**TailWag: A Dog Grooming Management App**

This application provides a user-friendly interface for scheduling appointments, viewing services, analyzing health data, and managing customer interactions. It’s ideal for organizations offering appointment-based services. This app also integrates technologies, including SQLite for database operations OpenAI’s ChatGPT-4o API for AI-based recommendations and Apple’s MapKit for location-based services.

**Table of Contents**

1. Introduction

2. Features

3. File Descriptions and Usage

4. Navigation Flow

5. [Technologies Used](#technologies-used)

6. Usage Instructions

**Introduction**

The Tailwag Application integrates innovative features to simplify appointment scheduling and service management. It leverages OpenAI’s ChatGPT-4 API for AI-driven pet health insights and Apple’s MapKit framework to embed a map for easier navigation in the “Contact Us” section.

**Features**

**1. Appointment Booking**

• Users can book appointments seamlessly.

• User can check previous bookings to prevent overlapping appointments.

**2. View Appointments**

• Displays scheduled appointments in a table view.

• Users can track their bookings

**3. Service Catalog**

• Lists all services with detailed descriptions.

• Users can check services available and each of its prices.

**4. Dog Health Analysis**

• Users input health data (e.g., weight, age) for personalized recommendations.

• ChatGPT-4 API processes input data and provides insights on diet, exercise, and health.

**5. Contact Us**

• Includes a map view powered by MapKit, displaying the organization’s location.

• Users can check available service centers directly from the app.

**6. Data Management**

• SQLite database for secure and efficient data storage.

• Handles all user, appointment, and service-related data.

**File Descriptions and Usage**

**1. ViewController.swift**

• **Purpose**: Serves as the main navigation hub for the app.

• **Usage**: Provides access to modules like appointment booking, service exploration, and health analysis.

**2. BookAppointmentVC.swift**

• **Purpose**: Facilitates the booking process.

• **Usage**: Contains forms for user input and stores appointment data in the SQLite database.

**3. AppointmentsViewer.swift**

• **Purpose**: Displays scheduled appointments.

• **Usage**: Retrieves data from the database and provides options to track the appointments.

**4. OurServicesVC.swift**

• **Purpose**: Lists all services offered.

• **Usage**: Users can explore services and navigate to the booking screen for selected services.

**5. DogHealthAnalysisVC.swift**

• **Purpose**: Provides AI-driven health analysis for pets.

• **Usage**:

• Accepts user inputs about the pet’s health.

• Sends data to ChatGPT-4o API for processing.

• Displays personalized recommendations based on the API response.

**6. ContactUsVC.swift**

• **Purpose**: Facilitates communication and navigation.

• **Usage**:

• Displays a form for user inquiries and feedback.

• Integrates a MapKit-powered map showing the organization’s location with directions.

**7. databasehelper.swift**

• **Purpose**: Manages database interactions.

• **Usage**:

• Helps to create and delete appointments as well as storing them for further tracking.

•Ensures data persistence across app sessions.

**Navigation Flow**

1. **Home Screen** (ViewController.swift):

• Access options:

• Book Appointment → BookAppointmentVC.swift

• View Appointments → AppointmentsViewer.swift

• Explore Services → OurServicesVC.swift

• Health Analysis → DogHealthAnalysisVC.swift

• Contact Us → ContactUsVC.swift

2. **AI Integration**:

• In “Dog Health Analysis,” inputs are sent to ChatGPT-4 API for recommendations.

• The API response is parsed and displayed in a readable format.

3. **MapKit Integration**:

• In “Contact Us,” MapKit displays the organization’s location with available centers.

4. **Data Management**:

• All user inputs and actions interact with the SQLite database for persistence and retrieval.

**Technologies Used**

1. **Programming Language**: Swift 5.0

2. **Database**: SQLite for local data storage.

3. **AI Integration**: Open AI ChatGPT-4o API for pet health analysis.

4. **Mapping Framework**: Apple’s MapKit for location-based services.

5. **Development Environment**: Xcode IDE for iOS development.

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**Usage Instructions**

1. **Launch the App**: Start the application to access the home screen. There are 4 buttons to navigate through the pages.

2. **Book Appointments**: Navigate to “Book Appointment” to schedule a new appointment. Input all the fields to book an appointment or to obtain a free health analysis of the dog.

3. **Explore Services**: Use “Our Services” to browse available options and proceed to book them.

4. **AI Health Analysis**:

• Navigate to “Dog Health Analysis.”

• Enter pet details like age, weight, and activity level.

• Receive personalized recommendations from Open AI ChatGPT-4o API.

5. **Find Us**:

• Go to “Contact Us” to view the map and get directions using MapKit.

6. **Manage Data**: Use “Appointment History” to review your bookings.