**A PROPOSED OFFERING OF WEB BASED**

**PET MEDICAL RECORDS SYSTEM**

**FOR PETLINK VETERINARY CLINIC, 10TH AVENUE, CALOOCAN CITY**

A Thesis Project Presented to the

Faculty of Datamex College of Saint Adeline, Inc.

In Partial Fulfillment of the Requirements for the

Degree of Bachelor of Science in Information Technology

By:

Mamay, John Carlo P.

Remoto, Rachel

Solidum, Jasmin E.

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**REQUIREMENTS AND SPECIFICATION DOCUMENT**

**INTRODUCTION**

The purpose of this document is to present a clear and organized description of the requirements for the Web-Based Pet Medical Records System. It serves as a reference for all stakeholders involved in the project, including the development team, the project adviser, the client, and the system. The document ensures that there is a common understanding of the system’s objectives, features, and limitations before development begins.

**Overview**

The Pet Medical Records System is a web-based application designed to help veterinary clinics manage and store important information about pets and their medical history. The system will consist of a Frontend built with HTML, CSS, JavaScript, and providing a user-friendly interface for clinic staff.

The Backend will utilize Node.js or Python, allowing for efficient handling of requests and interaction with the database through structured APIs. Data will be securely stored in an SQLite database, ensuring easy deployment in an offline or local server environment.

The system will allow clinic staff to create and maintain pet profiles, which include details such as the pet’s name, breed, age, and the owner’s information. It will also provide features for recording medical history, including check-ups, treatments, and vaccinations. With these features, the clinic can ensure that accurate and updated records are always available whenever needed.

The main goal of this system is to replace the manual, paper-based process of record-keeping with a more reliable, secure, and efficient offline web solution. By doing so, it will help the clinic improve its daily operations, minimize the risk of misplaced or incomplete records, and provide faster service to pet owners.

**Scope**

This section explains what the system will include, what it will not include, and the limitations that must be considered during development.

The system will focus on the following key functions

* Pet Profile Management: Storing pet details such as name, age, breed, and owner information.
* Medical Records Management: Recording and maintaining information on check-ups, treatments, and vaccinations, managed by clinic staff and overseen by the **staff**
* User Access: Providing secure login for veterinary clinic staff to ensure that only authorized users can manage records.
* Reports: Producing medical history and medical records that can be viewed or printed for reference, reference by the clinic staff or the **staff**

The scope of the system also identifies its limitations and exclusions

* The system will operate as an offline web application through Sqlite and will not require internet access.
* It will not include features for scheduling appointments, billing, inventory management, or automated reminders.
* It will be developed using the tools available, specifically HTML, CSS, JavaScript, (via Sqlite). with system configuration and maintenance handled by the **staff.**

**FUNCTIONAL REQUIREMENTS**

These requirements define the specific functions and capabilities that the system must perform to meet the needs of its users.

**Functional Requirements**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Requirement ID | Requirements Description | Priority | Dependencies | Acceptance Criteria |
| FR-01 | The system shall allow authorized clinic staff to log in using a username and password through a web-based login page. | High | Database setup | Valid users can log in; invalid users are denied. |
| FR-02 | The system shall allow Staff to add, edit, delete, and view Pet Profiles (name, species, breed, age, owner info). | High | FR-01 | Pet profiles save correctly in the database and display in the system. |
| FR-03 | The system shall allow Staff to record medical history for pets, including Check-ups, Treatments, and Vaccinations. | Medium | FR-02 | Records are linked to the correct pet and displayed in the proper tab. |
| FR-04 | The system shall generate a Medical History Report for a selected pet. | Medium | FR-03 | Report shows pet details and all medical entries; print preview works. |

*Table 1. Functional Requirements*

**Future Enhancements**

|  |  |
| --- | --- |
| Enhancement ID | Enhancement Description |
| FE-01 | Auto logout after inactivity for better security. |
| FE-02 | Account lock after multiple failed login attempts. |
| FE-03 | Audit logs for tracking user activities (create, update, delete). |
| FE-04 | Reference lists (e.g., species, breed, vaccines) with dropdowns. |
| FE-05 | Timeline view of medical records per pet. |
| FE-06 | Export reports directly to PDF format. |
| FE-07 | Automatic scheduled database backup. |

*Table 2. Future Enchancements*

**NON-FUNCTIONAL REQUIREMENTS**

These requirements ensure that the Pet Medical Records System is not only functional but also reliable, secure, and user-friendly.

**Performancen**

* System responds within 4–5 seconds when loading pet profiles or medical records.
* The system shall run smoothly on a standard desktop computer with at least:
  + At least intel i5 processor or equivalent
  + 8GB RAM
  + 500GB
  + Windows or Linux – based OS
  + Local server environment (SQlite)

**Usability**

* The web interface shall be simple and easy to navigate, using a menu/tab-based design, accessible to both staff**.**
* Icons, buttons, and labels shall be clear and consistent across all pages to support intuitive use by the staffand clinic users.
* Error messages shall be user-friendly and provide guidance on how to fix input errors.
* Basic training shall enable staff to learn the system within 1–2 hours of use.

**Reliability**

* The system shall be available whenever the clinic’s computer and local server (SQlite) are running, with 99% uptime under normal conditions as monitored by the **staff**
* In case of sudden power failure, the SQlite database shall remain intact without losing previously saved records.

**Security**

* The system shall require users including the **staff,** to log in with a valid username and password before accessing records.
* Only authorized veterinary clinic staff and the system **staff** shall have access to the system..

**Scalability**

* The system shall allow the addition of new pet profiles, medical records, and user accounts without modifying its core design.
* The system shall be designed to support future expansion, such as online access or appointment scheduling. which can be managed and configured by the **staff.**

**Maintainability**

* The system shall follow a modular code structure (separating front-end, back-end logic, and database access).
* The database design shall maintain proper relationships (one owner → many pets; one pet → many records).
* The system shall allow minor changes (e.g., adding a new field in a form) without a full redesign.

**USE CASES**

This section describe how users interact with the system to accomplish specific tasks. Each use case includes the actors, preconditions, postconditions and alternate flows to provide a clear understanding of the system’s functionality.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Case ID | Name | Actors | Description | Preconditions | Postconditions | Alternate Flows |
| UC-01 | User Login | Vet Staff | A user logs in using a valid username and password to gain access to the system. | The system is running, and a user account already exists in the database. | User is logged in and can access all system features intended for veterinary staff. | If invalid credentials are entered, an error message is displayed. |
| UC-02 | Manage Pet Information Records | Vet Staff | The clinic staff can add, edit, view, and update pet profiles, including details such as pet name, species, breed, age, and owner information. | The user is logged in and the system is running. | Pet information is stored in the database and can be viewed or updated by the staff. | If invalid or duplicate data is entered, the system displays an error message. |
| UC - 03 | Manage Medical Records | Vet Staff | The clinic staff can add, edit, and view medical history for pets, including check-ups, treatments, and vaccinations. | The user is logged in and the system is running. | Medical history is stored in the database and linked to the correct pet. | If invalid or incomplete data is entered, the system displays an error message. |
| UC-04 | GenerateReports | Vet Staff | The clinic staff generates a pet’s Medical History report. | The pet must have at least one medical record. | Report is generated, displayed, and optionally printed. | If no medical records exist, the system displays “No data available.” |

*Table 3. Uses Cases*

**DATA REQUIREMENTS**

This section describes the data entities, their attributes, and the relationships among them. Although the system interface combines pet and medical record input in a single form, the backend database keeps them in separate but linked tables. This ensures proper organization, easier maintenance, and data consistency.

**Data Entities**

* Medical records (Check up, Vaccination and Treatment)
* Pets Owner (Name, Species, Breed, Sex, Age, Color/markings)
* Users (staff)

**Relationships Between Entities**

* Medical records, such as check-ups, vaccinations, and treatments. This helps track the pet’s complete medical history
* **Pet owner** can have **many pets** registered under their name. This represents real-world situations where a single person owns multiple animals, such as dogs, and cats,
* User can manage multiple pet profiles in the system. This allows the staff to input and update information for all pets they are responsible for

**ASSUMPTIONS AND CONSTRAINTS**

This section defines the assumptions made during the requirement gathering and the constraints that may affect the development of the Pet Medical Records System. These help clarify the conditions under which the system will operate.

**Assumptions**

1. Hardware Availability - The clinic has at least one working desktop or laptop where the system can be installed.
2. Operating Environment - The system will be used on a Windows-based computer (Windows or Linux-based OS).
3. User Knowledge: - Clinic staff have basic computer literacy and can learn the system with minimal training.
4. Single Location Use - The system will be used only within the clinic and will not require internet access.
5. Data Entry - Clinic staff will input accurate and complete information when creating pet records and medical records.

**Constraints**

1. Platform Constraint -The system will only run on desktop and laptop computers and is not supported on mobile devices.
2. Technology Constraint – The development tools are limited to HTML, CSS, and JavaScript for the front-end and SQLite for the database.
3. Offline System – The system is strictly for offline/local installation and does not include online or mobile access.
4. Exclusions - The system does not include appointment scheduling, billing, inventory management, or automated reminders.

**GLOSSARY**

This section defines the key terms used in the Pet Medical Records System requirements specification. It ensures that all readers share the same understanding of the terms.

* **Pet Profile.** A record containing detailed information about a pet, including its name, species, breed, sex, age, color/markings, and owner details.
* **Owner.** The person who brings a pet to the clinic and whose details are stored in the system for contact and record linkage.
* **Medical Record.** Any entry related to a pet’s health, such as check-ups, treatments, and vaccinations, stored in the system and linked to a pet profile.
* **Check-up Record.** A medical entry that describes the findings, notes, or diagnosis during a veterinary consultation.
* **Vaccination Record.** A medical entry that documents vaccines given to a pet, including dosage, date, and next due date.
* **Database.** A structured collection of data managed using SQLite, which stores all information about users, pets, owners, and medical records.
* **User Account.**. A registered login credential in the system, consisting of a username, password, and assigned role ( Staff).
* **Report.** A formatted document generated by the system to summarize medical history or vaccination records of a pet, which can be viewed, printed, or saved.
* **Backup.** The process of saving a copy of the database to a safe location for recovery in case of data loss.
* **Restore.** The process of loading a previous backup into the system to recover data.
* **Primary Key (PK).** A unique identifier for each record in a database table.
* **Foreign Key (FK).** A database field that creates a relationship between two tables by linking a record to another entity.

**REVISION HISTORY**

This section keeps track of all changes made to the document. Each revision includes the version number, date, description of changes, and the person responsible. It ensures that the document remains updated and traceable.

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Description of Changes | Author/Editor |
| 1.1 | 07/13/25 | The first revision of the project where many errors in format needed to be corrected | Solidum, Jasmin E. |
| 1.2 | 07/25/25 | The content of the document was further expaneded | Remoto, Rachel |
| 1.3 | 08/28/25 | All formats, tables, and figures in the project proposal and requirements document were good format | Solidum, Jasmin E. |
| 1.4 | 08/30/25 | The requirements document were expended, and some parts of the documents not related to the system were revised | Remoto, Rachel |

*Table 4 Revision History*

**APPENDIX**

This section contains supporting materials that provide additional details for better understanding of the system. These include diagrams, mockups, and other references that were used in the development of the proposed system.