Care for Critter ~ Project Proposal (Web Application)
CPSC 471 ~ Fall 2025

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Vision and Purpose

Care for Critters Charity Foundation is a transformative approach to animal welfare, bridging the gap between abandoned pets and loving forever homes through innovative media and compassionate care. This charitable organization operates a network of shelter branches dedicated to rescuing lost and abandoned animals, providing them with tailored care, and ultimately connecting them with families who will cherish them for life. Our proposed web platform will serve as the digital nexus of this mission, creating seamless connections between animals in need, potential adopters, dedicated volunteers, and generous sponsors.

Organization Structure

Care for Critters operates through multiple locations spread out all across Calgary and other nearby municipalities. Each branch functions as both a pet sanctuary and a community hub, each with its own distinct location and contact information while contributing to the organization's unified mission. These shelters house animals of diverse species and backgrounds, each with a big heart waiting for the perfect family.

Every animal entering the Charity is given a unique PetID to help identify them within the comprehensive database. We document each creature's name, species, approximate age, and dietary requirements, alongside critical health information that ensures proper care. A detailed biography captures their personality and behavioral traits, while photographs showcase their unique charm to potential adopters browsing our platform.

The People Behind the Mission

Care for Critters would not be possible without the tremendous work of our Supervisors and Volunteers, a passionate and diverse group of animal lovers who help keep this foundation running.

Volunteers form the incredible foundation of daily operations, each registered with a unique volunteer ID. We maintain detailed records including their contact information (phone, email, and address), specific responsibilities within the shelter, and hours contributed to the cause. Each volunteer works at a designated branch and reports directly to a supervisor who guides and supports their efforts.

Supervisors serve as the professional backbone of each branch, bringing expertise and continuity to operations. These salaried employees possess unique employee IDs and maintain comprehensive contact profiles. Beyond managing day-to-day shelter operations, each supervisor mentors multiple volunteers, fostering a culture of learning and excellence. Supervisors also maintain secure accounts with username

and password credentials, granting them access to the platform's administrative features and sensitive organizational data including pet, sponsor, and adoption information.

Community Engagement: Events

Each branch actively engages the community by planning events that raise awareness, attract potential adopters, and build support for the foundation's mission. These events, each with their own date, location, budget, and name, can range from adoption fairs to fundraising galas. Branches may host events independently or collaborate with other locations, creating powerful opportunities for cross-branch community building.

Volunteers may choose to partake in events beyond their regular shelter duties, contributing their time across various initiatives. Supervisors must staff events hosted by their home branch, but are also permitted to attend the functions of other branches to encourage and build organizational cohesion.

Generosity of our Sponsors

Care for Critters relies on the generosity of our sponsors who help keep our mission alive. These benefactors can make their donations through the website directly to certain branches or multiple locations if their hearts so guide them. The organization maintains meticulous records of each sponsor's name and contribution amounts, ensuring proper acknowledgment and transparent financial stewardship.

The Adoption Journey

At the core of our mission lies the adoption process itself. When adopters discover their perfect companion, we require proper identification through driver's license verification, recording both the license number and adopter's name. This ensures responsible pet placement and creates an accountable adoption record that protects both animals and families.

The Care for Critters Official Website

Our proposed web application will streamline how people interact with our organization, offering distinct experiences tailored to different user needs.

For the public, the platform opens a window into the world of adoptable pets. Visitors can explore the complete catalogue of available pets, filtering by branch location, species, age, and other characteristics that matter to them. When they find their potential companion, they can submit adoption applications directly through the site. The platform also showcases upcoming events across all branches, inviting community participation, and provides convenient donation functionality for those who wish to support our cause financially.

For Supervisors, secure login credentials allow them to view the more comprehensive administrative information. This includes volunteer information, branch operations data, and pending adoption applications, enabling them to make informed decisions and employ efficient management of their shelter's activities.

Through this platform, Care for Critters will be able to reach more people looking for the perfect companion, and amplify its positive impact in our communities.

Accounts are a weak entity with a one-to-one relationship to Supervisors, containing username and password attributes for authentication. Each supervisor has exactly one account created upon hiring and automatically removed upon departure, preventing credential sharing and ensuring accountability. Authenticated supervisors access administrative data including volunteer information, adoption applications, donation records, and operational data. They can manage events, review adoptions, and update pet profiles. This weak entity design couples account security with personnel management, automatically aligning access credentials with employment status.

Database Transactions

Transaction Type 1: Animal Lifecycle Management

This transaction type manages the flow of animals through the shelter system. Intake transactions occur when stray or abandoned animals arrive at a branch, creating new pet records with unique PetIDs and capturing essential information (species, age, dietary needs, health status, photographs). Each animal is associated with the accepting branch location.

Adoption transactions remove pets from the active database when adopters complete the process, recording adopter information (name and driver's license number) while maintaining historical records. This ensures adopted animals no longer appear in searches while preserving accountability in documentation.

Transaction Type 2: Financial Flow Management

Donation transactions record sponsor contributions through the web platform, capturing the sponsor's name, contribution amount, and designated branch(es). Expenditure transactions allocate these funds toward operational expenses (veterinary services, food, supplies, maintenance) and event funding (adoption fairs, fundraising galas, educational programs). Together, these transactions track monetary flow from incoming donations through strategic resource deployment.

Project Assumptions

The following assumptions establish the operational and data management parameters for the Care for Critters database system and reading of the ER diagram:

- **Branch Staffing**: Multiple supervisors may be assigned to a single shelter branch to accommodate varying operational scales and administrative needs across different locations.
- **Supervisor Assignment**: Each supervisor is exclusively assigned to one branch at any given time, ensuring clear lines of responsibility and consistent branch-level leadership.
- **Volunteer Allocation**: Volunteers work at a single designated branch at a time to maintain operational continuity and foster strong community relationships. However, volunteers may be reassigned to different shelter locations as organizational needs evolve.
- **Supervisory Requirements**: Supervisors are not mandated to oversee volunteers in all circumstances. Certain branches may operate without volunteer staff, resulting in supervisors who

focus solely on administrative and operational duties without direct volunteer management responsibilities.

- **Branch Contact Information**: Each shelter branch maintains one primary phone number as its official contact line, streamlining communication channels for the public and ensuring consistent accessibility.
- **Multi-Role Capability**: Individual volunteers may hold multiple responsibilities within their assigned branch, allowing for flexible staffing arrangements and enabling volunteers to contribute across various operational areas based on their skills and interests.
- **Shelter Registration**: Stray and abandoned animals are registered directly to a specific shelter branch upon intake, establishing clear custodial responsibility and ensuring proper tracking within the organizational database from the moment they enter the Care for Critters system.

Resources for Flask:

Flask. (n.d.). *Flask Tutorial. Pallet Projects.* https://flask.palletsprojects.com/en/stable/tutorial/

- *This website is the official documentation for flask, maintained by the Pallet Projects team, the creators of Flask itself . It contains the installation guide, tutorials, as well as many helpful documents about flask. Because it comes directly from the official developers, this website is widely recognized as the most reliable source about Flask.*

GeeksforGeeks. (2023, April 24). *Flask Tutorial*. GeeksforGeeks. https://www.geeksforgeeks.org/python/flask-tutorial/

- *GeeksforGeeks is an extensive resource library that contains tutorials, reference materials, and easy-to-follow explanations for various Computer Science topics. This resource is trustworthy because of its legitimacy in the field, as well as the quality of its materials, and covers Flask in a reasonable manner.*

Visual Studio Code. (2025, September 11). *Flask Tutorial.* https://code.visualstudio.com/docs/python/tutorial-flask

- *All team members will be using VSCode to work on this project - this source contains tutorials and information on how to use Flask and Python within the VSCode environment. Being from the official VSCode site, this is a trustworthy source containing integration instructions for the latest version of VSCode.*