

Database Management System

CSE-302

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Computer Science and Engineering (CSE)

Military Institute of Science and Technology (MIST)

Project Title

SNIFF-N-PAWS (Foster Home for Pets)

Group -01

Section-A

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Table of Contents

Project Description	2
Literature Reviews.....	3
1. Case Study: DBMS Pet Shop	3
2. Pet Care Management System Capstone Project Document.....	4
Design.....	6
ER Diagram.....	6
Schema Diagram	7
Implementation	8
Features And Functionalities	8
Functionalities of Admin	8
Functionalities of Veterinarian	8
Functionalities of Customer	8
Limitation:	9
Future Scopes:.....	9
References.....	9

Project Description

- Our primary objective is to create an online management system for an organization that provides a nurturing environment for pets who need special attention and shelter.
- Integrating a Database Management System would make cataloging the animals of the shelter based on their various traits and type more efficient and faster.
- Our project also aims to digitalize the entire adoption system for simplicity and ease of access for customers.
- Hence, wide spreading crisis care for animals in disastrous times i.e., pandemic and natural adversities.
- To summarize the whole project it simply shows how beneficial the real life implement will be. For a betterment of the animals around us, we can implement the project further

Literature Reviews

Our project primarily revolves around giving care to pets and for that purpose we reviewed two papers:

1. Case Study: DBMS Pet Shop
2. Pet Care Management System Capstone Project Document

1. Case Study: DBMS Pet Shop

1.1 Abstract

Creating a user-friendly interface that utilizes database management system to make operations in the pet shop efficient and real time in terms of orders, services and sales. It would be an automated companion of the owner to make operations inside business seamless as possible.

1.2 Outcome

- Records are kept of the employees that removes redundancy & inconsistency.
- Admin can oversee the entire system and grant privileges according to need.
- Product and service managing is done in multiple level to divide the workload.
- Bill generation and payment are fully automated.
- Integrating database makes it reliable.

1.3 Tool Used

Front End and Backend: Microsoft Visual Basic 6

Database: Microsoft Access

1.4 Limitation

- Limited services of MS Access in expanding the database.
- MS Visual Basic 6 is comparatively older than current development tools that offer much more ease of access.
- Animals are not categorized based on their traits and species.

2. Pet Care Management System Capstone Project Document

2.1 Abstract

The aim is to develop and improve the management system in a pet hospital. The pet care management system will perform record handling of pets, monitor pet health, provide medical history, generate reports of pets and provide expiry notification for different information.

2.2 Outcome

- Client information and records as well as pet's records are kept in an organized way.
- Consultation services aid a lot in the upbringing of the pets.
- Medical history helps to discern the symptoms of an unhealthy pet quickly.
- Medicine archives are handled neatly by the database management system.
- Client and patient scheduling are done efficiently.

2.3 Tool Used

Front End and Backend: HTML, CSS, JavaScript

Database: PHP and Oracle

2.4 Limitation

- Hardware specifications and requirement needed.
- Needs a significant power from the computer.
- Data security/ integrity may be compromised.
- Only two types of targeted users.

List of features:

The core features of this project are categorized into three types or privileges given to the admin, staffs or veterinarian and the customers respectively. They are as follows:

Admin Privileges:

- Monitoring the entire system and its employees.
- Managing records.
- Making changes and updates to the system.
- Managing donations and adoptions.
- Managing prices and service rates.
- Keeping track total daycare services of customer and rescued animals.
- Managing rescuer info, cabin info.

Veterinarian Privileges:

- Having their own profile that will keep track of their history with the organization.
- Finding his own shift and schedule.
- keeping track the animal he treats in which day.
- treating daycare and rescued animal.
- Able to insert animal health record and diseases.
- Deciding which animal will insert in which cabin based on their health record and diseases.

Customer Privileges:

- Customers can have their own profile that will keep track of their history with the organization.
- Overseeing all Day-care services.
- Donating through the website for the organization.
- can give feedback through the website for the organization's cause.
- Consulting with the management through customer care.
- Choosing whether to provide a foster home or adopt.

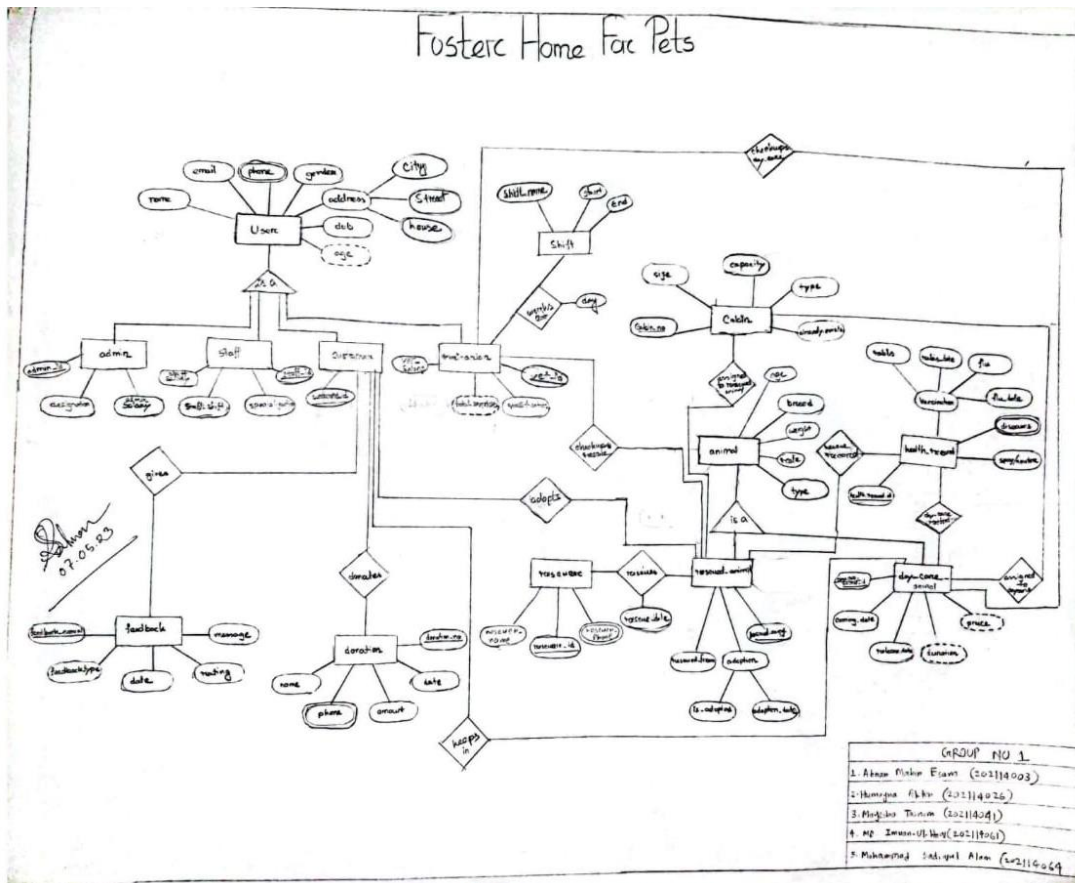
Design

Possible Users

Our main targeted users are the people who want to use the foster care services provided by this system. However, the entire system will be maintained by a system administrator. Moreover, there will be staffs for different care giving and services. The veterinarians will also have their own accounts. So, there are mainly **three** users in our system:

- Admin
- Customer
- Staffs or Veterinarian

ER Diagram



Schema Diagram

Fosters Home for Pets

```

    erDiagram
        Admin ||--o{ Staff : "is a"
        Admin ||--o{ Customers : "is a"
        Admin ||--o{ Feedback : "is a"
        Admin ||--o{ Donations : "is a"
        Admin ||--o{ Rescues : "is a"
        Admin ||--o{ RescuedAnimals : "is a"
        Admin ||--o{ HealthRecords : "is a"
        Admin ||--o{ Cages : "is a"

        Admin {
            string admin_id PK
            string name
            string email
            float salary
            string gender
            string city
            string street
            string house
            string dob
            string designation
        }

        Staff {
            string staff_id PK
            string name
            string email
            string specialization
            string gender
            string city
            string street
            string house
            string dob
            string salary
        }

        Customers {
            string customer_id PK
            string customer_name
            string email
            string dob
            string gender
            string city
            string street
            string house
        }

        Feedback {
            string feedback_id PK
            string serial_no
            string feedback_subject
            string date
            string rating
            string message
            string customer_id FK
        }

        Donations {
            string donation_id PK
            string name
            float amount
            string date
            string customer_id FK
        }

        Rescues {
            string rescue_id PK
            string rescue_name
            string city
            string street
            string house
            string dob
            string salary
        }

        RescuedAnimals {
            string animal_id PK
            string name
            string email
            string specialization
            string gender
            string city
            string street
            string house
            string dob
            string salary
        }

        HealthRecords {
            string health_record_id PK
            string health_name
            string date
            string animal_id FK
        }

        Cages {
            string cage_id PK
            string name
            string date
            string animal_id FK
        }
  
```

Handwritten notes:

- Admin, Staff, Customers, Feedback, Donations, Rescues, Rescued Animals, Health Records, Cages are all related to the central Admin table.
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Implementation

Features And Functionalities

Functionalities of Admin

- Admin can login through his email and password
- Admin can insert, delete, update of all users
- Admin can see details info about all users
- Admin can manage customer prices and service rates
- Admin can search any staff or customer from their information table
- Admin can handle the donation information

Functionalities of Veterinarian

- Veterinarian can login through his email and password
- He can find his own shift and schedule.
- He can keep track the animal he treats in which day.
- He treats daycare and rescued animal.
- He can able to insert animal health record and diseases.
- He can decide which animal will insert in which cabin based on their health record and diseases.

Functionalities of Customer

- Customer can login through his email and password
- He can oversee all Day-care services.
- He can donate through the website for the organization.
- He can give feedback through the website for the organization's cause.
- He can consult with the management through customer care.
- He can choose whether to provide a foster home or adopt.

Limitation:

1. Donation system is not fully online. Anonymous donations are not handled perfectly as online banking could not be implemented.
2. Security vulnerabilities lie in the log in feature.
3. Data abstraction and filtering are not present.
4. Flow of options are not fully functional.

Future Scopes:

1. Online Banking could be implemented in the donation system.
2. Email or SMS authentication could be used for verification of user.
3. Data abstraction can be used for making the website compact and user friendly.
4. Cookies can be used to ease user experience.

Tools

- Front End: HTML, CSS 3, firebase, tailwind, daisyui, ES-6, AOS, axios, TypeAnimation and React js
- Back End: Node.js, Express, cors, oracledb
- Database: Oracle

References

Case Study: DBMS Pet Shop

[URL:https://www.scribd.com/document/471004890/Case-StudyDBMS-Pet-Shop](https://www.scribd.com/document/471004890/Case-StudyDBMS-Pet-Shop)

Pet Care Management System Capstone Project Document URL:

https://capstoneguide.com/pet-care-management-systemcapstone-project-document/?fbclid=IwAR33zxn1EhkhRL6X79IrWViSrcxBLk3KLPoXhRXDevFaf0NELIMuBOh_tZc