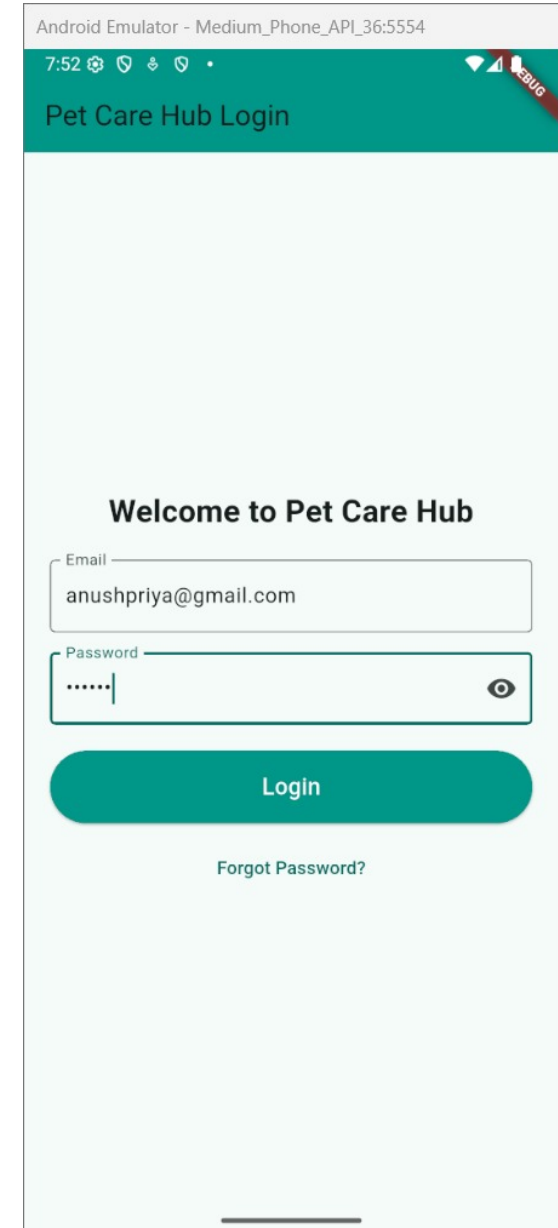
Email

Password

Login

Forgot Password?

This screenshot shows the initial login screen of the Pet Care Hub app. It features a teal header with the app name and a light blue background. The login form consists of two input fields, 'Email' and 'Password', followed by a teal 'Login' button and a 'Forgot Password?' link.



Android Emulator - Medium\_Phone\_API\_36:5554

7:52

Pet Care Hub Login

Welcome to Pet Care Hub

Email  
anushpriya@gmail.com

Password  
.....

Login

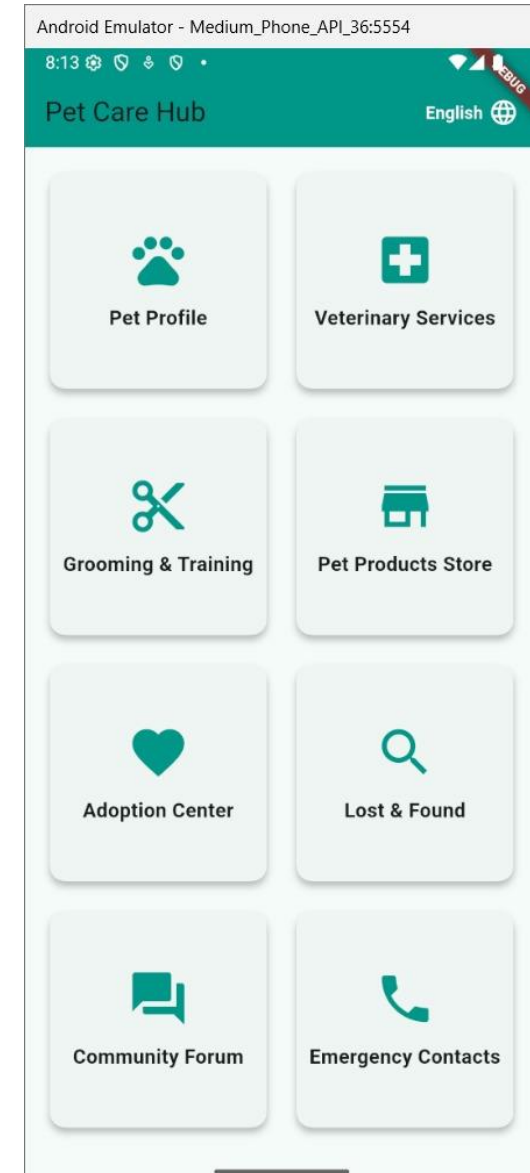
Forgot Password?

This screenshot shows the login screen with the email field filled with 'anushpriya@gmail.com' and the password field filled with masked characters. The 'Login' button and 'Forgot Password?' link are still visible.

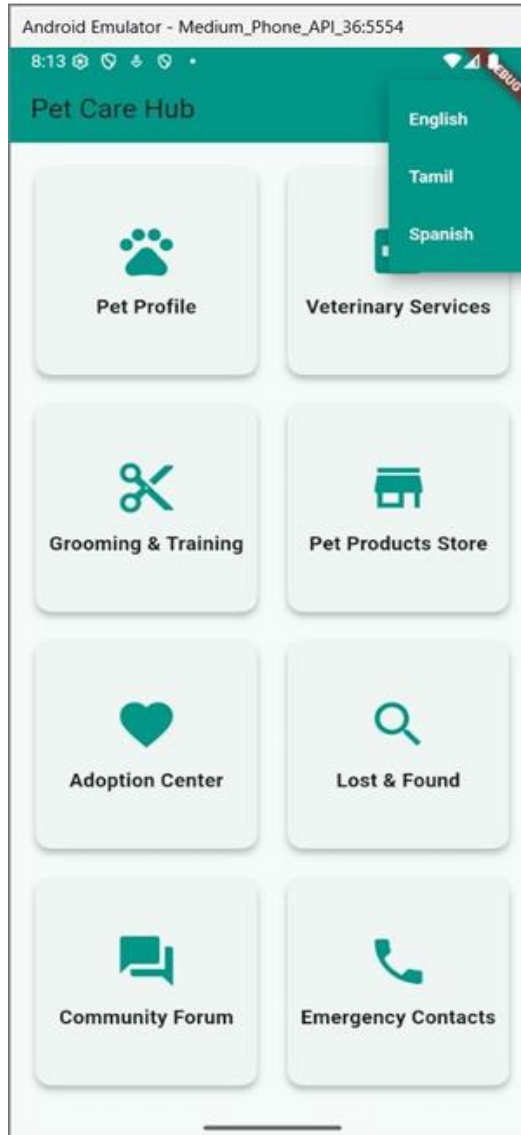
# Home Page :

The Home Page (Dashboard) is the central navigation hub for the Pet Care Hub app. It provides users with quick access to various pet-related services in a clean and structured layout.

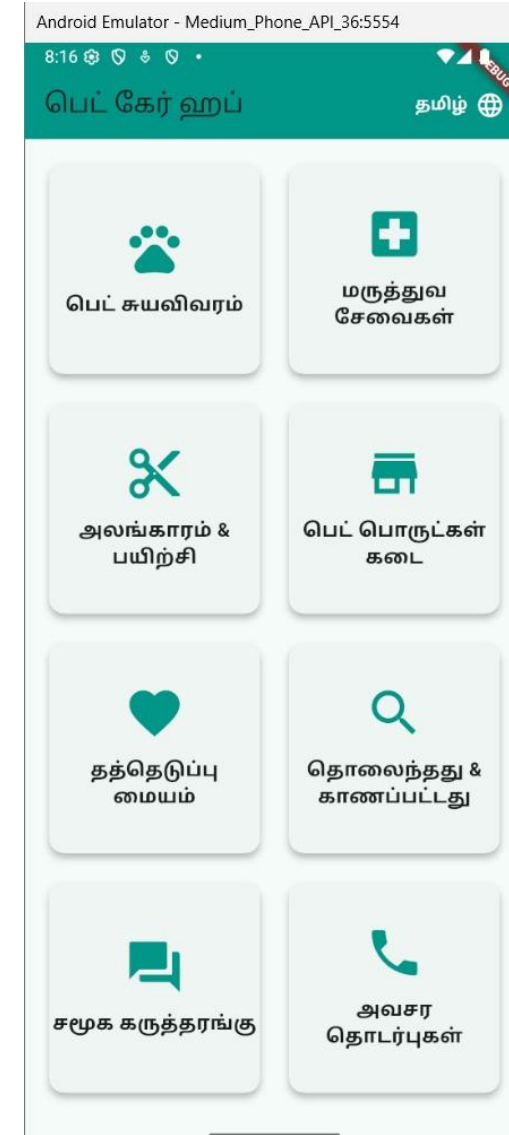
- Pet Profile
- Veterinary Services
- Grooming & Training
- Pet Products Store
- Adoption Center
- Lost & Found
- Community Forum
- Emergency Contacts



# Localization



- Clicking the globe icon ( ) opens a dropdown menu listing multiple language options.
- Users can select from English, Tamil, and Spanish in the given example.
- Once a language is selected, the app updates its content accordingly.



# Pet Profile Page

Android Emulator - Medium\_Phone\_API\_36:5554

8:29

## Pet Profile

Pet Type  
**Dog**

Breed  
pomerian

Allergies & Special Conditions  
Environmental allergies

Owner Contact Number  
9874562135

Adoption Date  
12-12-2023

Adoption Source  
Shelter

Save Profile

Android Emulator - Medium\_Phone\_API\_36:5554

8:31

## Pet Profile

Pet Type  
**Cat**

Breed  
Persian

Allergies & Special Conditions  
Sensitive stomach

Owner Contact Number  
9874562135

Adoption Date  
1-07-2022

Adoption Source  
Rescue Center

Save Profile

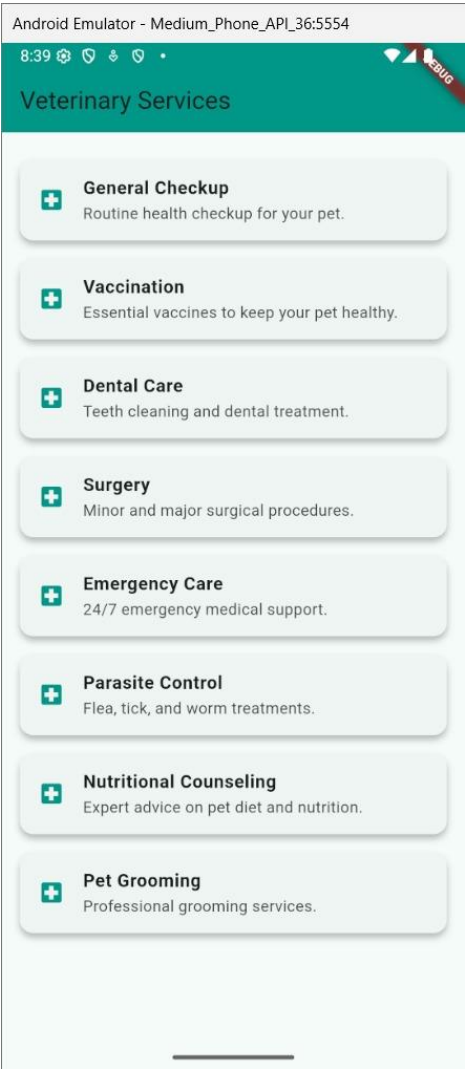
# Created a Firestore database

The screenshot displays the Google Cloud Firestore console interface. On the left is a sidebar with navigation options: 'Project shortcuts' (Firestore Database, Authentication), 'What's new' (Genkit, Vertex AI), and 'Product categories' (Build, Run, Analytics, AI, All products). The main area shows a breadcrumb path: Home > users > 9XI0NpvDwEUo.. At the top right of the main area are tabs for 'Panel view' and 'Query builder'. The main content is organized into three columns:

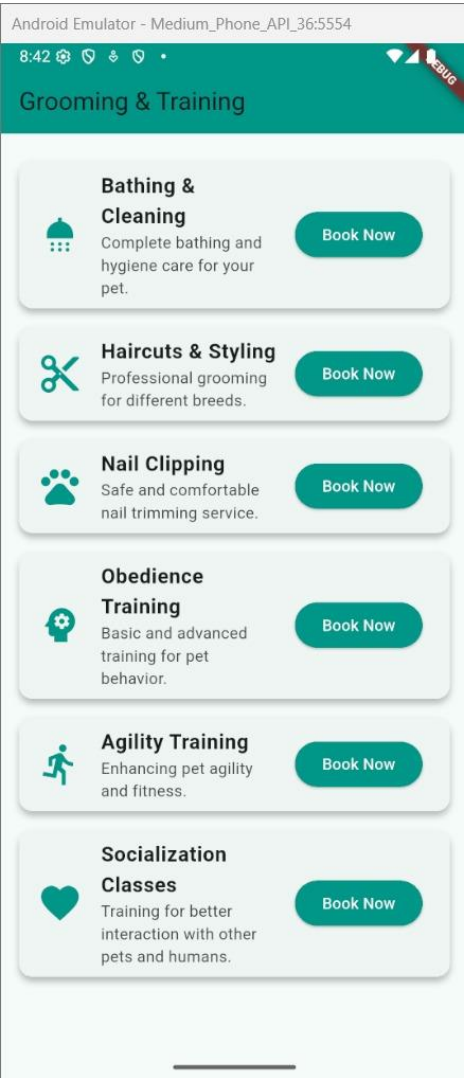
(default)	users	9XI0NpvDwEUobp5mUolXGtbUjAr1
+ Start collection	+ Add document	+ Start collection
users >	9XI0NpvDwEUobp5mUolXGtbUjAr1 > WqmhyBw1bGR1b03aKMM6wz4jLed2	+ Add field email: "anushpriya@gmail.com" name: "Anush Priya"

On the right side of the console, there are utility icons: a star, a help icon (?), a vertical scrollbar, and a moon icon for dark mode.

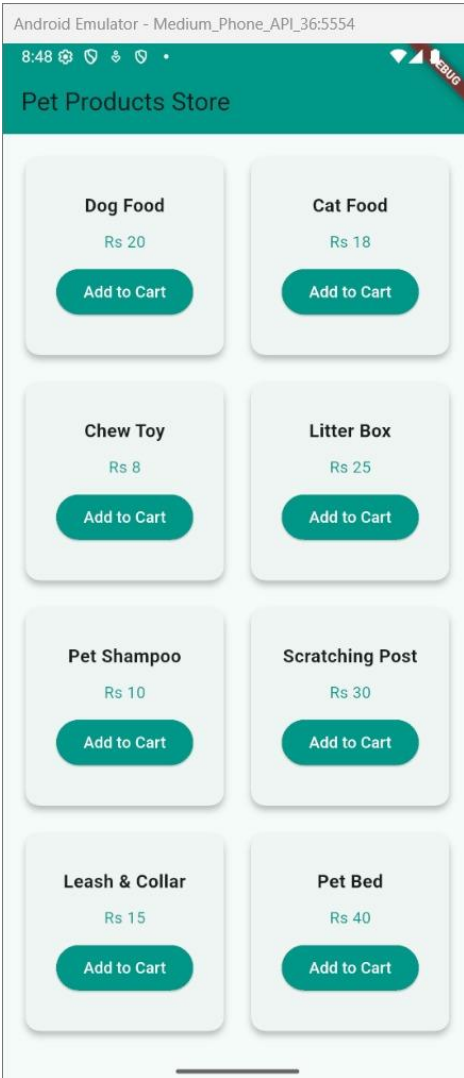
# Veterinary Services



# Grooming and Training

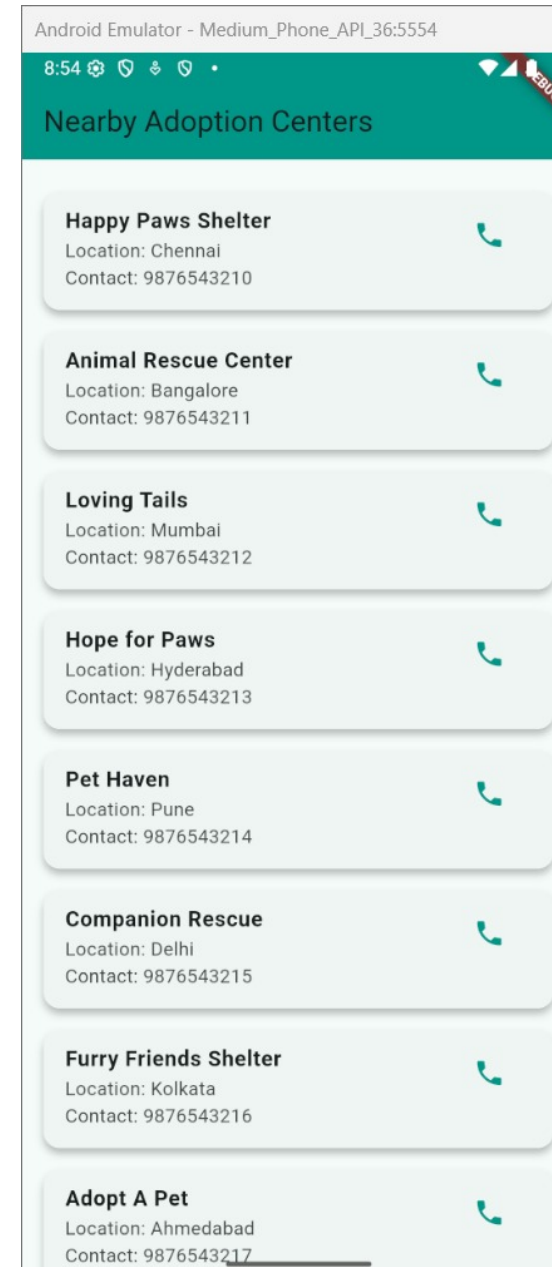


# Pet Product Store



## Nearby Adoption Centers :

This screen displays a list of nearby pet adoption centers. It fetches data from an API, showing each center's name, location, and contact details. Users can tap a phone icon to initiate a call to the center. While loading, it shows a progress indicator, and displays errors if the API call fails.





# Lost and found

Android Emulator - Medium\_Phone\_API\_36:5554

9:08

Lost & Found

Pet Type

Pug

Description

A small-sized dog with a wrinkled face and a curle

Location

chennai

Contact Number

6457895642

Report Pet

Lost & Found Reports

# Community Form

Android Emulator - Medium\_Phone\_API\_36:5554

9:11

Community Forum

Best Training Tips for Puppies

By: John Doe

Recommended Diet for Senior Cats

By: Sarah Lee

Looking for a Good Vet in My Area

By: Michael Brown

How to Handle Pet Allergies?

By: Emily Davis

Fun Outdoor Activities with Dogs

By: David Wilson

# Emergency Contacts

Android Emulator - Medium\_Phone\_API\_36:5554

9:20

Emergency Contacts

Veterinary Emergency

98765 43210

Animal Control

12345 67890

Pet Poison Helpline

800-213-6680

Local Animal Shelter

555-678-9012

Lost & Found Pets

444-123-5678

24/7 Vet Clinic

999-555-3333

Pet Adoption Center

777-888-9999

Pet Rescue Team

666-222-4444

Wildlife Rescue

333-777-1111

**Thank You**