Review Article

Empowering Animal Welfare: Investigating the Development and Impact of a Pet Shelter Care Application

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I N F O

A B S T R A C T

For our group task, we will create a PET shelter care application. A user can use this programme to look for veterinarians, foster care for their animals, a lot more. We utilize numerous app creation platforms such as Django Framework in Python, Django REST framework, React Native, we will be creating data tables for Database Management Systems in software such as Apache Cassandra. In addition, we will use APACHE to speed up the server. Manage all of your animals, medical records, care records, volunteers, adoptions, web presence from a single platform. Keep everything, including thorough veterinarian data, adoption contracts, photos, documentation. Many automated processes are used to prevent repeated chores. With the stroke of a mouse, you may post the animals for adoption and create the adoption paperwork. Alerts for deworming, immunization, veterinarian care are available. The software creates an extremely optimized adoptive catalogue for the animals in your care, increasing user interaction and search result and social network rating.

Keywords: Animal Welfare, Pet Shelter Care Application

Introduction

In this application, a user can check for vets, foster care places for their animals, much more. Manage the animals of your organization and keep all the information needed: medical records, adoption status, whereabouts, care records, public profile. Everything is intuitively organized in categories for easy access. Keep all the medical records of the animals: X-rays, analysis, tests, blood work, etc. You can also track the veterinary treatments, medical conditions, allergies, surgeries and monitor medical incidents with photos and notes. When needed, share the complete medical record with any veterinarian or specialist. Track the legal situation of each animal; how they entered the organization, if they are available for adoption, in a waiting period, reserved or adopted[1]. Keep track of all the relevant paperwork and automatically generate the relevant contracts. Also, track home checks and evaluation of potential adopter families. Add your foster homes and assign the animals to them. View the state per foster home and give access to the foster family for the animals in their care. Exchange information with them and keep all the data in the animal's records. Receive reminders for everything that needs to be done, from medications to deworming and vaccinations. Schedule the veterinary care and create tasks for dissemination or for filing the legal paperwork. Split the tasks into different teams for ease and efficiency.[3-5]

Background

For the backend of the project, for the framework to be

implemented we will be using Django framework in python. Furthermore, we will be using Django rest framework for serialization and parsing of our data in JSON, we will also be using Django mongo dB engine in our project for our Django to database connection and hosting. Our project will have its frontend hosted and developed on the latest React native open-source framework hosted by Facebook developers and in which we will be using many frameworks such as native base, react-native elements, UI Kitten, furthermore. We have also been working with postman services to improve our backend efficiency compared to others model and alongside MongoDB we will be using pymongo to enhance our databases further. We are working with SQLite as a simple database until our frontend is properly implemented after which we will start working with mongodb.

ER Diagram

Figure 1

Data Flow Diagram

Figure 3

Methodology

We will work each module line wise and then proceed to the other. First, we will divide the whole structure of the project and divide it into various modules as stated in the project. Then we will start with the modules related to the backend, frontend and then move on to our databases later. For the backend of the project, for the framework to be implemented we will be using Django framework in python,

Figure 2

furthermore, we will be using Django rest framework for serialization and parsing of our data in JSON, we will also be using Django mongo dB engine in our project for our Django to database connection and hosting. Our project will have its frontend hosted and developed on the latest React native open-source framework hosted by Facebook developers and in which we will be using many frameworks such as native base, react-native elements, UI Kitten, furthermore. After the frontend is complete, we will now complete the modules related to the Database Management System. We will create the data tables for storing data used in the project in the DBMS using MongoDB along with Django by using its Django framework. After adding the data to the tables, we will finally move on to the backend Figure1-7.

Software & Hardware Requirement

Software

1. Django
2. JavaScript 1.8.5
3. Python 3
4. MongoDB
5. HTML 5
6. CSS 3
7. MQl
8. PHP 5.6+
9. CENTOS 7
10. APACHE and nginx
11. VARNISH cache
12. MBString extension
13. File info extension
14. ZIP extension
15. CURL extension
16. PyCharm Hardware:
17. 8GB RAM
18. Solid State Drive (SSD)
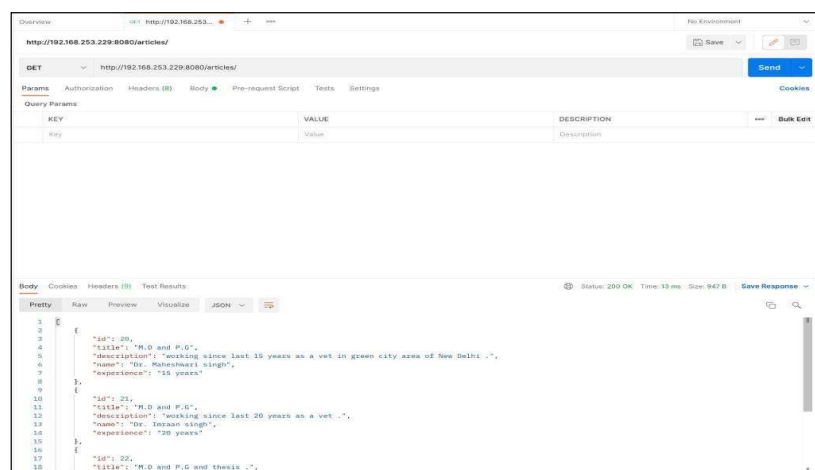19. Keyboard and Mouse
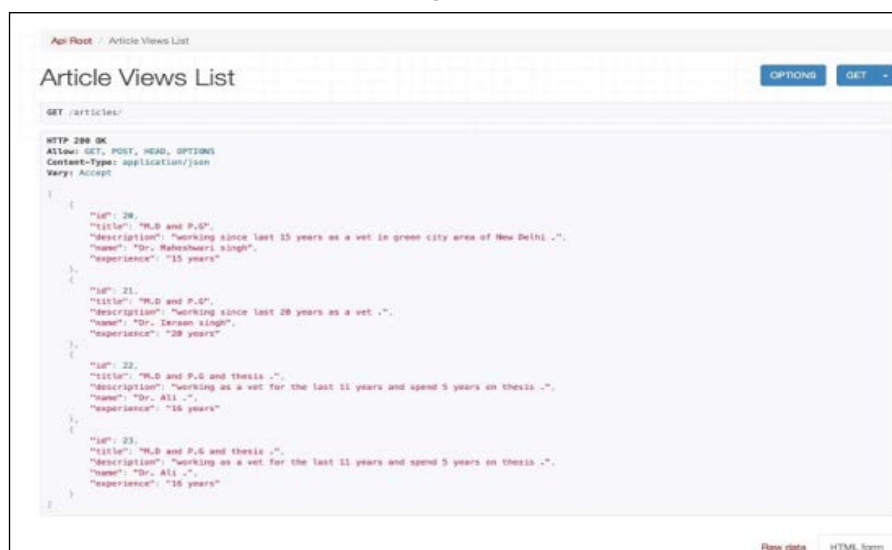20. Xenon processor
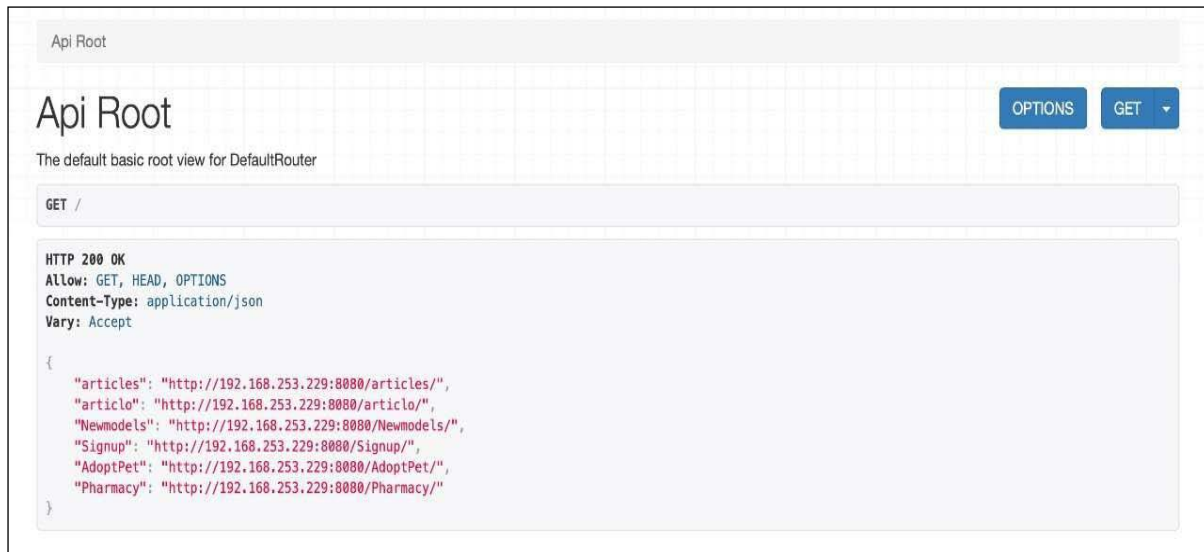
Output

Figure 4

Figure 5

Figure 6

Conclusion

A user may use this programme to look for veterinarians, foster care for their animals, a lot more. Handle your company's animals and have every requirement on hand: medical records, adoption status, locations, care records, public profile. Everything is conveniently organized into categories for quick access. Keep all of the animals' medical records, including X-rays, analyses, tests, blood testing. You may also use images and memos to keep track of veterinarian treatments, medical issues, allergies, procedures, as well as medical events. Share the whole medical record with any veterinarian or expert as required. Monitor each animal's legal status, including how they reached the organization, if they are offered for adoption, in a waiting period, quiet, or adopted. Maintain record of the required documentation and produce contracts automatically. Keep track of home inspections and possible adopting families.

Add your foster homes and place the animals there. Examine the state per foster home and provide the foster family permission to the animals in their care. Discuss details with them and note everything in the animal's records. Alerts of each thing that needs to be performed from meds to deworming and immunizations, are sent to you. Organize veterinary treatment as well as chores for distribution or completing legal papers. Divide the duties into various groups for convenience and efficiency.

Acknowledgement

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