UID lab 6

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Aim:

The aim is to demonstrate the lifecycle stages of UI/UX design through the RAD (Rapid Application Development) model and develop a modular, interactive mobile application for smart pet care management using Figma as the prototyping tool.

The Rapid Application Development (RAD) model in User Interface Design emphasizes quick iteration and user-centered design by building functional prototypes early in the development process. Instead of investing excessive time in upfront documentation, RAD promotes continuous user feedback and iterative improvements. This agile, feedback-driven approach helps identify user needs faster, refines the app experience with each cycle, and ensures that the PetVerse platform evolves to meet real-world challenges of pet owners efficiently.

PROCEDURE:

Phase 1: Requirements Planning(Identify Key Features, Create a Requirements Document)

Phase 2: User Design (Display The Wireframe)

Phase 3: Construction (Test and Iterate)

Phase 4: Cutover(Finalize and Export)

Phase 1: Identify the Requirements

· Login / Signup Page

(Allow users to create an account as a pet owner or NGO and securely sign in.)

· Home Page with Featured Modules

(Display main modules like Lost & Found, Emergency Vet Help, Adoption Listings, Health Tracker, and Pet Social.)

· Search Functionality

(Allow users to search for lost pets, adoptable pets, nearby clinics, or other pet services.)

· Module Listing Pages

(Show list of pets under Lost & Found, available pets for Adoption, or nearby Services.)

· Pet Details Page

(Display pet name, breed, image, last seen location or adoption details, and contact option.)

· Report Lost / Found Pet Page

(Allow users to report a missing or found pet by uploading image, entering location, and providing contact information.)

· Emergency Vet Locator Page

(Allow users to find nearby veterinary clinics and emergency services using GPS and Maps.)

· Adoption Application Page

(Collect adopter's basic details and submit a request for adoption to the NGO or pet shelter.)

· Profile Management

(Update user information such as name, address, contact number, pet records, and view past reports.)

User Stories and Use Cases:

User Story 1:

As a registered user, I want to log in securely so I can access all pet care services.

· Use Case:

The user enters their email and password (or uses social login), successfully authenticates, and is redirected to the home page displaying modules like Lost & Found, Emergency Help, Adoption Listings, and Health Tracker.

User Story 2:

As a user, I want to browse pet care modules easily so I can find the services I need.

· Use Case:

From the home screen, the user selects a module such as "Lost & Found" or "Emergency Vet Help" to view the relevant details and actions available under that service.

User Story 3:

As a user, I want to report a lost or found pet quickly so that others nearby can be alerted.

· Use Case:

In the Lost & Found module, the user uploads a pet image, fills in pet details and location, and submits the report. The report is updated in real-time for nearby users within a 10 km radius.

User Story 4:

As a user, I want to locate emergency vet services easily during critical situations.

· Use Case:

In the Emergency Vet Help module, the user accesses nearby vet clinics and hospitals using GPS and can make a one-tap emergency call or get directions through Google Maps integration.

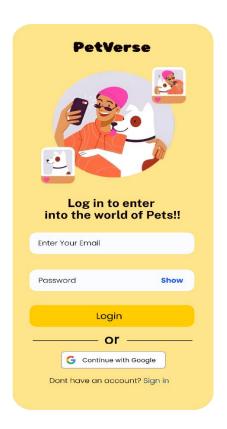
User Story 5:

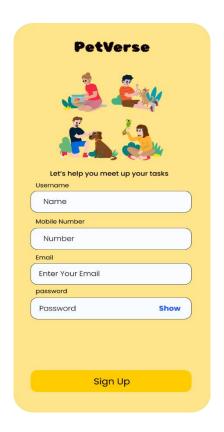
As a user, I want to adopt pets or post adoption requests so that I can find or help pets in need.

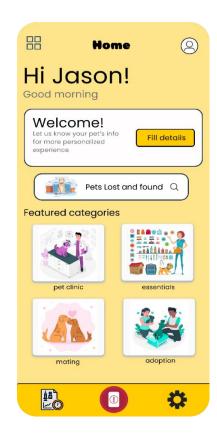
· Use Case:

In the Adoption module, the user browses available pets listed by NGOs, views their details, and submits an adoption inquiry directly from the app.

Phase 2: User Design:







Phase 3: Construction (Test and Iterate)

Test (n Times):

In this phase, the PetVerse app design was reviewed and tested multiple times by a group of users, pet owners, and stakeholders. Each testing round involved interacting with different modules and suggesting missing functionalities or improvements. Based on their feedback, iterative enhancements were carried out to strengthen usability, completeness, and user engagement.

Iteration 1:

→ User Feedback:

Users wanted an easier way to report a lost pet with quick image upload and location detection.

→ Action Taken:

The Lost & Found Reporting System was enhanced with automatic location fetching using GPS, and an image upload option directly linked to Cloudinary for faster and seamless posting.

Iteration 2:

→ User Feedback:

Users requested real-time chat features to connect quickly with pet communities and shelters for faster responses.

→ Action Taken:

A dedicated real-time Chat Module was integrated using Firebase Firestore, enabling users to message other pet owners, shelters, and vets instantly with support for media sharing.

Iteration 3:

→ User Feedback:

Users wanted personalized pet care suggestions based on breed without needing internet access.

→ Action Taken:

An offline Breed Care Tip Generator was added using TensorFlow Lite (TFLite), allowing users to receive instant health, grooming, feeding, and care reminders even without an internet connection.

Iteration 4:

→ User Feedback:

There was confusion about finding emergency vet clinics quickly during urgent situations.

→ Action Taken:

An Emergency Vet Locator module was created using Google Maps API integration, showing nearby clinics with one-tap SOS calling and navigation options.

Iteration 5:

→ User Feedback:

Users wanted a way to track and manage pet vaccination dates and health records within the app.

→ Action Taken:

A Vaccination & Health Tracker module was developed, allowing users to log vaccines, set reminders, and receive upcoming notification alerts for due vaccinations.

Phase 4: Cutover (Finalize and Export):

