

LIS 543 Animal Shelter Management

Database Specification: Purpose, Business Problems Addressed and Business Rules

McKenzie Marshall, Christina Sheets, Katrina Lujan, Sophie McIntyre

Database Purpose:

The purpose of this database is to organize and update data related to current and past animals housed by the animal shelter; matching potential adopters to animals; and matching potential foster homes to animals. The database will be used by the staff at the animal shelter.

Business Problems Addressed:

- Allow animal shelter staff to match adopters to animals.
- Allow animal shelter staff to match foster homes to animals.
- Maintain data on resident animals, candidate adopters, foster homes, staff, volunteers, and animal medication.
- Track the status of shelter capacity, animal adoption and medical care, foster home capacity, volunteership, and candidate adopting process.
- Report on capacity (shelter and foster home), resident animal demographics, trends in time to adoption, time spent in a foster home, and candidate adopter registration.
- Report on re-surrender of previously adopted animals and foster home care provided.
- Report on volunteer allocation.

Business Rules:

- Adoptions only happen inside the United States.
- All shelters are located in Washington state.
- Animal will retain the same ResidentAnimalId if surrendered multiple times.
- Animal may be surrendered/adopted/fostered from the shelter multiple distinct times.
- Surrendering entity is allowed to surrender the same animal multiple times. Some Surrendering entities will be shelters or animal control that may receive the same animal through complex means.
- Adoption can only be for one animal per Adoption entry.
- Weight of ResidentAnimal is in pounds (lbs).

Design Requirements:

- Use Crow's Foot Notation.
- Specify the primary key fields in each table using PK beside the fields.
- Draw a line between each table to show the relationships between them.
- Specify which table is on the one side of the relationship by placing a one next to the entity where the line starts.
- Specify which table is on the many side of the relationship by placing a crow's feet symbol next to the entity where the line ends.

Design Decisions:

Entity Name	Why Entity Included	How Entity is Related to Other Entities
ResidentAnimal	One of the primary factors in the database is concerned with the resident animal that needs adoption and care.	ResidentAnimal (RA) is the core entity in the database design. A RA belongs to one branch and could be adopted, fostered, or surrendered by zero or many individuals/organizations. A RA can also be on zero or many medications prescribed by one vet. Lastly, a RA will have their own constraints about what kind of home they would be best in (ex: can they be in a house with a dog/cat, do they have special needs, ect).
AdoptionConstraints	Individual resident animal constraints must be documented to ensure the right fit between CandidateOwner and FosterHome, and the needs or limitations of Resident Animal	Each CandidateOwner, FosterHome, and ResidentAnimal have one list of needs or constraints for an adoption which is contained in the AdoptionConstraints entity.
ResidentAnimalAdoption Constraint	To capture needs or limitations of Resident Animal	Contains two foreign keys to AdoptionConstraints and ResidentAnimal that connect both entities. Each instance of the ResidentAnimalAdoptionConstraint will only have one AdoptionContraint and one ResidentAnimal.
CandidateOwnerAdoptio nConstraint	Capture needs or limitations of Candidate Owners to ensure best fit between interested adopters and Resident Animal	Contains two foreign keys to AdoptionConstraints and CandidateOwner that connect the both entities. Each instance of the CandidateOwnerAdoptionConstraint

		will only have one AdoptionContraint and one CandidateOwner.
FosterHomeAdoptionConstraint	To capture needs or limitations of Foster Home to ensure best fit between Foster Home and Resident Animal	Contains two foreign keys to AdoptionConstraints and FosterHome that connect the both entities. Each instance of the FosterHomeAdoptionConstraint will only have one AdoptionContraint and one FosterHome.
Branch	To determine current population levels, available space, and if support level requirements are available to run branch	The Branch will manage zero to many ResidentAnimals. The Branch will have at least one Staff member (hopefully there's more than one staff member to run it). The Branch will also have zero, one, or many Volunteers at a given time. One attribute of Branch is BranchCapacity which will govern how many ResidentAnimals can be taken care of by a single branch.
Staff	To capture staff information including support available to branch	A Staff member will belong to one branch represented in the foreign key BranchID.
Volunteer	To capture volunteer information including support available to branch	A Volunteer will belong to one branch represented in the foreign key BranchID.
ResidentMedication	To provide necessary information aiding in animal medical care	ResidentMedication will only list one ResidentAnimal, one Medication, and one Veterinarian, all represented through foreign keys.
Medication	To provide necessary information aiding in animal medical care	A Medication can be listed in a ResidentMedication zero or many times.
Veterinarian	To capture veterinarian information including support available to animals or possible availability to incoming animals	A Veterinarian can be listed on zero or many ResidentMedications and can have different specialties.
VetSpecialty	Aids in assignment of resident animal to veterinarian that will be able to provide for needs	VetSpecialty contains two foreign keys to VetID and Specialty ID and will only have one of each.
Specialty	Holds the different type of specialties a Vet can have (ex: surgical, oncology, general welfare, ect)	Specialty can be listed in zero or many VetSpecialties.

CandidateOwner	To track and maintain a record of available and/or completed adopters	The CandidateOwner will have either no AdoptionConstraints or only one AdoptionContraint. CandidateOwner can also apply for Adoption zero to many times.
Adoption	Tracks adoption status providing statistical and historical information on adoptions completed, including linking information of animal to adopter	Surrender has two foreign keys for CandidateOwner and ResidentAnimal.
FosterHome	To capture foster home information	The FosterHome will have either no AdoptionConstraints or only one AdoptionContraint. A FosterHome can also apply to foster (FosterCare) zero to many ResidentAnimals.
FosterCare	Tracks fostering status providing statistical and historical information on time in foster care, including linking information of animal to foster care home	Surrender has two foreign keys for FosterHome and ResidentAnimal.
SurrenderingEntity	To capture surrendering identity information, providing statistical and historical information	The SurrenderingEntity can surrender zero to many ResidentAnimals.
Surrender	Tracks surrender providing statistical and historical information on surrender events, including linking information of animal to surrendering entity	Surrender has two foreign keys for SurrenderingEntity and ResidentAnimal.