

## Project Step 6 Final: Hichua Veterinarian Hospital

**URL:** <http://flip2.engr.oregonstate.edu:50690/>

### Executive Summary:

From where we started, we changed several attribute names to be more cohesive with the rest of the data. This includes things like changing the 'name' attribute under Veterinarians to 'vet\_name', to match 'pet\_name' under Pets. We also later added 'proc\_name' under Procedures so it was more readable than just an ID number. We also changed the attribute names in our intersection tables to exactly match their foreign key values, whereas before we had shortened them, for example vID instead of vetID. The peer reviews also influenced us to add two additional entity tables, Owners and Pet\_Types, which were not included in our initial outline, so as to better normalize our data. It was also suggested to us that we change our 'cost' attribute under Procedures from the float datatype to the decimal datatype to avoid rounding errors. We initially had an additional 'total\_cost' attribute under Appointments, but ultimately decided to remove it to make things a bit simpler for ourselves.

With the intersection tables between Appointments and Procedures, and Procedures and Vets, there seemed to be some confusion as to how those tables were being displayed, both in peer and instructor reviews. Initially we planned to try and display the corresponding data in the main table, for example displaying the procedures assigned to an appointment in the Appointments table. However, after realizing it technically had to have its own table, in its place we added view buttons that gave these tables their own pop up window. As well, we clarified in our CRUD SQL statements where these tables were being displayed. Per instructor reviews, we also added our intersection tables to both the ER Diagram and the Database Outline.

When initially implementing our CRUD functions, we were following the NodeJS tutorial and for whatever reason made the updateable attribute of our Pets entity the pet\_typeID, which corresponds with Pet\_Types. After it was pointed out that this decision made no sense, as the Pets pet\_typeID wouldn't change, we adjusted it to be able to update the Pets breed and birthdate. We also realized we had to add an additional Nullable attribute between two entities, so we added to Appointments 'requested\_vetID', which can be initially set or updated to be a NULL value, or if an entry in Veterinarians is deleted, it is automatically set to NULL. We also realized to implement the Create functionality for Exam\_Rooms, we had to change its datatype from the predefined TINYINT to INT. To make the UI cleaner, it was suggested to us in the peer reviews to add short descriptions of the different pages under their links on the homepage, as well as adding a navigation bar linking to all pages at the top of our site.

## Project and Database Outline:

### **Project Outline:**

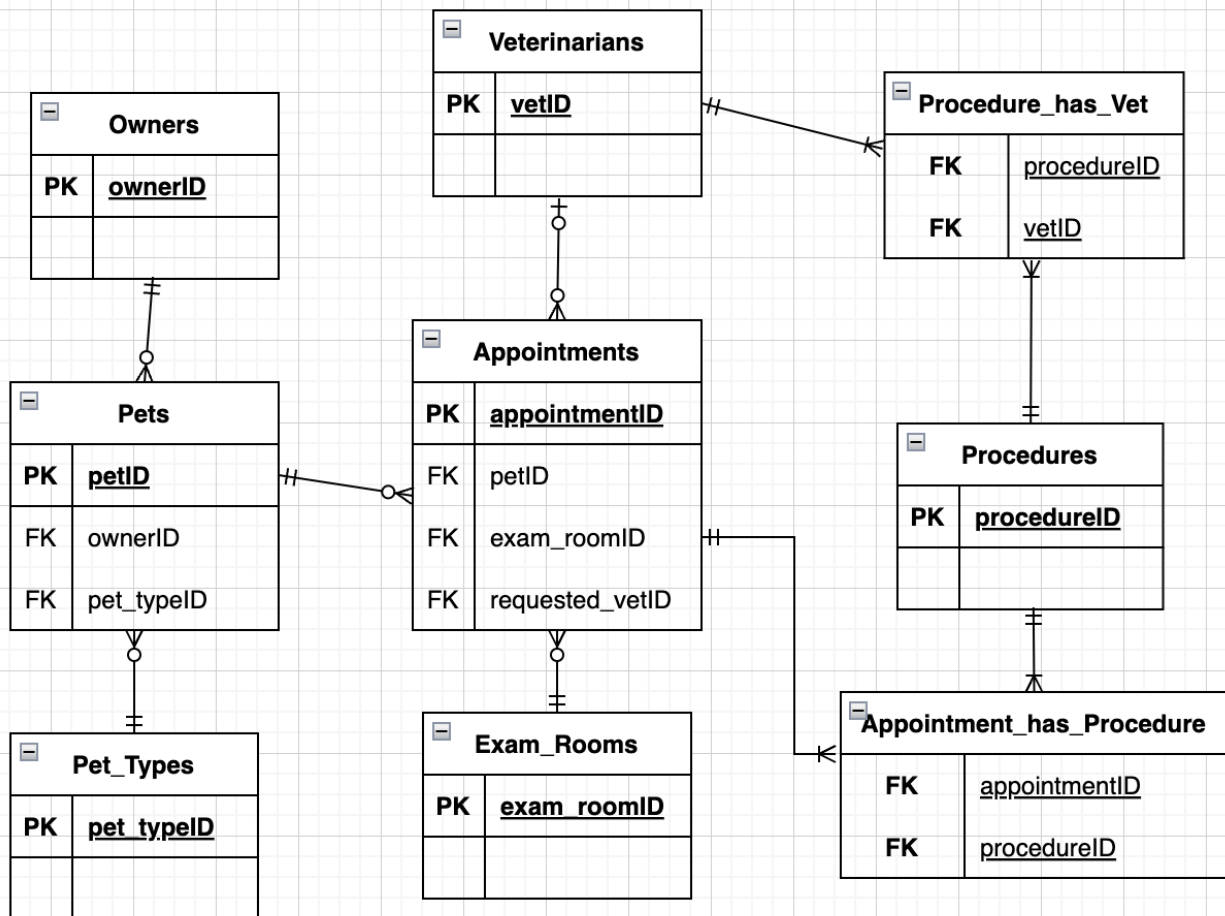
Hichua Veterinarian Hospital is located in a small town and performs 500 procedures on 300 animals annually, utilizing their facility of 3 exam rooms and 4 talented veterinarians. They have recently upgraded their old computers and realized their previous software doesn't work on anything made after 2009. They need a simple database driven website that will record Appointments, Pets, Pet\_Types, Owners, Veterinarians, Procedures, and Exam\_Rooms.

### **Database Outline:**

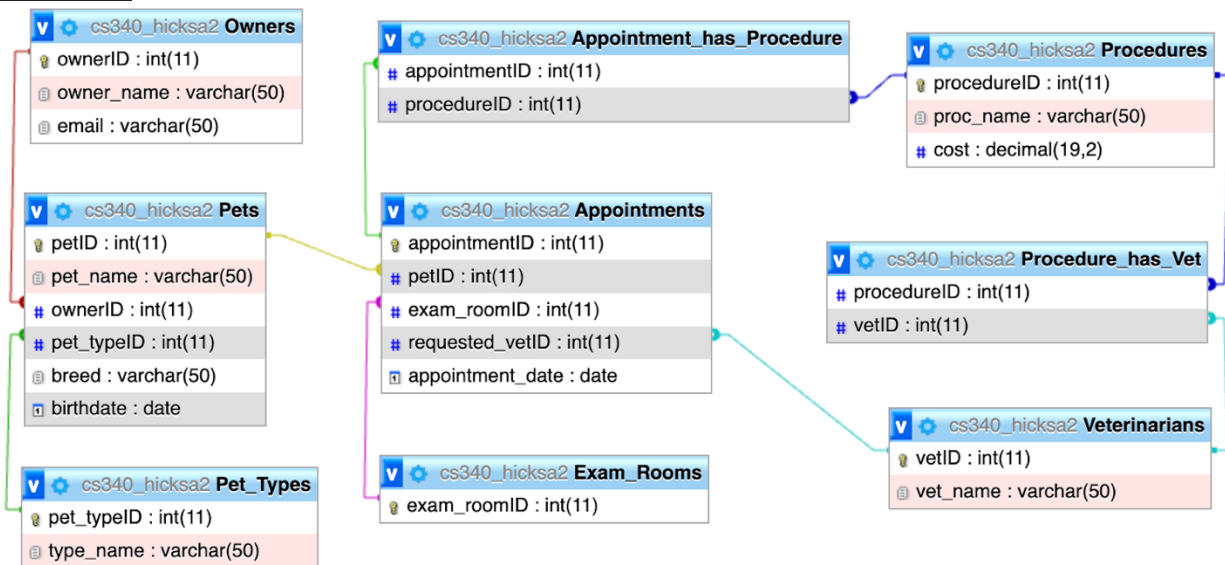
- **Appointments:** entity to store data about pet appointments
  - Attributes:
    - appointmentID: INT, auto\_increment, not NULL, PK
    - petID: INT, not NULL, FK
    - exam\_roomID: INT, not NULL, FK
    - requested\_vetID: INT, FK
    - appointment\_date: DATE, not NULL
  - Relationships:
    - A 1:M relationship between Pets and Appointments, implemented with petID as FK in Appointments
    - A 1:M relationship between Exam\_Rooms and Appointments, implemented with exam\_roomID as FK in Appointments
    - A M:M relationship between Procedures and Appointments
    - An optional 1:M relationship between Appointments and Veterinarians, implemented with requested\_vetID as FK in Appointments
  - *Team Member Responsible: Ann Marie Hicks*
- **Pets:** entity to store data about hospital patients, which are pets.
  - Attributes:
    - petID: INT, auto\_increment, not NULL, PK
    - pet\_name: VARCHAR(50), not NULL
    - ownerID: INT, not NULL, FK
    - pet\_typeID: INT, not NULL, FK
    - breed: VARCHAR(50)
    - birthdate: DATE, not NULL
  - Relationships:
    - a 1:M relationship between Pets and Appointments, implemented with petID as FK in Appointments
  - *Team Member Responsible: Ann Marie Hicks*
- **Owners:** entity to store data about pet owners
  - Attributes:
    - ownerID: INT, auto\_increment, not NULL, PK
    - owner\_name: VARCHAR(50) not NULL
    - email: VARCHAR(50) not NULL
  - Relationships:
    - A 1:M relationship between Owners and Pets, implemented with ownerID as FK in Pets
  - *Team Member Responsible: Becky Lashua*
- **Pet\_Types:** entity to store list of different animal types to assign to pets
  - Attributes:
    - pet\_typeID: INT, auto\_increment, not NULL, PK
    - type\_name: VARCHAR(50), not NULL
  - Relationships:
    - A 1:M relationship between Pet\_Types and Pets, implemented with pet\_typeID as FK in Pets

- *Team Member Responsible: Ann Marie Hicks*
- **Veterinarians:** entity to store data about hospital veterinarians
  - Attributes:
    - vetID: INT, auto\_increment, not NULL, PK
    - vet\_name: VARCHAR(50), not NULL
  - Relationships:
    - a M:N relationship between Veterinarians and Procedures
  - *Team Member Responsible: Becky Lashua*
- **Procedures:** entity to store data about different hospital procedures
  - Attributes:
    - procedureID: INT, auto\_increment, not NULL, PK
    - proc\_name: VARCHAR(50), not NULL
    - cost: DECIMAL(19,2), not NULL
  - Relationships:
    - a M:N relationship between Procedures and Veterinarians
    - a M:N relationship between Procedures and Appointments
  - *Team Member Responsible: Becky Lashua*
- **Appointment\_has\_Procedure:** not an entity, intersection table between two entities
  - Attributes:
    - appointmentID: INT, not NULL, FK
    - procedureID: INT, not NULL, FK
  - Relationships:
    - Intersection table between Appointments and Procedures
  - *Team Member Responsible: Ann Marie Hicks*
- **Procedure\_has\_Vet:** not an entity, intersection table between two entities
  - Attributes:
    - procedureID: INT, not NULL, FK
    - vetID: INT, not NULL, FK
  - Relationships:
    - Intersection table between Procedures and Veterinarians
  - *Team Member Responsible: Ann Marie Hicks*
- **Exam\_Rooms:** entity to store data about each exam room, of which there are 3
  - Attributes:
    - exam\_roomID: INT, not NULL, PK
  - Relationships:
    - a 1:M relationship between Exam\_Rooms and Appointments, implemented with exam\_roomID as FK in Appointments
  - *Team Member Responsible: Ann Marie Hicks*

## Entity-Relationship Diagram:



## Schema:



## Sample Data:

### Appointments

appointmentID	petID	requested_vetID	exam_roomID	appointment_date
1	2	2	1	4/26/2022
2	3	1	2	4/26/2022
3	4		3	4/26/2022
4	5		1	4/27/2022
5	1	4	3	4/27/2022

### Appointment\_has\_Procedure

appointmentID	ProcedureID
1	4
1	3
2	5
3	1
3	3
4	5
4	4
5	3

### Pets

petID	pet_name	ownerID	pet_typeID	breed	birthdate
1	Sunday	1	2	Domestic Shorthair	04/15/2020
2	Knox	2	2	Main Coon	09/23/2015
3	Chelsea	3	1	Great Dane	06/23/2018
4	Pico de Gallo	4	3		07/01/2021
5	Snickers	5	1	Pomeranian	03/01/2012

### Exam\_Rooms

exam_roomID
1
2
3

### Veterinarians

vetID	vet_name
1	Sara Robinson
2	Evan Johnson
3	Mary Smith
4	Greg Williams

### Pet\_Types

pet_typeID	type_name
1	Dog
2	Cat
3	Rat
4	Rabbit

### Procedures

procedureID	proc_name	cost
1	neuter	\$10.00
2	spay	\$10.00
3	vaccinate	\$15.00
4	wellness exam	\$50.00
5	sick exam	\$50.00

### Procedure\_has\_Vet

procedureID	vetID
5	1
2	1
4	2
3	2
1	2
4	3
2	3
5	4

### Owners

ownerID	owner_name	email
1	Robert McGee	rmcgee12@email.com
2	Ankur Manz	ankurmanz@email.com
3	Reko Velasco	rvelasco@email.com
4	Eliana Randall	elrandall23@email.com
5	Vina Rosenfeld	vinarosenfeld@email.com

UI Screenshots:

READ/DELETE/CREATE Pets Page

Hichua Veterinarian Hospital

Home

Pets

Appointments

Owners

Pet Types

Procedures

Veterinarians

Exam Rooms

Pets

Pet ID	Pet Name	Owner	Pet Type	Breed	Birthdate	delete
1	Sunday	Robert McGee	Cat	Domestic Shorthair	04-15-2020	
2	Knox	Ankur Manz	Cat	Main Coon	09-23-2015	
3	Chelsea	Reko Velasco	Dog	Great Dane	06-23-2018	
4	Pico de Gallo	Eliana Randall	Rat		07-01-2021	
5	Snickers	Vina Rosenfeld	Dog	Pomeranian	03-01-2012	

Search by Pet's Name...

Search

Reset

Add Pet

Update Pet

Pet's Name:

Pet Name...

Owner's Name:

Select Owner

Pet Type:

Select Pet Type

Breed:

Breed...

Birthdate:

mm / dd / yyyy

Add Pet

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UPDATE Pets Page

Hichua Veterinarian Hospital

Home

Pets

Appointments

Owners

Pet Types

Procedures

Veterinarians

Exam Rooms

Pets

Pet ID	Pet Name	Owner	Pet Type	Breed	Birthdate	delete
1	Sunday	Robert McGee	Cat	Domestic Shorthair	04-15-2020	
2	Knox	Ankur Manz	Cat	Main Coon	09-23-2015	
3	Chelsea	Reko Velasco	Dog	Great Dane	06-23-2018	
4	Pico de Gallo	Eliana Randall	Rat		07-01-2021	
5	Snickers	Vina Rosenfeld	Dog	Pomeranian	03-01-2012	

Search by Pet's Name...

Search

Reset

Add Pet

Update Pet

Pet's Name:

Select a Pet

Breed:

Breed...

Birthdate:

mm / dd / yyyy

Update Pet

## READ/DELETE/CREATE Appointments Page

### Hichua Veterinarian Hospital

Home Pets **Appointments** Owners Pet Types Procedures Veterinarians Exam Rooms

#### Appointments

Appointment ID	Pet Name	Exam Room	Requested Vet	Date	Scheduled Procedures	Delete
1	Knox	1	Evan Johnson	Tue Apr 26 2022	<a href="#">View</a>	
2	Chelsea	2	Sara Robinson	Tue Apr 26 2022	<a href="#">View</a>	
3	Pico de Gallo	3		Tue Apr 26 2022	<a href="#">View</a>	
4	Snickers	1		Wed Apr 27 2022	<a href="#">View</a>	
5	Sunday	3	Greg Williams	Wed Apr 27 2022	<a href="#">View</a>	

[Add Appointment](#) [Update Appointment](#)

Please select appointment information, and then click 'add procedures' to add procedures to the appointment

pet name:

Select Pet Name

Exam Room:

Select Exam Room

Requested Vet:

Select Requested Vet

Appointment Date:

mm/dd/yyyy

Add Procedures

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## READ Appointment\_has\_Procedure Page

Hichua Veterinarian Hospital

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**Appointment for Pico de Gallo:**

- neuter
- vaccinate

## CREATE Appointment\_has\_Procedure Page

### Add Procedures to Appointment

Please select procedures for appointment 6:

**Chelsea on Fri Jun 24 2022:**

If 0 procedures are selected, no appointment will be created.

☐ neuter

☐ spay

☐ vaccinate

☐ wellness exam

☐ sick exam

Total Procedures:

Add Procedures

# UPDATE Appointments Page

## Hichua Veterinarian Hospital

[Home](#) [Pets](#) [Appointments](#) [Owners](#) [Pet Types](#) [Procedures](#) [Veterinarians](#) [Exam Rooms](#)

Appointments

Appointment ID	Pet Name	Exam Room	Requested Vet	Date	Scheduled Procedures	Delete
1	Knox	1	Evan Johnson	Tue Apr 26 2022	<a href="#">View</a>	
2	Chelsea	2	Sara Robinson	Tue Apr 26 2022	<a href="#">View</a>	
3	Pico de Gallo	3		Tue Apr 26 2022	<a href="#">View</a>	
4	Snickers	1		Wed Apr 27 2022	<a href="#">View</a>	
5	Sunday	3	Greg Williams	Wed Apr 27 2022	<a href="#">View</a>	

Add Appointment

Update Appointment

Please select the Pet's Name of the appointment you'd like to update. Verify you have selected the correct appointment by the appointment ID. Then update information.

Pet Name | Appointment ID:

Exam Room:

Requested Vet:

Appointment Date:

Procedures:

☐ neuter ☐ spay ☐ vaccinate ☐ wellness exam ☐ sick exam

# READ/CREATE Owners Page

[Home](#) [Pets](#) [Appointments](#) [Owners](#) [Pet Types](#) [Procedures](#) [Veterinarians](#) [Exam Rooms](#)

Owners

Owner ID	Owner Name	Email
1	Robert McGee	rmcgee12@email.com
2	Ankur Manz	ankurmanz@email.com
3	Reko Velasco	rvelasco@email.com
4	Eliana Randall	elrandall23@email.com
5	Vina Rosenfeld	vinarosenfeld@email.com

Add Owner

Update Owner

please enter info and click submit

Owner Name:

Email:

# UPDATE Owners Page

[Home](#) [Pets](#) [Appointments](#) [Owners](#) [Pet Types](#) [Procedures](#) [Veterinarians](#) [Exam Rooms](#)

Owners

Owner ID	Owner Name	Email
1	Robert McGee	rmcgee12@email.com
2	Ankur Manz	ankurmanz@email.com
3	Reko Velasco	rvelasco@email.com
4	Eliana Randall	elrandall23@email.com
5	Vina Rosenfeld	vinarosenfeld@email.com

Add Owner

Update Owner

To update an owner's email, select their name and enter their new email

Owner's Name:

New Email:



READ/DELETE/CREATE Pet\_Types Page

### Hichua Veterinarian Hospital

[Home](#)[Pets](#)[Appointments](#)[Owners](#)[Pet Types](#)[Procedures](#)[Veterinarians](#)[Exam Rooms](#)

#### Pet Types

Pet Type ID	Type Name	Delete
1	Dog	
2	Cat	
3	Rat	
4	Rabbit	

Add Pet Type

Please enter the new Pet Type and click "Add Pet Type"

Pet Type Name:

Pet Type...

Add Pet Type

READ/CREATE Procedures Page

### Hichua Veterinarian Hospital

[Home](#)[Pets](#)[Appointments](#)[Owners](#)[Pet Types](#)[Procedures](#)[Veterinarians](#)[Exam Rooms](#)

#### Procedures

Procedure ID	Name	Cost(\$)
1	neuter	10
2	spay	10
3	vaccinate	15
4	wellness exam	50
5	sick exam	50

Add Procedure

Update Procedure

please enter info and click "Add Procedure"

Procedure Name:

Procedure Name...

Cost:

Add Procedure

UPDATE Procedures Page

### Hichua Veterinarian Hospital

[Home](#)[Pets](#)[Appointments](#)[Owners](#)[Pet Types](#)[Procedures](#)[Veterinarians](#)[Exam Rooms](#)

#### Procedures

Procedure ID	Name	Cost(\$)
1	neuter	10
2	spay	10
3	vaccinate	15
4	wellness exam	50
5	sick exam	50

Add Procedure

Update Procedure

To update the cost of a procedure, please select the procedure name from the drop down

Procedure:

Select a Procedure

Cost:

Update Procedure

READ/DELETE/CREATE Veterinarians Page

### Hichua Veterinarian Hospital

[Home](#)[Pets](#)[Appointments](#)[Owners](#)[Pet Types](#)[Procedures](#)[Veterinarians](#)[Exam Rooms](#)

#### Veterinarians

Vet ID	Vet Name	Procedures	Delete
1	Sara Robinson	<a href="#">View</a>	
2	Evan Johnson	<a href="#">View</a>	
3	Mary Smith	<a href="#">View</a>	
4	Greg Williams	<a href="#">View</a>	

Click view to see all the procedures that talented vet can perform!

Add Veterinarian

Enter new Veterinarian's name, then click "Add Procedures" to assign that vet procedures.

Vet's Name:

Add Procedures

READ Procedure\_has\_Vet Page

Hichua Veterinarian Hospital

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Evan Johnson:

- wellness exam
- vaccinate
- neuter

CREATE Procedure\_has\_Vet Page

### Assign Procedures to Veterinarian

Please select procedures **Veterinarian Rebecca Ross** can perform:

☐ neuter

☐ spay

☐ vaccinate

☐ wellness exam

☐ sick exam

Total Procedures = 0

Add Procedures

READ/CREATE Exam\_Rooms Page

### Hichua Veterinarian Hospital

[Home](#)[Pets](#)[Appointments](#)[Owners](#)[Pet Types](#)[Procedures](#)[Veterinarians](#)[Exam Rooms](#)

#### Exam Rooms

Exam Room IDs
1
2
3

Add Exam Room

Exam Room Number:

Add Exam Room