

Members: Christian Ardaix
Pranita Lomte
Yan Yun Zhang

Proposal:

Our group is designing a database application for a non-profit adoption organization with multiple shelter locations. The adoption organization has been operating for over 10 years, helping thousands of animals find loving homes. The organization currently uses a mix of paper forms and spreadsheets to manage animal records, adoption applications, and staff assignments. This outdated system has led to data entry errors, delayed updates, and difficulty retrieving or analyzing information when needed.

Entities and Attributes:

Animal

- AnimalID, Name, Type, Breed, Age, Gender, ArrivalDate, AdoptionStatus, ShelterID

Customer

- CustomerID, FirstName, LastName, Email, PhoneNumber, Address, City, State, ZipCode

Adoption

- AdoptionID, AdoptionDate, AdoptionFee, PaymentMethod, AnimalID, CustomerID, CounselorID

AdoptionCounselor

- CounselorID, FirstName, LastName, Email, Phone, Role, ShelterID

ApplicationStatus

- ApplicationStatusID, Status, PaymentStatus, AdoptionID, CustomerID

Shelter

- ShelterID, ShelterName, Address, City, State, ZipCode, Phone, Capacity

MedicalFile

VaccinationRecord or MedicalRecord (VaccinationRecord can be a sub under MedicalRecord)

- RecordID, RecordDate, RecordType, Description, Vet, AnimalID

Employee

- EmployeeID, Name, Role, Email, Phone, ShelterID

Waitlist

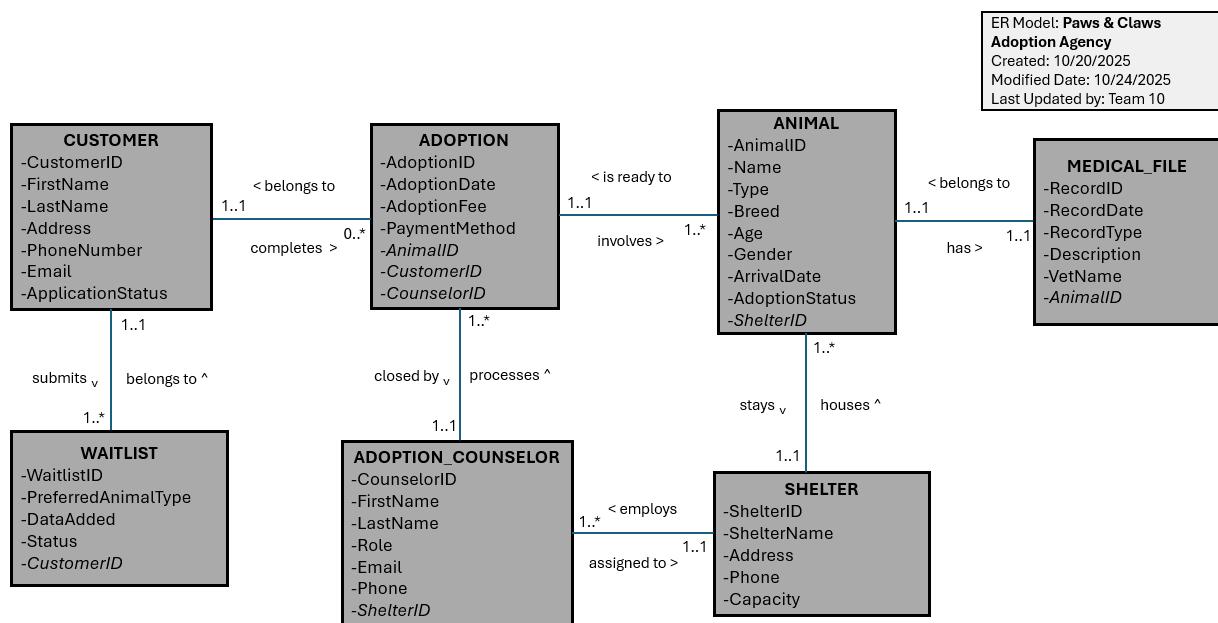
- WaitlistID, CustomerID, PreferredAnimalType, DateAdded, WaitlistStatus

Vet

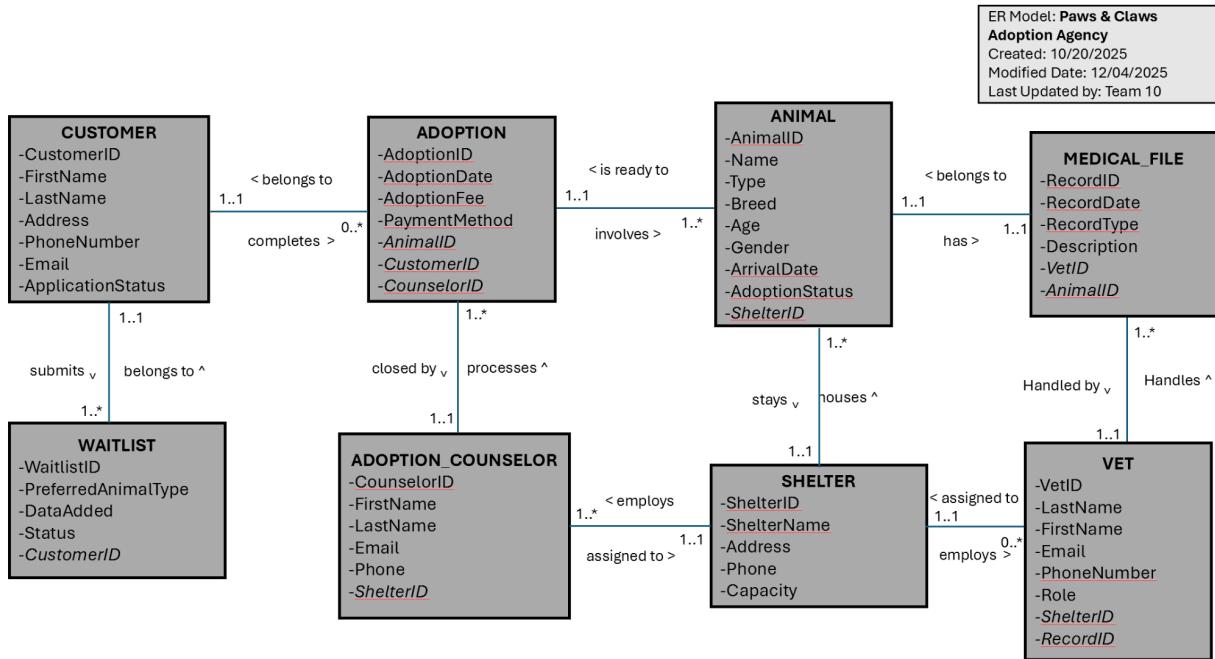
- VetID, LastName, FirstName, Email, PhoneNumber, Role, ShelterID

Screenshot of the ER Diagram

[ER Model Diagram.pptx](#)



Screenshot of ER Diagram version 2:



NF3 Relations

- ApplicationStatus** [ApplicationStatusID (PK), Status, PaymentStatus, AdoptionID (FK), CustomerID(PK)]
- Shelter** [ShelterID (PK), ShelterName, Address, Phone, City, State, ZipCode, Capacity]
- Customer** [CustomerID (PK), FirstName, LastName, Address, City, State, ZipCode, PhoneNumber, Email, Notes]
- Animal** [TypeID (PK), Type, Name, Breed, Age, Gender, AnimalID (PK), ArrivalDate, AdoptionID (FK), ShelterID (FK)]
- AdoptionCounselor** [CounselorID (PK), FirstName, LastName, Email, Phone, ShelterID (FK)]
- Adoption** [AdoptionID (PK), AdoptionDate, AdoptionFee, PaymentMethod, AnimalID (FK), CustomerID (FK), CounselorID (FK)]
- Waitlist** [WaitlistID (PK), StatusType, CustomerID (FK), DateAdded, PreferredAnimalType]
- MedicalFile** [RecordID (PK), Description, VetID (FK), AnimalID (FK), RecordDate, RecordType]
- Vet** [VetID (PK), FirstName, LastName, Email, Phone, ShelterID (FK)]

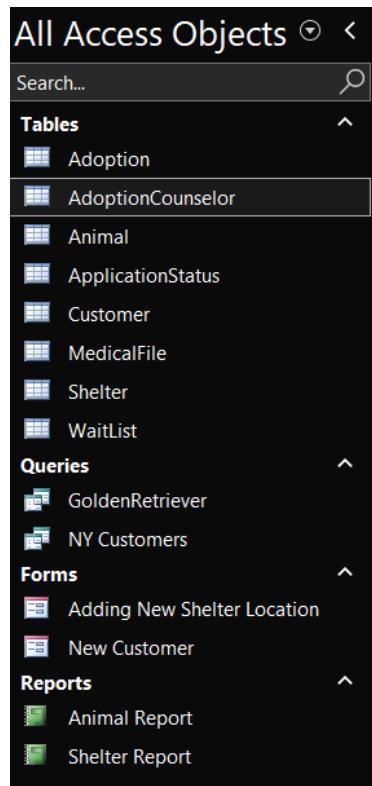
Removed:

Breed [BreedID (PK), BreedName,TypeID (FK)]
AnimalType [TypeID (PK), TypeName]
WaitlistStatus [WaitlistStatusID (PK), StatusName]
AdoptionStatus [AdoptionStatusID (PK), StatusName]
RecordType [RecordTypeID (PK), TypeName]
PaymentMethod [PaymentMethodID (PK), MethodName]

Separated:

AdoptionCounselor and Vet

Access



Query:

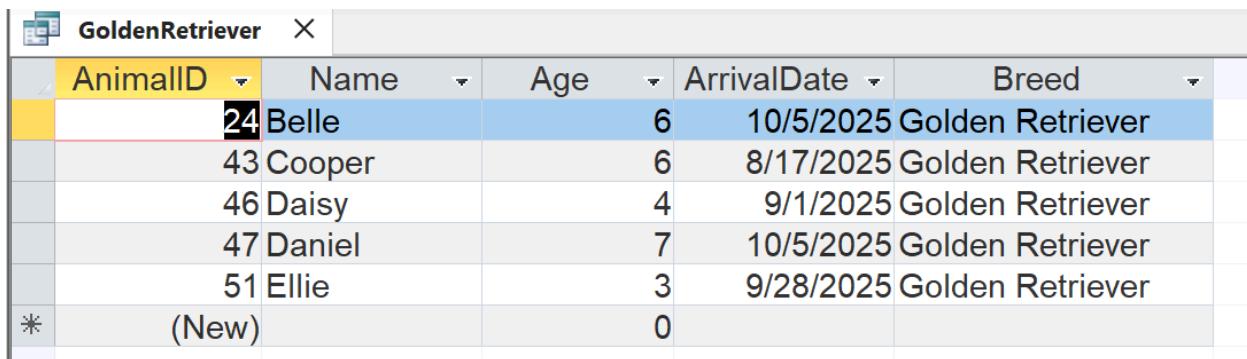
1. A customer is looking for adoption on “Golden Retriever”.

SQL input:



```
1 SELECT
2     AnimalID,
3     Name,
4     Age,
5     ArrivalDate,
6     Breed
7 FROM
8     Animal
9 WHERE
10    ((Animal.Breed) = "Golden Retriever"));
```

Data result:



	AnimalID	Name	Age	ArrivalDate	Breed
	24	Belle	6	10/5/2025	Golden Retriever
	43	Cooper	6	8/17/2025	Golden Retriever
	46	Daisy	4	9/1/2025	Golden Retriever
	47	Daniel	7	10/5/2025	Golden Retriever
	51	Ellie	3	9/28/2025	Golden Retriever
*		(New)	0		

2. Looking for NY customers

SQL code:

Customer in NY X Animal X

```

1 SELECT
2 *
3 FROM
4 Customer
5 WHERE
6 Address LIKE '*NY*'

```

Data result:

CustomerID	FirstName	LastName	Address	PhoneNumber	Email	ApplicationStatus
1	Phil	Fox	142 Maplewood Ave, Yonkers, NY 10701	(914) 555-2384	PhilFox@gmail.com	
3	Megan	Martinez	27 Riverbend Drive, White Plains, NY 10605	(718) 555-9017	MeganMart@gmail.com	
5	Matthew	Gin	59 Orchard Hill Road, New Rochelle, NY 10801	(516) 555-6721	MatthewGin@outlook.com	
7	Jack	Roger	76 Pinecrest Circle, Tarrytown, NY 10591	(845) 555-1286	JackRog1@gmail.com	
9	Liv	Williams	45 Sunnyside Court, Sleepy Hollow, NY 10591	(646) 555-4820	LivWilliams1@gmail.com	
*	(New)					

Forms:

Adding a new customer:

Customer

CustomerID	11
FirstName	Sarah
LastName	Lee
Address	760 Broadway, Manhattan, NY 10003
PhoneNumber	646-555-9098
Email	sarah.lee@gmail.com
ApplicationStatus	

Data result:

CustomerID	FirstName	LastName	Address	PhoneNumber	Email	ApplicationStatus
1	Phil	Fox	142 Maplewood Ave, Yonkers, NY 10701	(914) 555-2384	PhilFox@gmail.com	Pending Review
2	Steve	Postman	88 Chestnut Street, Hoboken, NJ 07030	(201) 555-7642	StevePostman@gmail.com	Pending Review
3	Megan	Martinez	27 Riverbend Drive, White Plains, NY 10605	(718) 555-9017	MeganMart@gmail.com	Pending Review
4	Abby	Marsh	310 Liberty Lane, Jersey City, NJ 07302	(973) 555-4438	AbbyMarsh@aol.com	Pending Review
5	Matthew	Gin	59 Orchard Hill Road, New Rochelle, NY 10801	(516) 555-6721	MatthewGin@outlook.com	Pending Review
6	Michelle	Lucy	201 Bayview Terrace, Bayonne, NJ 07002	(908) 555-3309	MichelleLucy@gmail.com	Pending Review
7	Jack	Roger	76 Pinecrest Circle, Tarrytown, NY 10591	(845) 555-1286	JackRog1@gmail.com	Pending Review
8	Stephanie	White	134 Garden Grove Blvd, Montclair, NJ 07042	(609) 555-7755	StephWhite@aol.com	Pending Review
9	Liv	Williams	45 Sunnyside Court, Sleepy Hollow, NY 10591	(646) 555-4820	LivWilliams1@gmail.com	Pending Review
10	Rafael	Lopez	92 Brookside Avenue, Edison, NJ 08817	(732) 555-9933	RafLopez@gmail.com	Pending Review
11	Sarah	Lee	760 Broadway, Manhattan, NY 10003	646-555-9098	sarah.lee@gmail.com	Pending Review
*	(New)					

Adding New Shelter Location:

Customer X Adoption X Shelter X AdoptionCounselor X New Customer X Animal X Adding New Shelter Location X

Shelter

ShelterID	4
ShelterName	Paws and Claws NY 2
Address	120 Oakwood Rd. Queens, NY 11375
Phone	718-555-2040
Capacity	45

Data Result:

Customer	Adoption	Shelter	AdoptionCounselor	New Customer	Animal	Adding New Shelter Location
ShelterID	ShelterName	Address	Phone	Capacity	Click to Add	
1	Paws and Claws NY	215 Willow Creek Rd, Peekskill, NY 10566	(914) 555-8821	50		
2	Paws and Claws NJ	78 Maple Ridge Avenue, Morristown, NJ, 07960	(973) 555-4410	40		
3	Paws and Claws CT	12 Harbor View Lane, Norwalk, CT 06854	(203) 555-3375	40		
4	Paws and Claws NY 2	120 Oakwood Rd. Queens, NY 11375	718-555-2040	45		
*	(New)			0		

Reports:

Shelter Report:

The screenshot shows a report titled "Shelter" generated on Saturday, November 22, 2025, at 2:50:51 PM. The report lists four shelter locations with their details:

ShelterID	ShelterName	Address	Phone	Capacity
1	Paws and Claws NY	215 Willow Creek Rd, Peekskill, NY 10566	(914) 555-8821	50
2	Paws and Claws NJ	78 Maple Ridge Avenue, Morristown, NJ, 07960	(973) 555-4410	40
3	Paws and Claws CT	12 Harbor View Lane, Norwalk, CT 06854	(203) 555-3375	40
4	Paws and Claws NY 2	120 Oakwood Rd. Queens, NY 11375	718-555-2040	45

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Animal Report:

The screenshot shows a report titled "Animal" generated on Saturday, November 22, 2025, at 2:53:58 PM. The report lists 19 animals with their details:

AnimalID	Name	Type	Breed	Age	Gender	ArrivalDate	Ado
1	Mighty	Dog	Labrador Retriever	1	Male	8/3/2025	
2	Max	Cat	Maine Coon	2	Male	8/17/2025	
3	Simba	Dog	Husky	1	Male	9/1/2025	
4	Minnie	Dog	German Shepherd	2	Female	9/14/2025	
5	Spike	Dog	Boxer	1	Male	9/28/2025	
6	Falcon	Dog	Australian Shepherd	3	Male	10/2/2025	
7	Weewo	Cat	Siamese	2	Female	10/19/2025	
8	Lex	Cat	American Shorthair	2	Female	11/2/2025	
9	Shadow	Cat	Bengal	3	Male	11/10/2025	
10	Tank	Dog	Pitbull	2	Male	11/18/2025	
13	Ace	Dog	Labrador Retriever	4	Male	9/1/2025	
14	Abby	Dog	Beagle	6	Female	10/5/2025	
15	Angel	Cat	American Shorthair	3	Female	9/14/2025	
16	Angel	Dog	Poodle	5	Female	8/17/2025	
17	Annie	Dog	Poodle	7	Female	11/2/2025	
18	Ash	Cat	Maine Coon	2	Male	9/28/2025	
19	Avol	Dog	Dobberman	6	Male	10/19/2025	

See Access for the updated version

Scenarios

Scenarios 1:

After the customer(id=6, name = James O'Connor) visits a shelter in CT (id=3, name = Paws and Claws CT), the customer wants to adopt an animal(id=26, name= Benny, type = Dog). The customer is working with a counselor who works in a CT shelter named **Natalie** (id = 12).

Natalie started an adoption application with an adoption fee of \$150, payment method by check, entered animal ID, customer ID, and counselor ID. Then also created the application status form with the current application status as “ In review”, adding payment status as “unpaid”. Natalie then **saves the record** and closes the form.

Now go to the adoption table, CustomerID=6 appears in the table after refreshing all.

Scenario 2:

Customer (id=48, name = Grace Kim) wants to adopt a 1-year-old male Husky, but as of current, the shelter near the customer does not have such an animal, so the customer is put on the waiting list.

Eg. date 11/10/2025, entering customer ID, and choosing the waitlist status to be Active.

Now saves the record and closes the form. Now the customer is on the waiting list.

Scenario 3:

Now a Husky arrived at Shelter 2.

Counselor enters the animal information on the new animal form, animalID will be auto-generated so counselor enters the Name = Larry, Type = Dog, Breed = Husky, Age = 1, Gender = Male, and the arrival date. Shelter ID 2 is selected. The record was then saved, and Larry the Husky appears on the animal list.

Scenario 4:

Counselor (id=6, name = Jesscia) calls the customers, customers who loved Larry the Husky are now going through the adoption application process. Jesscia started an adoption application with an adoption fee of \$150, payment method by credit, entered animal ID, customer ID, and counselor ID. Then also created the application status form with the current application status as “Approved” since the customer's background check was already performed. The customer then paid right away with Debit, adding payment status as “paid”. Jessica, the counselor, then **saves the record** and closes the form.

Now go to the adoption table. CustomerID 48 appears in the table, as well as the application status.

There are more scenarios we can come up with, such as a medical record being created for an animal. We will continue to improve our database system, such as the navigation form and startup.