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MOBILE APPLICATION PROGRAMMING

GROUP NAME:
SCRUMSHANK REDEMPTION

PROJECT PROPOSAL:
PetPal – Smart Pet Care Management Mobile Application

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1.0 Project Background and Problem Statement

With the increasing number of pet owners, managing pet care services such as veterinary visits, pet sitting, and medical record keeping has become more complex. Currently, many pet owners rely on fragmented solutions such as manual records, phone calls, or messaging applications to manage appointments and communicate with veterinarians or pet sitters. This often leads to inefficiencies, missed appointments, poor record management, and lack of centralized communication.

Veterinarians and pet sitters also face challenges in managing bookings, tracking job status, and maintaining clear communication with pet owners. The absence of a unified digital platform results in duplicated work, delayed responses, and limited transparency.

PetPal is proposed to address these issues by providing a centralized mobile application that connects pet owners, veterinarians, and pet sitters. The application aims to streamline pet care management by integrating registration, booking, communication, reporting, and notification features into a single, user-friendly system.

2.0 Project Objectives and Scope

2.1 Project Objectives

The main objectives of the PetPal mobile application are:

To provide a seamless and secure registration system for pet owners, veterinarians, and pet sitters.

- To allow pet owners to manage pet profiles, including medical history and images.
- To enable efficient appointment booking and service request workflows.
- To facilitate real-time communication between pet owners and service providers.
- To generate activity reports and allow export in PDF or CSV format.
- To deliver timely notifications for bookings, approvals, and reminders.
- To ensure application quality through automated testing and continuous integration.

2.2 Project Scope

The scope of the PetPal system includes:

- Role-based authentication for Pet Owners, Veterinarians, and Pet Sitters.
- Pet profile management with image uploads.
- Browsing directories of veterinarians and pet sitters.
- Appointment and service booking workflows.
- Push notifications using Firebase Cloud Messaging (FCM).
- Real-time chat functionality between users.
- Report generation and file export features.
- Automated testing and continuous integration support.

Features such as payment processing are considered out of scope for this project.

3.0 Target Users and Identified User Needs

Target Users

3.1 Pet Owners

- Manage pet profiles and health records
- Book veterinary appointments and pet sitting services
- Receive notifications and reminders
- Communicate with veterinarians and pet sitters

3.2 Veterinarians

- Manage clinic profiles and availability
- View, approve, or reject appointments
- Update appointment status and records
- Communicate with pet owners

3.3 Pet Sitters

- Manage service availability
- Accept or reject service requests
- Track job progress
- Communicate with pet owners

Identified User Needs

- A centralized platform for pet care management
- Simple and reliable booking and scheduling
- Clear communication between users
- Easy access to pet records and service history

- Real-time updates and notifications

4.0 Overview of Proposed Application Features

The proposed PetPal mobile application includes the following key features:

- Role-based user registration and login system.
- Pet profile management with medical history and image uploads.
- Veterinarian and pet sitter directory browsing.
- Appointment booking and service request management.
- Approval and rejection workflows with status tracking.
- Real-time chat between users.
- Push notifications for bookings, approvals, and reminders.
- Activity report generation with PDF and CSV export options.
- Automated testing and continuous integration to ensure system quality.

5.0 Project Timeline and Development Milestones

The project follows the Agile Scrum methodology, with development divided into four sprints.

Each sprint focuses on delivering functional components of the system.

Sprint 1 (13 October 2025 – 26 October 2025)

- User authentication and role-based registration
- Profile management for all user roles
- Setup of testing framework

Sprint 2 (27 October 2025 – 9 November 2025)

- Pet management system
- Veterinarian directory browsing

Sprint 3 (10 November 2025 – 23 November 2025)

- Booking system implementation
- Pet sitter management
- Push notifications using Firebase Cloud Messaging

Sprint 4 (24 November 2025 – 7 December 2025)

- Activity reports and analytics
- Real-time chat functionality
- Report export (PDF and CSV)
- Continuous integration and automation setup

6.0 Conclusion

PetPal aims to modernize pet care management by providing a reliable, scalable, and intuitive mobile application. By integrating pet owners, veterinarians, and pet sitters into a single platform, the application improves efficiency, communication, and transparency. Through Agile development practices and continuous integration, PetPal ensures high-quality delivery and long-term maintainability, ultimately enhancing the overall pet care experience