

# Online Portal for Data Medical Tracking for Canines with Disease Diagnosis

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**Abstract:** Electronic health records are used to extract patient's information instantly and remotely, which can help to keep track of patients' due dates for check-ups, immunizations, and to monitor health performance. Pet care project deals with problems faced in pet services. This project will bring together pet owners and people willing to provide services together. This gives pet owners the ability to choose the types of services they need. The Front-end of the project is designed using HTML and CSS language, back end uses JavaScript language, the database using MySQL, and server-side communication using PHP language. After the language selection phase was complete, then the second phase started. The second phase consisted of creating the layout of front-end pages keeping in mind the relationship between them, the functionality of those pages, the designing data tables, and the deciding relationship between the data tables and how the searching mechanism will work. Considering all the criteria of the project was split into 5 parts: coding front-end pages, coding back-end according to front-end, designing and writing database, writing server-side code for communication between back-end and database and last were testing. The website has three different portal's - user, doctor, and admin. The admin manages the complete website and has control over user and doctor. All the three contains different sub tabs. It shows all the medical history of the pet. The user can book the appointment through the portal. It gives the remainder of the date schedule for check-up and vaccination. The doctor can provide prescription through portal and user can view and print it online. The pet complete medical history can be accessed through QR code by the user and doctor. The pet parent can analysis the pet health condition by visiting FAQ in website which contain short question-answer related to pet behavioural change which is commonly occurring in pets. This online portal helps the pet owner to take care of pet efficiently and doctor can give proper treatment to pet.

**Keywords:** Online portal, Data medical tracking, Disease diagnosis, Pet health, Pet, Healthcare

## I. INTRODUCTION

Google is the most searched website in the world. It receives approximately 5.6 billion searches a day. Around 30% of people visit Google to make appointments at various places like hospitals, shops, etc. In fact, according to PYMNTS.com, 88% of consumers will research product information before they make a purchase online or in the store. This buying behaviour emphasizes the importance of a website in the success of a business today. Consumers like to be informed of the products and services that are available. Websites make this information more readily available to them.

According to a study done by the American Pet Product Association (APPA), 68% of people have one or more pets. 90 million of those are dogs and 94 million of those are cats. The emotional attachment and connection that pet owners have with animals are immense. Pets are often thought of as family members. A great example of this is the new trend that has arisen in the last few years, celebrating pet birthdays. Since pets have an important role in the owner's lives, owners want to make sure their furry friends are well taken care of in their absence. Pet owners often search for reputable trainers, groomers, walkers, and part-time sitters. It can be difficult to find all these services in one place.

This project aims to solve the problems faced by pet owners and pet doctors. It helps pet owners find trainers, groomers, walkers, and part-time sitters in their area. Pet owners can search for all the services mentioned on the user portal for their pets on the day and date they want, check profiles, reviews, availability dates for check-up, and how much they charge for different service. As per the pet owner's requirements, he or she can book a service required and wait for the service provider to confirm the availability. Once the service provider confirms his availability, a pet owner can get the check-up done. The owner gets the remainder mail for the check-up. The service provider provides various services. The doctors can also easily check and treat the pet through this project. The previous medical history of pets can easily get through QR code to pet owner as well as doctor. This online portal helps the pet owner to take care of pet efficiently and doctor can give proper treatment to pet. This project is an exposition on the web application development lifecycle, problems faced, and goals achieved.

The "Online Portal for Data Medical Tracking for canines with Disease Diagnosis" project is a step forward in leveraging technology to improve the quality of pet healthcare. By providing a digital platform that enables pet owners and veterinarians to manage pet medical records more efficiently and effectively, this project has the potential to make a significant impact in the lives of pets and their owners.

## II. LITERATURE REVIEW

1. Daniele De Guzman, Samuel Mirasol, King Perez, and Grace Lorraine Intal. The given topic bases itself on the implementation of an online-based website application system for animal clinics and pet owners. The impact of Coronavirus-related events paved the way for innovative applications when purchasing goods and acquiring services.
2. Asih et al. the development of Information Technology is very fast and continuous, companies and organizations have tried to utilize tools and platforms to constantly attract and keep customers for their businesses to survive). One way is the implementation of E-commerce, which is where business activities are being done online and it is usually the purchasing and selling of goods.
3. Bayaton-Obispo. A good example of this is the e-commerce platform of Shopee, a marketplace where users can browse, shop, and sell with secure payment and logistic support. Small businesses can join at zero cost and they are provided with tools and functions to manage their products and customer relations. Additionally, Live Chat functions in Shopee allows users to communicate at their own time and convenience.
4. Canvas Solutions In the case of pet industry platforms, early application concepts such as "Pet Portals" are known to provide secure, private pet health websites that have been designed as human health portals where pet parents can access medical records, emails and online prescriptions. This implies a working relationship between veterinary clinics/grooming stations and the owner in relation to the health and service of the animal.
5. Leong. Given the rapid development of information communication technology (ICT) and smartphones, smart technologies, and application software have become an extensive and integral part of everyday life. Also, since the system that is most used by many industries is a traditional manual ordering system, where all information and work is recorded manually, which sometimes is also the cause of human error, it is not an efficient and effective work practice anymore. That is why a computerized system will help businesses in their daily routine to have a better daily management operation.
6. Garavand et al. Many clinics are getting easily crowded and have a long waiting time in order to get their appointment to their specific doctors that are usually using the traditional system for their scheduled appointments. An application schedule can help a lot of patients in order to have scheduled appointments in the clinic that it won't be a hassle to any patients, and they can easily schedule their appointments to their doctors.
7. Rice. The Groomk9 software is another concept. Because most groomers still use the traditional way to record their information in paper or in excel, GroomK9 manages customers, staff and their time and accounts, so it is a software that helps Dog groomer's business manage their day-to-day business. In addition, it was stated in the study that, because the cost must be flexible, fast set-up and able to grow along the line of business, the SOA cloud base is ideal for the grooming industry. Since many Dog Grooming businesses, do not use modern technologies to manage their business), it is considered to understand the age range given within the users of any considerable

- application. Mobile growth and unified Software as a Service - the based applications can be derived from the internet and easily accessible to those willing to create records and schedule appointments.
8. M. Chen, Y. Hao, K. Hwang, L. Wang, and L. Wang, Aim of this paper is to improve the savvy treatment using Machine Learning technology to simplify the decision support system. It is a comprehensive paper on the diagnosis of heart disease by monitoring a person's heartbeat. The framework grants you to set the requirements of your pulse. Subsequent to setting these limits an individual can begin to screen the heartbeat and at whatever point a person's heartbeat outperforms a particular level he get an admonition of high pulse and the danger of coronary failure or the heart attack. Author Ahmed M. Alaa and Senthil Kumar Mohan have experimented with a combination of different factors and obtained 88.7% accuracy with a random hybrid forest.
  9. B. Qian, X. Wang, N. Cao, H. Li, and Y.-G. Jiang, This Paper deals with classic supervised binary classification where it is given a number of attributes in the Dataset. The dataset includes Plasma glucose concentration Blood pressure (mm Hg), Body mass index Age (years) etc. A number of elements all with certain features is used to identify people affected by the disease. To tackle the problem, we should investigate the information, do any necessary changes, apply ML algorithm, train a model, check the exhibition of the prepared model and repeat with different algorithms until we locate the most exact outcome. The improvement of software or sites it is critical to recognize the framework necessities by appropriately gathering expected information to connect with provider and customer.
  10. IM. Chen, Y. Ma, Y. Li, D. Wu, Y. Zhang, and C. Youn, This Paper clarifies that there is a need to study and make a framework which will make it simple for an end-user to anticipate the perpetual disease without visiting a doctor or specialist for diagnosis. It is useful and simple to identify the Various Diseases through looking at Symptoms of patient's utilizing different strategies of Machine Learning Models. This section of the paper results the accuracy using different algorithms such as Decision Tree (DT) with accuracy of 90.2%, Random Forest (RF) with accuracy of 95.28% and NB with accuracy of 88.08%. This Paper clarifies that innovation has been further developed in wellbeing industry to give answers for the patients by giving ideas of trained professionals and facilities where to concede and which expert ought to be counselled for the particular disease. The medical care industry gathers information from the patient's data set by applying information mining and Machine Learning

### III. ANALYSIS OF PROBLEM

When we visit a veterinary hospital, it need time to get an appointment also it is difficult to carry the pet to the hospital without appointment being confirmed. Secondly, it is difficult to maintain the pet's medical history and sometimes the pet owner forget the check-up dates of their pets. Also, it is difficult to identify the changing behaviour of the pet. So according to that problem we try to solve the problem of pet parents we try to develop a webpage that gives the previous medical history of the pet and reminder of the dispensary.

The existing system for medical data tracking and disease diagnosis for pets lacks adequate security measures and does not provide a comprehensive view of a pet's medical history. Furthermore, there is no mechanism for owners to receive reminders for dispensary appointments. This results in potential security breaches and incomplete or inaccurate medical records, which can negatively impact pet health outcomes.

To address these issues, we propose developing an online portal that offers enhanced security features and comprehensive medical tracking for pets, including disease diagnosis and dispensary appointment reminders. The expected outcome of this proposed system is to improve pet health outcomes by providing owners with access to accurate and up-to-date medical records and timely reminders for dispensary appointments.

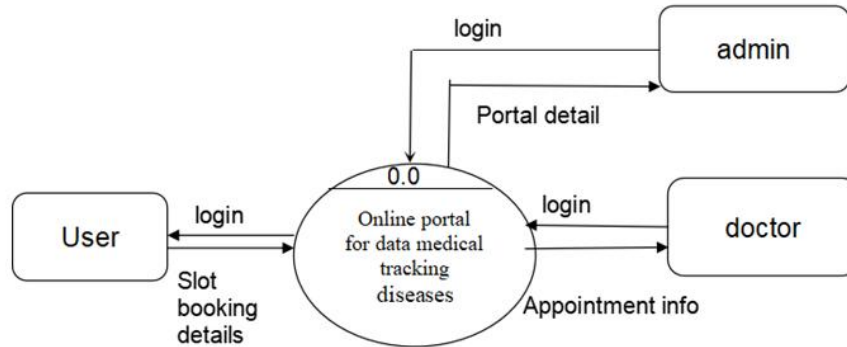
### IV. PROPOSED SYSTEM ANALYSIS AND DESIGN

We propose the development and implementation of an innovative online portal for comprehensive pet medical data tracking and management. This user-friendly system will provide pet owners with a secure platform to store and update their pet's medical information, while enabling veterinarians to access complete medical histories, manage medications, set reminders, and communicate with pet owners. The system will incorporate QR code authentication for secure access, send SMS and email notifications for medication reminders, and allow pet parents to assess their pet's health

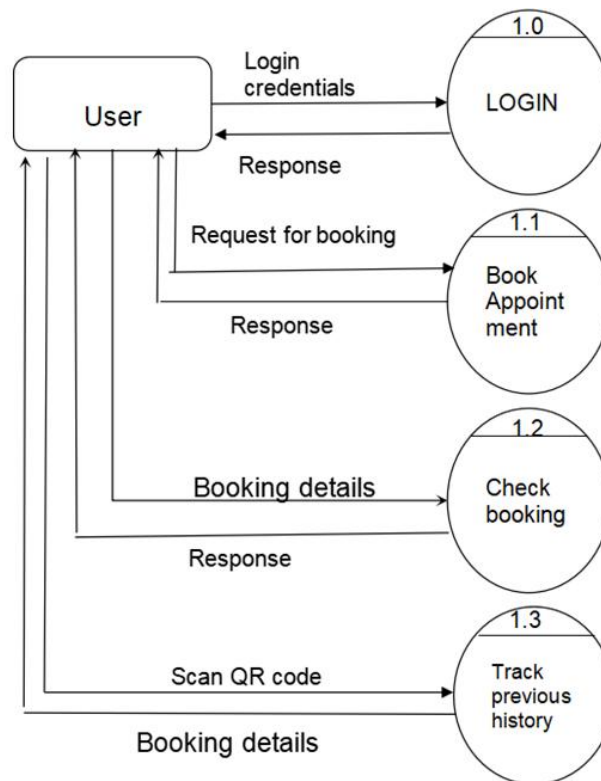
through behavioural response analysis. With our expertise and ongoing support, this portal will revolutionise pet healthcare, improving diagnosis accuracy, medication management, and overall pet well-being.

Data Flow Diagram

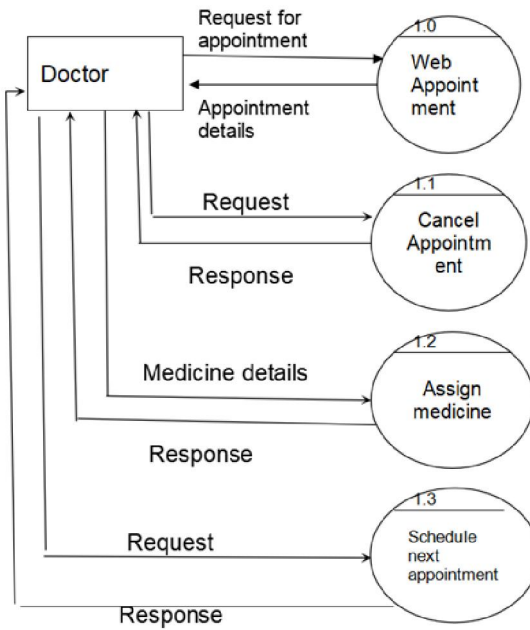
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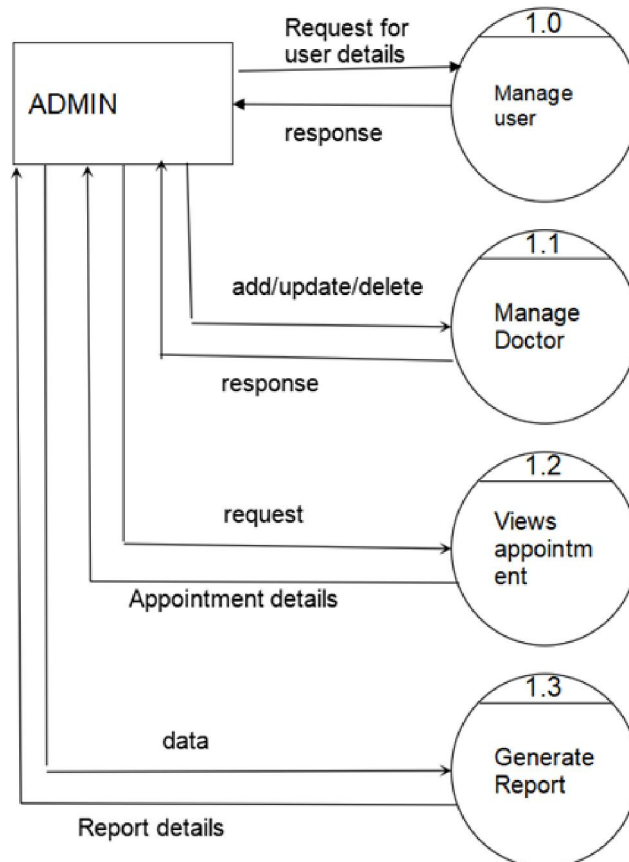
USER



**DOCTOR**



**ADMIN**



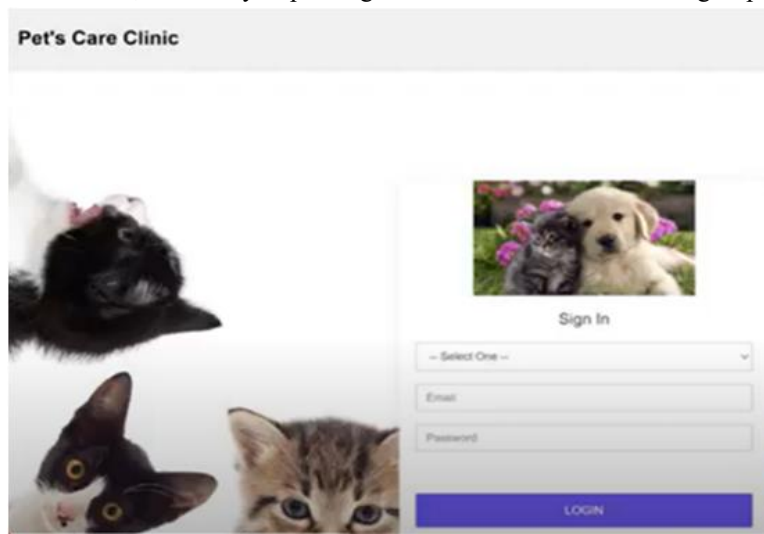
### V. OBJECTIVE

1. To design an E-Commerce Website application for animal clinics to provide convenience to both pet clinics and pet owners in their service and order transactions during pandemic.
2. The main objective of this project is to automate the process of serving towards the welfare of the pets by giving the abandoned pets a place of shelter, care for them with affection.

### VI. SYSTEM IMPLEMENTATION

#### Working:

The PetMedTrack (Pet Medical Tracking) portal combines the convenience of online data storage with advanced features for disease diagnosis, medication management, and health analysis. By providing a comprehensive platform for tracking and managing pet medical information, it aims to enhance communication and collaboration between pet owners and healthcare professionals, ultimately improving the overall care and well-being of pets.



#### Online Portal for Pet Data Storage:

The online portal provides a centralised platform for storing and managing pet data. Pet owners can create accounts and securely store their pet's medical information, including veterinary records, vaccination history, allergies, and any ongoing treatments. Once registered, pet owners can log in to their PetMedTrack account through the online portal using their credentials.

#### Control Panel for Doc and Pet Parent:

This portal includes separate control panels for both doctors and pet parents. The doctor's control panel allows them to access their patients' medical records, update treatment information, and set reminders for medications. Pet parents have their own control panel to view and manage their pets' medical information, receive notifications, and analyse their pet's health.

#### Displaying Complete Medical History:

When a pet is detected in the system, the portal retrieves the complete medical history associated with that pet. This includes past diagnoses, treatments, surgeries, medications prescribed, and any relevant test results. The medical history provides a comprehensive overview of the pet's health, aiding in accurate diagnosis and treatment decisions.

#### QR Code Access for Doctors:

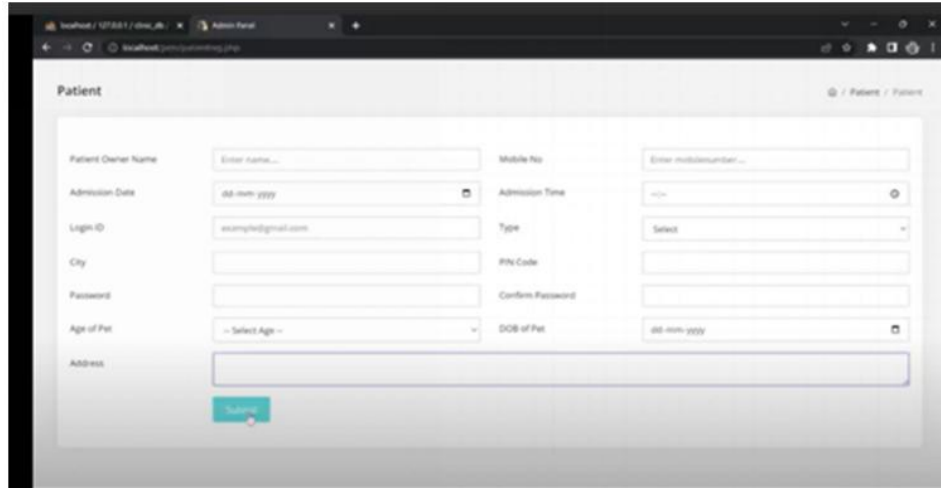
To ensure secure access, the system utilises QR codes. Doctors are provided with unique QR codes that they can scan to access a pet's account. This authentication process ensures that only authorised healthcare professionals can view and update pet information.

**Medication Management by Doctors:**

Doctors can add medications prescribed to a pet directly into the portal. They can specify the dosage, frequency, and duration of the medication. Additionally, doctors can set reminders for the next administration of medication, enabling effective medication management.

**Pet Owner Registration:**

Pet owners visit the website and create an account. They provide necessary details such as their name, contact information, and their pet's information (name, breed, age, etc.).



**Pet Data Storage:**

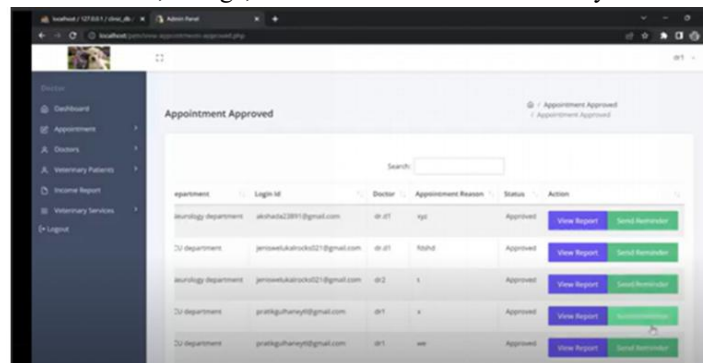
Pet owners can enter and store their pet's medical information, including veterinary records, vaccination history, allergies, and ongoing treatments. They can update this information as needed to keep it current.

**Doctor Registration and QR Code Generation:**

Doctors register on the platform and provide their professional information. The system generates a unique QR code for each doctor. During a veterinary visit, the doctor can scan the pet's QR code using a QR code scanner integrated into the PetMedTrack system. This action links the pet's account with the doctor's profile, allowing them to access the pet's medical information.

**Reminder Notifications:**

On the day of the medication reminder, both the pet parent and the doctor receive SMS and email notifications. These reminders help ensure timely administration of medications and assist in maintaining the pet's health. The notifications contain information about the medication, dosage, and instructions to ensure timely administration.



**Behavioural Response Analysis:**

Pet parents can assess their pet's health or detect potential fever symptoms through a selection of short questions regarding behavioural responses. The portal provides a set of options for pet parents to choose from, allowing them to indicate changes in appetite, energy levels, mobility, or any other relevant observations. Pet parents select the most appropriate response option based on their pet's behaviour. This information assists both pet parents and doctors in evaluating the pet's overall well-being and identifying potential health concerns.



**Analysis and Communication:**

Pet parents can analyse their pet's health based on the behavioural responses they provided. Doctors can review the analysis and interpret the information to evaluate the pet's overall well-being.

If there are any concerns, the doctor can communicate with the pet parent through the portal to provide guidance or schedule further examinations. The system provides a comprehensive online portal that facilitates efficient data storage, medication management, and communication between pet owners and doctors. It streamlines the process of tracking and managing pet medical information, ultimately leading to improved pet care and health outcomes.

**Software Requirement:**

1. PHP7.4 or Greater
2. XAMPP
3. VS code

**VII. APPLICATIONS**

1. Ideal for busy pet owners who want to ensure their pet's medical history and care are up to date.
2. Provides doctors with an efficient and streamlined way to manage pet medication and treatment plans.
3. Enables pet parents to easily monitor and analyze their pet's health and behavioral response.
4. Helps to improve pet health outcomes by providing comprehensive and accurate medical records.
5. Conveniently sends reminders to pet owners and doctors for upcoming dispensary appointments and medication schedules.

**VIII. ADVANTAGES AND DISADVANTAGES**

**Advantages:**

1. Enhanced security features for pet medical data.
2. Comprehensive medical tracking with disease diagnosis.
3. Convenient dispensary appointment reminders for pet owners.
4. Efficient medication management for doctors.
5. Easy analysis of pet health and behavioural response for pet parents



**Disadvantages:**

1. Can't work for Street Animals.
2. Not for Rural areas.
3. Unavailability of doctors may occur according to patients need.
4. Its time consuming for emergency condition.
5. Home treatment is not provided through this application.

**IX. CONCLUSION AND FUTURE SCOPE**

**Conclusion:**

The proposed online portal for data medical tracking for canines with disease diagnosis offers a comprehensive and secure solution for managing pet health. By allowing patients to easily input and track their medical information, such a portal can help to ensure that healthcare providers have access to accurate and up-to-date information about a patient's health status, enabling more effective treatment and better outcomes. In addition, the integration of machine learning algorithms and diagnostic tools can greatly enhance the accuracy and speed of disease diagnosis, improving patient outcomes and reducing the burden on healthcare providers. The system provides a control panel for doctors and pet parents, managed by the admin with enhanced security features and convenient reminders for dispensary appointments and medication schedules. Pet owners can easily access their pet's medical history, view the appointments, prescriptions given by the doctor and doctors can efficiently manage medication and treatment plans. This system allows for easy analysis of pet health and behavioural response through FAQ which contain short question-answer, which can help improve pet health outcomes. Furthermore, efforts should be made to ensure that the portal is accessible and user-friendly for all patients, including those who may have limited technology skills or resources.

Overall, the system provides a convenient and reliable way to manage pet health, benefiting both pet owners and medical professionals but must be designed and implemented thoughtfully to ensure its success.

**Future Scope:**

In the future, the online portal can be further enhanced with AI-powered disease diagnosis and predictive analytics, which can aid in early detection and treatment of pet illnesses. The portal can also be integrated with wearable devices and sensors to provide real-time monitoring of pet health, allowing for proactive healthcare management. Additionally, the system can be expanded to include telemedicine services, enabling remote consultations with veterinary professionals. These advancements can further improve the quality of pet care and health outcomes.

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