**Repository link:**

1) **Project Description:**

In this project we built an Animal Shelter Management Website. Our website is targeted specifically for shelter managers and aims to make managers' responsibilities more manageable by allowing them to keep track of everything that is related to the shelter they manage and helping them efficiently complete their daily tasks .

Here are the key features of our website:

1. A new shelter manager can sign up and login to our website.
2. As soon as a manager logs in, only the information related to the shelter that manager is responsible for shows up on all of the pages. The manager can use the navigation bar to access all the pages we have on our website.
   - The pages on our website are Home, Volunteers, Adopters, Vets, Inspectors, Events and Workshops, Animals, Dogs, Cats and Birds
   - (Additionally we have a reset button that resets the system. It should be used when the website is being used for the first time.)
   - Logout directs the manager to the Login page.
3. Home page includes information about the shelter that the manager is managing such as shelter name, shelter location, shelter capacity and number of volunteers. Additionally there is a dropdown menu that allows the manager to view any table with any attribute of their choice.
4. Volunteers page allows the shelter manager to add volunteers for this shelter. There is a list of volunteers being displayed in a table and a table of volunteer IDs that are already in use. Additionally, the manager can use a form to find volunteers available for specific times in a week.
5. Adopters page allows the manager to insert new adopters and update their information. There is a list of adopters displayed on a table where the manager can choose to view the table either with Address or without address using the dropdown menu. There is also a table displayed for the list of unadopted animal IDs in this shelter.
6. Vets page allows the manager to insert new vets. It also allows the manager to find for which specialties your shelters have vets that match the minimum years of experience that the manager specified using a form.
7. The inspector page allows the manager to insert new inspectors, view the list of inspectors for that shelter in a table and also it shows the inspector IDs that are already in use in a table.
8. Event and workshops page allows the manager to insert, update and delete events. It also shows a list of events in a table.

9. Animal page allows the manager to insert, update and delete all animals. It also shows a list of animals in a table. There is also a button that allows the manager to calculate the average age of each breed in that shelter.
10. Dogs page allows the manager to view only the table for Dogs. In addition, there is a table that shows overweight dogs in this shelter and a button that will allow the manager to view the dogs that got all vaccines.
11. Cats page allows the manager to view only the table for Cats. In addition, there is a table that shows overweight cats in this shelter and a button that will allow the manager to view the cats that got all vaccines. Also there is a form that helps the manager find a cat with certain features across all shelters.
12. Birds page allows the manager to view only the table for Bird. In addition, there is a table that shows overweight birds in this shelter and a button that will allow the manager to view the birds that got all vaccines.
.

Initial Design [ER Diagram]:
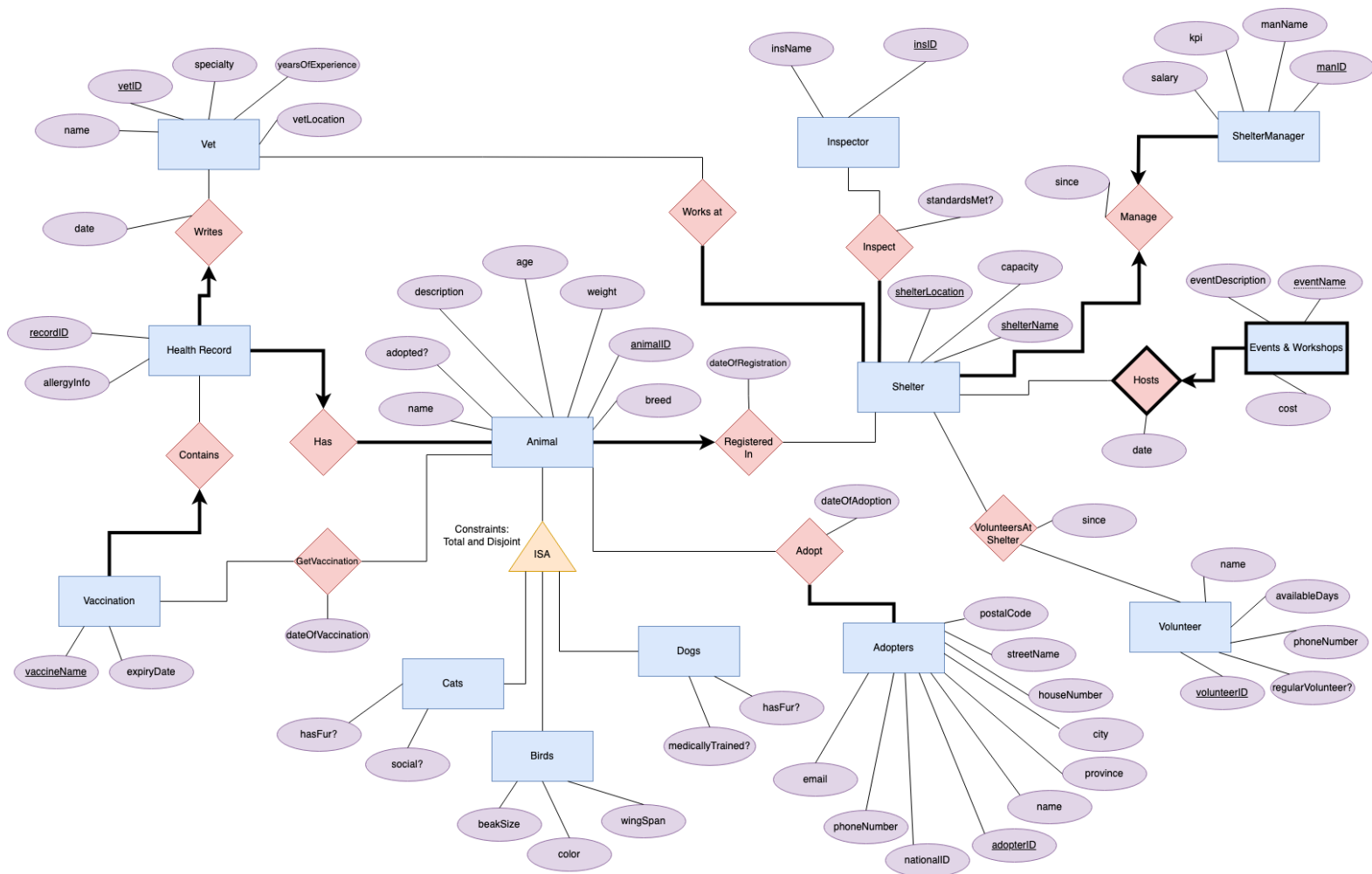
Changes to our design:

- we took out total participation for shelter to vets and inspects
    - In our website, managers sign up with their manager ID and they give shelter name/location because it is a total participation one-to-one relationship. We thought it would be awkard for the manager to have to also add a vet and inspector to a newly added shelter in this scenario - so we removed the total participation.
- changed shelterManagerInfo table name to Manager for simplicity.
- changed ShelterManagerPerformance table name to ManagerPerformance for simplicity.
- added NOT NULL to manager password because it makes more logical sense (user cannot be signed up with no password)
- added ON DELETE CASCADE for HealthRecord,GetVaccination and Adopt since they all reference RegsiteredAnimals and we want to be able to successfully delete an animal.
- added ON DELETE SET NULL for Vaccination and delete the original NOT NULL constraint for recordID.

2) List of Relational Schemas:

Manager=(manID, manPassword, **shelterLocation**, **shelterName**, manName, **kpi**, since)

ManagerPerformance = (kpi,salary)

Vet (vetID, vetName, specialty, yearsOfExperience, vetLocation)

VetWorksAtShelter (**vetID**, **shelterLocation**, **shelterName**)

Shelter(shelterLocation, capacity ,shelterName)

EventsHosted(eventName, eventDescription, cost, eventDate, **shelterLocation, shelterName**)

AdoptersInfo(adopterID, nationalID, name, phoneNumber, email, **postalCode,** houseNumber)
AdoptersLocation(postalCode**,** city, streetName, province)
Adopt(**adopterID**, **animalID**, dateOfAdoption)

AvailableDaysRegularVolunteer(availableDays*,* regularVolunteer)
Volunteer (volunteerID, name, availableDays, phoneNumber, regularVolunteer)
VolunteersAtShelter (**volunteerID**, **shelterLocation**, **shelterName**, since)

Inspector(insName,insID)
Inspect(**insID**,**shelterLocation**, **shelterName**,standardsMet)

RegisteredAnimal (<u>animalID</u>, name, adopted?,description, age, weight, breed, **shelterLocation, shelterName**)

Cats (**<u>animalID</u>**, hasFur,social)
Dogs (**<u>animalID</u>**, medicallyTrained, hasFur)
Birds(**<u>animalID</u>**, beakSize, wingSpan, color)

GetVaccination(**<u>animalID, vaccinationName</u>**,dateOfVaccination)
Vaccination (<u>vaccineName</u>, expiryDate, **recordID**)
HealthRecord (<u>recordID</u>, allergyInfo, **vetID,animalID**)

3) Screenshots of DB After Reset (Initial Insert Statements):

AvailableDaysRegularVolunteer:

Available Days	Regular Volunteer
TTTTTTT	1
TTTTTTF	1
TTTTFFF	1
TTFFFFF	1
FFFFFFF	0
FTFFTFF	1

Volunteer:

Volunteer ID	Name	Available Days	Phone Number
V123	Sam Johns	TTTTTTT	1231231234
V124	Clara Yang	TTTTTTF	1231239999
V125	Anna Smith	TTTTFFF	7781111111
V444	Robert Robertson	FFFFFFF	6046046044
V445	Blake Tran	TTTTFFF	2233445566
V446	Clare Cooper	TTTTFFF	3452435267
V447	Jake Miles	FFFFFFF	1234567888
V448	Jamie Finley	FTFFTFF	2342342344
V126	Chase Jones	TTFFFFF	1231231234
V127	Larry Miller	FFFFFFF	2220004444

Inspector:

```
InsName              InsID
-------------------- --------------------
Selina               I001
Ece                  I002
Sogand               I003
Tony                 I004
Zed                  I005
```

Vet:

```
VetID                Vet Name            Specialty           Years of Experience Vet Location
-------------------- ------------------- ------------------- ------------------- --------------------
V001                 Andy White          Cardiology                            6 Surrey
V002                 Jack Allen          Cardiology                            4 Surrey
V003                 Jackie Brown        Neurology                             3 Surrey
V004                 Mary Moore          Oncology                              2 San Francisco
V005                 Sandy Blum          Dentistry                             8 Dentistry
```

AdoptersLocation:

```
Postal Code          City                Street Name          Province
-------------------- ------------------- -------------------- --------------------
123456               Toronto             120 Bremner Blvd     Ontario
34FS67               Toronto             20 Bay Street        Ontario
45A67S8              Mississauga         2375 Skymark Avenue  Ontario
V7TDZ4               Vancouver                                British Columbia
444555               Cambridge           705 Fountain Street  Ontario
                                         N.
```

AdoptersInfo:

```
AdopterID  NationalID AdopterName         Phone Number Email                   Postal Code          House Number
---------- ---------- ------------------- ------------ -------------------     -------------------- --------------------
A000       7290920930 Jane Smith            7781234567 jane98smith@gmail.co 123456                  12
                                                       m
A001       7599921838 Joe Johnson           6449826543 joe.johnson@gmail.co                         17
                                                       m
A002       7899234932 Natalia Davis         5223426189 nattyisb32.davis@gma 34FS67                  912
                                                       il.com
A003       7899980938 Jason Ng              5671231212 jas65.ng@gmail.com   45A67S8                  789
A005       7145980938 Clark Brown           2355678912 clark.brown456@outlo V7TDZ4                   23
                                                       ok.com
A006       7166980938 Sara Brown            2359929988 sara.brown6@outlook. 444555                   13
                                                       com
A007       7166000038 Andy Smith            2352228888 andy.smith@outlook.c 444555                   13
                                                       om
A008       7166111038 Ally Smith            1010101010 ally@outlook.com     444555                   13
A009       7123450038 Jones Blake           2020202020 jones@outlook.com    V7TDZ4                   23
```

Shelter:

```
Shelter Location       Capacity  Shelter Name
---------------------  --------  ----------------------
270 Gerrard St E, To        200  Lovely Pet Home
ronto, Ontario

322 Dundas St W, Tor        150  Loving Care Animal S
onto,Ontario                     helter

101 Oak Street, Evac        500  Lovely Pet Home
uationville, USA

10776 King George Bo        100  Paws and Claws Anima
ulevard, Surrey, Bri             l Shelter
tish Columbia

4455 110 Avenue SE,         300  The Animal Haven
Calgary, Alberta

234 Willow Lane, Sup        500  The Animal Haven
portville, USA
```

VetWorksAtShelter:

```
VetID                  Shelter Location      Shelter Name
---------------------  --------------------  --------------------
V001                   10776 King George Bo  Paws and Claws Anima
                       ulevard, Surrey, Bri  l Shelter
                       tish Columbia

V002                   10776 King George Bo  Paws and Claws Anima
                       ulevard, Surrey, Bri  l Shelter
                       tish Columbia

V003                   10776 King George Bo  Paws and Claws Anima
                       ulevard, Surrey, Bri  l Shelter
                       tish Columbia

V004                   234 Willow Lane, Sup  The Animal Haven
                       portville, USA

V005                   234 Willow Lane, Sup  The Animal Haven
                       portville, USA
```

Inspect:

```
InsID                Shelter Location     Shelter Name         Standards Met
-------------------- -------------------- -------------------- -------------
I001                 234 Willow Lane, Sup The Animal Haven                 1
                     portville, USA

I002                 234 Willow Lane, Sup The Animal Haven                 1
                     portville, USA

I002                 4455 110 Avenue SE,  The Animal Haven                 1
                     Calgary, Alberta

I003                 10776 King George Bo Paws and Claws Anima             1
                     ulevard, Surrey, Bri l Shelter
                     tish Columbia

I004                 270 Gerrard St E, To Lovely Pet Home                  1
                     ronto, Ontario

I004                 322 Dundas St W, Tor Loving Care Animal S             0
                     onto,Ontario             helter
```

ManagerPerformance:

```
KPI                        SALARY
-------------------------- --------------------------
AnimalAdoptionRate : 5000/month
  70%

AnimalAdoptionRate : 5500/month
  75%

AnimalAdoptionRate : 4000/month
  60%

AnimalAdoptionRate : 4000/month
  50%

AnimalAdoptionRate : 6000/month
  80%
```

Manager:

```
ManID          MANPASSWORD  Shelter Location      Shelter Name        ManName        KPI                        Since
------------   -----------  --------------------  -----------------   -------------  -------------------------  ------------
M001           myt          322 Dundas St W, Tor  Loving Care Animal S Seth Smith    AnimalAdoptionRate : 02-FEB-20
                            onto,Ontario          helter                              70%
M002           myt          234 Willow Lane, Sup  The Animal Haven    Jordon Miles   AnimalAdoptionRate : 09-OCT-09
                            portville, USA                                            70%
M003           pass         4455 110 Avenue SE,   The Animal Haven    Sarah Coles    AnimalAdoptionRate : 29-NOV-10
                            Calgary, Alberta                                          60%
M004           pass4        101 Oak Street, Evac  Lovely Pet Home     Nick Knightly  AnimalAdoptionRate : 27-MAY-10
                            uationville, USA                                          50%
M005           pass5        10776 King George Bo  Paws and Claws Anima Anna Johnson  AnimalAdoptionRate : 15-APR-17
                            ulevard, Surrey, Bri  l Shelter                           70%
                            tish Columbia
```

VolunteersAtShelter:

```
Volunteer ID          Shelter Location      Shelter Name         Since
--------------------  --------------------  -------------------- ------------
V123                  270 Gerrard St E, To  Lovely Pet Home      11-NOV-23
                      ronto, Ontario

V124                  270 Gerrard St E, To  Lovely Pet Home      27-OCT-23
                      ronto, Ontario

V125                  101 Oak Street, Evac  Lovely Pet Home      11-NOV-23
                      uationville, USA

V126                  10776 King George Bo  Paws and Claws Anima 01-JAN-07
                      ulevard, Surrey, Bri  l Shelter
                      tish Columbia

V126                  234 Willow Lane, Sup  The Animal Haven     04-AUG-10
                      portville, USA

V444                  10776 King George Bo  Paws and Claws Anima 18-DEC-10
                      ulevard, Surrey, Bri  l Shelter
                      tish Columbia

V445                  10776 King George Bo  Paws and Claws Anima 23-FEB-10
                      ulevard, Surrey, Bri  l Shelter
                      tish Columbia

V446                  10776 King George Bo  Paws and Claws Anima 05-SEP-19
                      ulevard, Surrey, Bri  l Shelter
                      tish Columbia

V447                  10776 King George Bo  Paws and Claws Anima 14-AUG-13
                      ulevard, Surrey, Bri  l Shelter
                      tish Columbia

V448                  10776 King George Bo  Paws and Claws Anima 04-OCT-11
                      ulevard, Surrey, Bri  l Shelter
                      tish Columbia
```

EventsHosted:

Event Name	Event Description	Cost	Event Date	Shelter Location	Shelter Name
Adoption Party	A fun event where you can meet and adopt adorable shelter pets	$20 per person	20-MAY-22	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
Pet Play Day	Playtime for pets and people with games and activities	$10 per person	24-DEC-22	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
Pets 101	Time to learn about being a pet owner	$15 per person	24-DEC-23	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
Sick pet caring	Caring ways for your sick pet	$10 per person	12-NOV-23	234 Willow Lane, Supportville, USA	The Animal Haven
Vets 101	Which vets can you trust?	$11 per person	06-DEC-23	234 Willow Lane, Supportville, USA	The Animal Haven

RegisteredAnimal:

Animal ID	Name	Adopted	Description	Age	Weight	Breed	Shelter Location	Shelter Name
C000	Smokey	0	A very cute cat. Loves to be pet.	3	8	British Shorthair	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
C001	Pinky	0	Not a playful cat.	3	20	Siamese	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
C002	Bonbon	1	Loves to cuddle and eat.	3	15	Bengal	322 Dundas St W, Toronto,Ontario	Loving Care Animal Shelter
C003	Bambi	0	Bambi loves to be pet.	1	13	Calico	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C004	Daisy	1	Loves to eat. Always hungry	5	15	Ragdoll	234 Willow Lane, Supportville, USA	The Animal Haven
C005	Kitkat	1	Loves kitkats	0	10	Ragdoll	234 Willow Lane, Supportville, USA	The Animal Haven
C006	Catcat	0	is a ver nice cat	10	18	Bengal	234 Willow Lane, Supportville, USA	The Animal Haven
C007	Kitty	0	Kitty is really cute.	4	10	Calico	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
D000	Spots	1	A good boy, lots of energy.	1	15	Dalmatian	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
D001	Jamie	0	Playful dog and loves to cuddle	5	20	Labrador	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
D002	Wolfie	0	Loves to cuddle.	3	15	Golden Retriever	322 Dundas St W, Toronto,Ontario	Loving Care Animal Shelter
D003	Luna	1	Luna loves when you pet her.	1	8	Chinese Crested Dog	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
D004	Bear	1	Loves to eat.	1	3	Husky	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
B000	Coco	1	Peaceful bird.	3	8	Finch	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
B001	Bluey	1	Speaks a lot. So cute.	5	20	Macaw	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home

B002	Jay	0	Loves to speak	3	15	Parrot	322 Dundas St W, Tor onto,Ontario	Loving Care Animal S helter
B003	Raven	0	Angry bird	1	8	Grey parrot	10776 King George Bo ulevard, Surrey, Bri tish Columbia	Paws and Claws Anima l Shelter
B004	Kiwi	0	Loves to eat. Always hungry	1	3	Dove	234 Willow Lane, Sup portville, USA	The Animal Haven
C008	Mr. Cat	0	Fun cat	3	4	Siamese	10776 King George Bo ulevard, Surrey, Bri tish Columbia	Paws and Claws Anima l Shelter
C009	Paws	1	Loves to run around	3	3	Siamese	10776 King George Bo ulevard, Surrey, Bri tish Columbia	Paws and Claws Anima l Shelter
C010	Whiskers	1	Very active	5	5	Siamese	10776 King George Bo ulevard, Surrey, Bri tish Columbia	Paws and Claws Anima l Shelter
C011	Stripes	0	Sleeps all day	7	6	Ragdoll	10776 King George Bo ulevard, Surrey, Bri tish Columbia	Paws and Claws Anima l Shelter
C012	Fuzzy	0	Smart cat	3	5	Ragdoll	10776 King George Bo ulevard, Surrey, Bri tish Columbia	Paws and Claws Anima l Shelter

Cats:

Animal ID	HasFur	Social
C000	1	1
C001	1	0
C002	1	1
C003	1	1
C004	1	0
C005	0	1
C006	1	0
C007	1	0
C008	1	0
C009	0	1
C010	1	1
C011	1	1
C012	1	1

Dogs:

```
ANIM  MEDICALLYTRAINED      HASFUR
----  ------------------    -----------
D000                  1              1
D001                  0              1
D002                  1              1
D003                  0              0
D004                  0              1
```

Birds:

Animal ID	BeakSize	WingSpan	Color
B000	4	25	White
B001	7	30	Blue
B002	9	20	Green
B003	12	25	Blue
B004	5	12	Grey

Health Record:

RecordID	AllergyInfo	VetID	Animal ID
R123	Dairy	V001	C001
R111	Pollen	V001	D002
R222	Fish	V002	C002
R333	Fish	V004	C003
R444	Chicken	V005	D004

Vaccination:

Vaccine Name	Expiry Date	RecordID
Rabies Vaccine	22-FEB-45	R123
Bordetella Vaccine	10-FEB-24	R111
Canine Parvovirus Vaccine	06-JUN-30	R222
Feline Distemper Vaccine	09-FEB-34	R333
Avian Influenza Vaccine	02-SEP-29	R444

GetVaccination:

```
Animal ID            Vaccine Name         Date of Vaccination
-------------------- -------------------- --------------------
C000                 Rabies Vaccine       20-JAN-22
C000                 Bordetella Vaccine   21-MAR-22
C000                 Canine Parvovirus Va 04-FEB-21
                     ccine

C000                 Feline Distemper Vac 09-SEP-22
                     cine

C000                 Avian Influenza Vacc 09-FEB-23
                     ine

C008                 Rabies Vaccine       22-JAN-22
C008                 Bordetella Vaccine   21-APR-22
C008                 Canine Parvovirus Va 04-JAN-20
                     ccine

C008                 Feline Distemper Vac 09-JUL-21
                     cine

C008                 Avian Influenza Vacc 09-FEB-20
                     ine

C010                 Rabies Vaccine       26-JAN-22
C010                 Bordetella Vaccine   26-MAR-22
C010                 Canine Parvovirus Va 04-DEC-21
                     ccine

C010                 Feline Distemper Vac 19-NOV-22
                     cine

C010                 Avian Influenza Vacc 19-OCT-23
                     ine

C012                 Bordetella Vaccine   26-MAY-22
C012                 Canine Parvovirus Va 13-OCT-21
                     ccine

C012                 Feline Distemper Vac 09-DEC-22
                     cine

C012                 Avian Influenza Vacc 20-JAN-23
```

C002	Avian Influenza Vaccine	17-SEP-23
C003	Rabies Vaccine	20-JAN-22
C003	Bordetella Vaccine	21-MAR-22
C003	Canine Parvovirus Vaccine	04-FEB-21
C003	Feline Distemper Vaccine	09-SEP-22
C003	Avian Influenza Vaccine	09-FEB-23
D001	Bordetella Vaccine	04-FEB-21
D003	Rabies Vaccine	20-JAN-22
D003	Bordetella Vaccine	21-MAR-22
D003	Canine Parvovirus Vaccine	04-FEB-21
D003	Feline Distemper Vaccine	09-SEP-22
D003	Avian Influenza Vaccine	09-FEB-23
D002	Bordetella Vaccine	09-SEP-22
D002	Feline Distemper Vaccine	09-FEB-23
B001	Rabies Vaccine	20-JAN-22
B001	Bordetella Vaccine	21-MAR-22
B001	Canine Parvovirus Vaccine	04-FEB-21
B001	Feline Distemper Vaccine	09-SEP-22
B001	Avian Influenza Vaccine	09-FEB-23
B002	Rabies Vaccine	20-JAN-22
B003	Bordetella Vaccine	21-MAR-22
B002	Canine Parvovirus Vaccine	04-FEB-21
B004	Feline Distemper Vaccine	09-SEP-22

Adopt:

AdopterID	Animal ID	Date of Adoption
A000	C005	23-AUG-23
A001	D004	02-SEP-23
A002	B002	03-OCT-23
A003	B000	11-OCT-23
A005	C004	22-OCT-23
A006	C001	06-NOV-23
A007	D003	02-JUN-22
A008	C010	07-NOV-23
A009	C009	04-DEC-22

4) Screenshots of Before, During, After Queries:

Insert:

- Volunteers has availableDays as a FK
    - If available days are inputted and it does not already exist in AvailableDaysRegularVolunteer table, then we first add to that table
- File: routeHandler.php, function: handleInsertVolunteerRequest(), line: (insert into availableDays -> 1161), (insert into volunteer -> 1177)

BEFORE:
Volunteer:

```
Volunteer ID          Name                Available Days        Phone Number
------------------    ----------------    ----------------      -------------
V123                  Sam Johns           TTTTTTT                 1231231234
V124                  Clara Yang          TTTTTTF                 1231239999
V125                  Anna Smith          TTTTFFF                 7781111111
V444                  Robert Robertson    FFFFFFF                 6046046044
V445                  Blake Tran          TTTTFFF                 2233445566
V446                  Clare Cooper        TTTTFFF                 3452435267
V447                  Jake Miles          FFFFFFF                 1234567888
V448                  Jamie Finley        FTFFTFF                 2342342344
V126                  Chase Jones         TTFFFFF                 1231231234
V127                  Larry Miller        FFFFFFF                 2220004444
```

AvailableDaysRegularVolunteer:

```
Available Days        Regular Volunteer
------------------    ------------------
TTTTTTT                             1
TTTTTTF                             1
TTTTFFF                             1
TTFFFFF                             1
FFFFFFF                             0
FTFFTFF                             1
```

GUI (DURING): in "vounteers.php" page

Id: V999

Name: Sam Sammy

Days Available: FTTTTTT

Phone Number: 5555555556

Insert

AFTER:

```
Volunteer ID          Name                 Available Days        Phone Number
------------------    ------------------   ------------------    ------------
V999                  Sam Sammy            FTTTTTT                 5555555556
V123                  Sam Johns            TTTTTTT                 1231231234
V124                  Clara Yang           TTTTTTF                 1231239999
V125                  Anna Smith           TTTTFFF                 7781111111
V444                  Robert Robertson     FFFFFFF                 6046046044
V445                  Blake Tran           TTTTFFF                 2233445566
V446                  Clare Cooper         TTTTFFF                 3452435267
V447                  Jake Miles           FFFFFFF                 1234567888
V448                  Jamie Finley         FTFFTFF                 2342342344
V126                  Chase Jones          TTFFFFF                 1231231234
V127                  Larry Miller         FFFFFFF                 2220004444

Available Days        Regular Volunteer
------------------    -----------------
FTTTTTT                               1
TTTTTTT                               1
TTTTTTF                               1
TTTTFFF                               1
TTFFFFF                               1
FFFFFFF                               0
FTFFTFF                               1
```

Delete:

We do delete on animals since it has an ISA relationship with cats,dogs and birds, and they have ON DELETE CASCADE for animals. HealthRecord, Adopt, and GetVaccination also has ON DELETE CASCADE for animals.

- Code: routeHandler.php, function:handleDeleteAnimalRequest() -> line 210

Before:
ALL registered animals in our DB:

```
Animal ID            Name           Adopted Description          Age Weight Breed              Shelter Location       Shelter Name
-------------------- -------------- ------- ------------------   --- ------ ------------------ ---------------------- --------------------
C000                 Smokey             0 A very cute cat. Lov   3      8 British Shorthair  270 Gerrard St E, To Lovely Pet Home
                                           es to be pet.                                      ronto, Ontario
C001                 Pinky              0 Not a playful cat.     3     20 Siamese            270 Gerrard St E, To Lovely Pet Home
                                                                                             ronto, Ontario
C002                 Bonbon             1 Loves to cuddle and    3     15 Bengal             322 Dundas St W, Tor Loving Care Animal S
                                           eat.                                              onto,Ontario         helter
C003                 Bambi              0 Bambi loves to be pe   1     13 Calico             10776 King George Bo Paws and Claws Anima
                                           t.                                                ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
C004                 Daisy              1 Loves to eat. Always   5     15 Ragdoll            234 Willow Lane, Sup The Animal Haven
                                           hungry                                            portville, USA
C005                 Kitkat             1 Loves kitkats          0     10 Ragdoll            234 Willow Lane, Sup The Animal Haven
                                                                                             portville, USA
C006                 Catcat             0 is a ver nice cat     10     18 Bengal             234 Willow Lane, Sup The Animal Haven
                                                                                             portville, USA
C007                 Kitty              0 Kitty is really cute   4     10 Calico             10776 King George Bo Paws and Claws Anima
                                           .                                                 ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
D000                 Spots              1 A good boy, lots of    1     15 Dalmatian          270 Gerrard St E, To Lovely Pet Home
                                           energy.                                           ronto, Ontario
D001                 Jamie              0 Playful dog and love   5     20 Labrador           270 Gerrard St E, To Lovely Pet Home
                                           s to cuddle                                       ronto, Ontario
D002                 Wolfie             0 Loves to cuddle.       3     15 Golden Retriever   322 Dundas St W, Tor Loving Care Animal S
                                                                                             onto,Ontario         helter
D003                 Luna               1 Luna loves when you    1      8 Chinese Crested Dog 10776 King George Bo Paws and Claws Anima
                                           pet her.                                          ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
D004                 Bear               1 Loves to eat.          1      3 Husky              10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
B000                 Coco               1 Peaceful bird.         3      8 Finch              270 Gerrard St E, To Lovely Pet Home
                                                                                             ronto, Ontario
B001                 Bluey              1 Speaks a lot. So cut   5     20 Macaw              270 Gerrard St E, To Lovely Pet Home
                                           e.                                                ronto, Ontario
B002                 Jay                0 Loves to speak         3     15 Parrot             322 Dundas St W, Tor Loving Care Animal S
                                                                                             onto,Ontario         helter
B003                 Raven              0 Angry bird             1      8 Grey parrot        10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
B004                 Kiwi               0 Loves to eat. Always   1      3 Dove               234 Willow Lane, Sup The Animal Haven
                                           hungry                                            portville, USA
C008                 Mr. Cat            0 Fun cat                3      4 Siamese            10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
C009                 Paws               1 Loves to run around    3      3 Siamese            10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
C010                 Whiskers           1 Very active            5      5 Siamese            10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
C011                 Stripes            0 Sleeps all day         7      6 Ragdoll            10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
C012                 Fuzzy              0 Smart cat              3      5 Ragdoll            10776 King George Bo Paws and Claws Anima
                                                                                             ulevard, Surrey, Bri l Shelter
                                                                                             tish Columbia
```

Logged in as M005, these are animals for **THIS SHELTER ONLY**:

During(GUI):

Delete Animal:

AnmialID's are in the format 'CXXX or BXXX or DXXX' where X are integers between 0-9. You can only delete existing animals in this shelter.

AnimalID: [C003]

[Delete]

List of Registered Animals in this shelter

AnimalID	Name	Adopted	Description	Age	Weight	Breed
C003	Bambi	No	Bambi loves to be pet.	1	13	Calico
C007	Kitty	No	Kitty is really cute.	4	10	Calico
D003	Luna	Yes	Luna loves when you pet her.	1	8	Chinese Crested Dog
D004	Bear	Yes	Loves to eat.	1	3	Husky
B003	Raven	No	Angry bird	1	8	Grey parrot
C008	Mr. Cat	No	Fun cat	3	4	Siamese
C009	Paws	Yes	Loves to run around	3	3	Siamese
C010	Whiskers	Yes	Very active	5	5	Siamese
C011	Stripes	No	Sleeps all day	7	6	Ragdoll
C012	Fuzzy	No	Smart cat	3	5	Ragdoll

After:

```
Animal ID            Name                 Adopted Description          Age Weight Breed            Shelter Location          Shelter Name
--------------------  -------------------  ------- -------------------  --- ------ ---------------  ------------------------  ------------------
C000                 Smokey                     0 A very cute cat. Lov   3      8 British Shorthair 270 Gerrard St E, To Lovely Pet Home
                                                  es to be pet.                                     ronto, Ontario
C001                 Pinky                      0 Not a playful cat.     3     20 Siamese          270 Gerrard St E, To Lovely Pet Home
                                                                                                    ronto, Ontario
C002                 Bonbon                     1 Loves to cuddle and    3     15 Bengal           322 Dundas St W, Tor Loving Care Animal S
                                                  eat.                                              onto,Ontario         helter
C004                 Daisy                      1 Loves to eat. Always   5     15 Ragdoll          234 Willow Lane, Sup The Animal Haven
                                                  hungry                                            portville, USA
C005                 Kitkat                     1 Loves kitkats          0     10 Ragdoll          234 Willow Lane, Sup The Animal Haven
                                                                                                    portville, USA
C006                 Catcat                     0 is a ver nice cat     10     18 Bengal           234 Willow Lane, Sup The Animal Haven
                                                                                                    portville, USA
C007                 Kitty                      0 Kitty is really cute   4     10 Calico           10776 King George Bo Paws and Claws Anima
                                                  .                                                 ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
D000                 Spots                      1 A good boy, lots of    1     15 Dalmatian        270 Gerrard St E, To Lovely Pet Home
                                                  energy.                                           ronto, Ontario
D001                 Jamie                      0 Playful dog and love   5     20 Labrador         270 Gerrard St E, To Lovely Pet Home
                                                  s to cuddle                                       ronto, Ontario
D002                 Wolfie                     0 Loves to cuddle.       3     15 Golden Retriever  322 Dundas St W, Tor Loving Care Animal S
                                                                                                    onto,Ontario         helter
D003                 Luna                       1 Luna loves when you    1      8 Chinese Crested Dog 10776 King George Bo Paws and Claws Anima
                                                  pet her.                                          ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
D004                 Bear                       1 Loves to eat.          1      3 Husky            10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
B000                 Coco                       1 Peaceful bird.         3      8 Finch            270 Gerrard St E, To Lovely Pet Home
                                                                                                    ronto, Ontario
B001                 Bluey                      1 Speaks a lot. So cut   5     20 Macaw            270 Gerrard St E, To Lovely Pet Home
                                                  e.                                                ronto, Ontario
B002                 Jay                        0 Loves to speak         3     15 Parrot           322 Dundas St W, Tor Loving Care Animal S
                                                                                                    onto,Ontario         helter
B003                 Raven                      0 Angry bird             1      8 Grey parrot      10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
B004                 Kiwi                       0 Loves to eat. Always   1      3 Dove             234 Willow Lane, Sup The Animal Haven
                                                  hungry                                            portville, USA
C008                 Mr. Cat                    0 Fun cat                3      4 Siamese          10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
C009                 Paws                       1 Loves to run around    3      3 Siamese          10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
C010                 Whiskers                   1 Very active            5      5 Siamese          10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
C011                 Stripes                    0 Sleeps all day         7      6 Ragdoll          10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
C012                 Fuzzy                      0 Smart cat              3      5 Ragdoll          10776 King George Bo Paws and Claws Anima
                                                                                                    ulevard, Surrey, Bri l Shelter
                                                                                                    tish Columbia
```

List of Registered Animals in this shelter

AnimalID	Name	Adopted	Description	Age	Weight	Breed
C007	Kitty	No	Kitty is really cute.	4	10	Calico
D003	Luna	Yes	Luna loves when you pet her.	1	8	Chinese Crested Dog
D004	Bear	Yes	Loves to eat.	1	3	Husky
B003	Raven	No	Angry bird	1	8	Grey parrot
C008	Mr. Cat	No	Fun cat	3	4	Siamese
C009	Paws	Yes	Loves to run around	3	3	Siamese
C010	Whiskers	Yes	Very active	5	5	Siamese
C011	Stripes	No	Sleeps all day	7	6	Ragdoll
C012	Fuzzy	No	Smart cat	3	5	Ragdoll

Update:

- Email is unique, national ID is unique, and postal code is a foreign key
- file: routeHandler.php, function: handleUpdateAdopterRequest(), line: 585

BEFORE:

AdoptersInfo:

```
AdopterID  NationalID AdopterName        Phone Number Email               Postal Code          House Number
---------- ---------- -----------------  ------------ -------------------- -------------------- ------------
--------
A000       7290920930 Jane Smith           7781234567 jane98smith@gmail.co 123456               12
                                                      m
A001       7599921838 Joe Johnson          6449826543 joe.johnson@gmail.co                      17
                                                      m
A002       7899234932 Natalia Davis        5223426189 nattyisb32.davis@gma 34FS67               912
                                                      il.com
A003       7899980938 Jason Ng             5671231212 jas65.ng@gmail.com   45A67S8              789
A005       7145980938 Clark Brown          2355678912 clark.brown456@outlo V7TDZ4               23
                                                      ok.com
A006       7166980938 Sara Brown           2359929988 sara.brown6@outlook. 444555               13
                                                      com
A007       7166000038 Andy Smith           2352228888 andy.smith@outlook.c 444555               13
                                                      om
A008       7166111038 Ally Smith           1010101010 ally@outlook.com     444555               13
A009       7123450038 Jones Blake          2020202020 jones@outlook.com    V7TDZ4               23
```

GUI (DURING): (in adopters.php page)

Update Adopter info below:

ID entered must match with an already existing ID. ID c

Id: [A009]

National Id: [ ] [Update]

Name: [ ] [Update]

Phone Number: [ ] [Update]

Email: [newuniqueemail@ubc.com] [Update]

House number: [ ] [Update]

Postal Code: [ ] [Update]

AFTER:

```
AdopterID  NationalID AdopterName       Phone Number Email               Postal Code          House Number
---------- ---------- ----------------- ------------ ------------------- -------------------- ------------
                                                                         --------------------- ------------
--------
A000       7290920930 Jane Smith          7781234567 jane98smith@gmail.co 123456                        12
                                                     m
A001       7599921838 Joe Johnson         6449826543 joe.johnson@gmail.co                               17
                                                     m
A002       7899234932 Natalia Davis       5223426189 nattyisb32.davis@gma 34FS67                       912
                                                     il.com
A003       7899980938 Jason Ng            5671231212 jas65.ng@gmail.com   45A67S8                      789
A005       7145980938 Clark Brown         2355678912 clark.brown456@outlo V7TDZ4                        23
                                                     ok.com
A006       7166980938 Sara Brown          2359929988 sara.brown6@outlook. 444555                        13
                                                     com
A007       7166000038 Andy Smith          2352228888 andy.smith@outlook.c 444555                        13
                                                     om
A008       7166111038 Ally Smith          1010101010 ally@outlook.com     444555                        13
A009       7123450038 Jones Blake         2020202020 newuniqueemail@ubc.c V7TDZ4                        23
                                                     om
```

Selection:

- Selection on Cats table
- file:routeHandler.php, function handleSelectAnimalRequest() -> line 439 (the string for the query is built based on operator conditions, this starts at line 401-411 or 415-417)
- Note: in the queries we are joining cats with registered animal first, but this is only for the user to see the information on the shelter info AFTER the selection (as it makes more sense for user stories - the user would want to see where the cat lives after searching for their perfect cat). Because of this, registeredAnimal was NOT considered in the attributes for selection. The selection is still purely on cats table.

Before:
Cats:

```
Animal ID              HasFur Social
-------------------    ------ ------
C000                       1      1
C001                       1      0
C002                       1      1
C003                       1      1
C004                       1      0
C005                       0      1
C006                       1      0
C007                       1      0
C008                       1      0
C009                       0      1
C010                       1      1
C011                       1      1
C012                       1      1
```

RegisteredAnimal:

Animal ID	Name	Adopted	Description	Age	Weight	Breed	Shelter Location	Shelter Name
C000	Smokey	0	A very cute cat. Loves to be pet.	3	8	British Shorthair	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
C001	Pinky	0	Not a playful cat.	3	20	Siamese	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
C002	Bonbon	1	Loves to cuddle and eat.	3	15	Bengal	322 Dundas St W, Toronto,Ontario	Loving Care Animal Shelter
C003	Bambi	0	Bambi loves to be pet.	1	13	Calico	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C004	Daisy	1	Loves to eat. Always hungry	5	15	Ragdoll	234 Willow Lane, Supportville, USA	The Animal Haven
C005	Kitkat	1	Loves kitkats	0	10	Ragdoll	234 Willow Lane, Supportville, USA	The Animal Haven
C006	Catcat	0	is a ver nice cat	10	18	Bengal	234 Willow Lane, Supportville, USA	The Animal Haven
C007	Kitty	0	Kitty is really cute.	4	10	Calico	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
D000	Spots	1	A good boy, lots of energy.	1	15	Dalmatian	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
D001	Jamie	0	Playful dog and loves to cuddle	5	20	Labrador	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
D002	Wolfie	0	Loves to cuddle.	3	15	Golden Retriever	322 Dundas St W, Toronto,Ontario	Loving Care Animal Shelter
D003	Luna	1	Luna loves when you pet her.	1	8	Chinese Crested Dog	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
D004	Bear	1	Loves to eat.	1	3	Husky	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
B000	Coco	1	Peaceful bird.	3	8	Finch	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
B001	Bluey	1	Speaks a lot. So cute.	5	20	Macaw	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
B002	Jay	0	Loves to speak	3	15	Parrot	322 Dundas St W, Toronto,Ontario	Loving Care Animal Shelter
B003	Raven	0	Angry bird	1	8	Grey parrot	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
B004	Kiwi	0	Loves to eat. Always hungry	1	3	Dove	234 Willow Lane, Supportville, USA	The Animal Haven
C008	Mr. Cat	0	Fun cat	3	4	Siamese	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C009	Paws	1	Loves to run around	3	3	Siamese	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C010	Whiskers	1	Very active	5	5	Siamese	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C011	Stripes	0	Sleeps all day	7	6	Ragdoll	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C012	Fuzzy	0	Smart cat	3	5	Ragdoll	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter

During(GUI): in "cats.php page. (example selection of hasFur = 1 AND social = 1)

Cat ID: [   ]

OR ▼ hasFur: [1   ]

AND ▼ Social: [1   ] [Submit]

After: (table that is displayed to GUI):

Animal ID	Has Fur	Social	Shelter Location	Shelter Name
C000	1	1	270 Gerrard St E, Toronto, Ontario	Lovely Pet Home
C002	1	1	322 Dundas St W, Toronto,Ontario	Loving Care Animal Shelter
C003	1	1	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C010	1	1	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C011	1	1	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C012	1	1	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter

Projection:

- Located in home page of website
- We will choose to project Vet table for example
- File: index.php, line: 75, 84
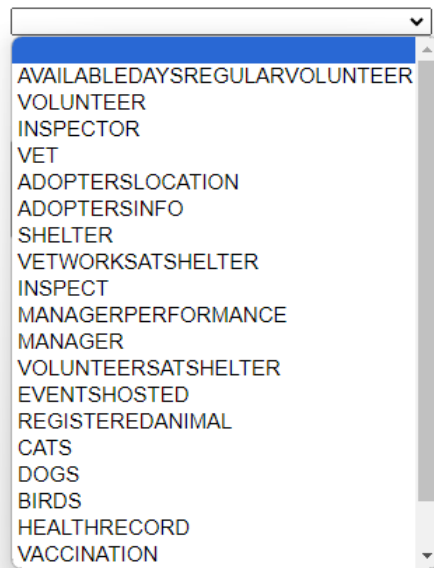
BEFORE:
Vet:

VetID	Vet Name	Specialty	Years of Experience	Vet Location
V001	Andy White	Cardiology	6	Surrey
V002	Jack Allen	Cardiology	4	Surrey
V003	Jackie Brown	Neurology	3	Surrey
V004	Mary Moore	Oncology	2	San Francisco
V005	Sandy Blum	Dentistry	8	Dentistry

GUI (during):
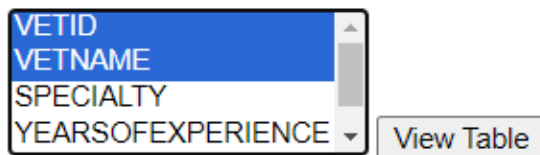
Select a table below to view it's contents:

After choosing Vet table for above, we see this is now filled with Vet table attributes below:

Select attributes to view (hold control to select multiple)

AFTER:
- clicking "view table" displays the table below:

Table for: VET

VETID	VETNAME
V001	Andy White
V002	Jack Allen
V003	Jackie Brown
V004	Mary Moore
V005	Sandy Blum

JOIN:
- Joins Volunteer, AvailableDaysRegularVolunteer, and VolunteersAtShelter table
- AvailableDays in Volunteer is a FK to AvailableDaysRegularVolunteer

- User inputs 1 or 0 for if they are looking for regular/not regular volunteers IN THEIR SHELTER
- File: routeHandler.php, function: handleFindVolunteerRequest(), line: 462

BEFORE:
Our GUI displays all volunteers THEIR shelter to the user. (I am logged in as M005 - where shelterLocation = '10776 King George Boulevard, Surrey, British Columbia' and shelterName = 'Paws and Claws Animal Shelter';)

List of volunteers

Available volunteers have filled out their schedule and are consistently available at least once a week.

Volunteer ID	Name	Days Available	Regular Volunteer	Phone Number	Start date
V448	Jamie Finley	FTFFTFF	Yes	2342342344	04-OCT-11
V447	Jake Miles	FFFFFFF	No	1234567888	14-AUG-13
V446	Clare Cooper	TTTTFFF	Yes	3452435267	05-SEP-19
V445	Blake Tran	TTTTFFF	Yes	2233445566	23-FEB-10
V444	Robert Robertson	FFFFFFF	No	6046046044	18-DEC-10
V126	Chase Jones	TTFFFFF	Yes	1231231234	01-JAN-07

GUI (DURING):

Find all regular or not regular volunteers in this shelter (enter 1 for regular and 0 otherwise)

Regular: [0]

[Insert]

AFTER:
(table below is displayed to user)

Volunteer ID
V444
V447

Aggregation with GROUP BY:

file:routeHandler.php,function handleCalculateAvgRequest() -> line161

Before:
ALL registered animals in our DB:

```
Animal ID            Name            Adopted Description           Age Weight Breed              Shelter Location      Shelter Name
-------------------  --------------  ------- ------------------    --- ------ ----------------   --------------------  --------------------
C000                 Smokey                0 A very cute cat. Lov   3      8 British Shorthair   270 Gerrard St E, To  Lovely Pet Home
                                             es to be pet.                                       ronto, Ontario
C001                 Pinky                 0 Not a playful cat.     3     20 Siamese             270 Gerrard St E, To  Lovely Pet Home
                                                                                                 ronto, Ontario
C002                 Bonbon                1 Loves to cuddle and    3     15 Bengal              322 Dundas St W, Tor  Loving Care Animal S
                                             eat.                                                onto,Ontario          helter
C003                 Bambi                 0 Bambi loves to be pe   1     13 Calico              10776 King George Bo  Paws and Claws Anima
                                             t.                                                  ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
C004                 Daisy                 1 Loves to eat. Always   5     15 Ragdoll             234 Willow Lane, Sup  The Animal Haven
                                             hungry                                              portville, USA
C005                 Kitkat                1 Loves kitkats          0     10 Ragdoll             234 Willow Lane, Sup  The Animal Haven
                                                                                                 portville, USA
C006                 Catcat                0 is a ver nice cat     10     18 Bengal              234 Willow Lane, Sup  The Animal Haven
                                                                                                 portville, USA
C007                 Kitty                 0 Kitty is really cute   4     10 Calico              10776 King George Bo  Paws and Claws Anima
                                             .                                                   ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
D000                 Spots                 1 A good boy, lots of    1     15 Dalmatian           270 Gerrard St E, To  Lovely Pet Home
                                             energy.                                             ronto, Ontario
D001                 Jamie                 0 Playful dog and love   5     20 Labrador            270 Gerrard St E, To  Lovely Pet Home
                                             s to cuddle                                         ronto, Ontario
D002                 Wolfie                0 Loves to cuddle.       3     15 Golden Retriever     322 Dundas St W, Tor  Loving Care Animal S
                                                                                                 onto,Ontario          helter
D003                 Luna                  1 Luna loves when you    1      8 Chinese Crested Dog 10776 King George Bo  Paws and Claws Anima
                                             pet her.                                            ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
D004                 Bear                  1 Loves to eat.          1      3 Husky               10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
B000                 Coco                  1 Peaceful bird.         3      8 Finch               270 Gerrard St E, To  Lovely Pet Home
                                                                                                 ronto, Ontario
B001                 Bluey                 1 Speaks a lot. So cut   5     20 Macaw               270 Gerrard St E, To  Lovely Pet Home
                                             e.                                                  ronto, Ontario
B002                 Jay                   0 Loves to speak         3     15 Parrot              322 Dundas St W, Tor  Loving Care Animal S
                                                                                                 onto,Ontario          helter
B003                 Raven                 0 Angry bird             1      8 Grey parrot         10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
B004                 Kiwi                  0 Loves to eat. Always   1      3 Dove                234 Willow Lane, Sup  The Animal Haven
                                             hungry                                              portville, USA
C008                 Mr. Cat               0 Fun cat                3      4 Siamese             10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
C009                 Paws                  1 Loves to run around    3      3 Siamese             10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
C010                 Whiskers              1 Very active            5      5 Siamese             10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
C011                 Stripes               0 Sleeps all day         7      6 Ragdoll             10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
C012                 Fuzzy                 0 Smart cat              3      5 Ragdoll             10776 King George Bo  Paws and Claws Anima
                                                                                                 ulevard, Surrey, Bri  l Shelter
                                                                                                 tish Columbia
```

Logged in as M005, these are animals for **THIS SHELTER ONLY**:

```
Animal ID        Name             Adopted Description       Age Weight Breed            Shelter Location       Shelter Name
-------------    -------------    ------- ---------------    --- ------ ---------------  --------------------   --------------
C003             Bambi                  0 Bambi loves to be pe  1     13 Calico          10776 King George Bo Paws and Claws Anima
                                          t.                                             ulevard, Surrey, Bri l Shelter
                                                                                         tish Columbia

C007             Kitty                  0 Kitty is really cute  4     10 Calico          10776 King George Bo Paws and Claws Anima
                                          .                                              ulevard, Surrey, Bri l Shelter
                                                                                         tish Columbia

D003             Luna                   1 Luna loves when you   1      8 Chinese Crested Dog 10776 King George Bo Paws and Claws Anima
                                          pet her.                                       ulevard, Surrey, Bri l Shelter
                                                                                         tish Columbia

D004             Bear                   1 Loves to eat.         1      3 Husky           10776 King George Bo Paws and Claws Anima
                                                                                         ulevard, Surrey, Bri l Shelter
                                                                                         tish Columbia

B003             Raven                  0 Angry bird            1      8 Grey parrot     10776 King George Bo Paws and Claws Anima
                                                                                         ulevard, Surrey, Bri l Shelter
                                                                                         tish Columbia
```

During:

(User just click this button to get the result. Also, it will only show results IN THIS SHELTER)

Average age of each breed:

Calculate Average

After: (Below shows the list of animals IN THIS SHELTER)

Average age of each breed:

Calculate Average

Breed	Average Age
Husky	1
Grey parrot	1
Chinese Crested Dog	1
Calico	2.5
Siamese	3.6666666666666666666666666666666666667
Ragdoll	5

Aggregation with HAVING:

- File: vets.php, line: 75

Before:

Before filling in "Minimum Years of Experience" and clicking on "Find Vets"

```
VetID                    Vet Name            Specialty               Years of Experience Vet Location
------------------------ ------------------- ----------------------- ------------------- -----------------------
V001                     Andy White          Cardiology                                6 Surrey
V002                     Jack Allen          Cardiology                                4 Surrey
V003                     Jackie Brown        Neurology                                 3 Surrey
V004                     Mary Moore          Oncology                                  2 San Francisco
V005                     Sandy Blum          Dentistry                                 8 Dentistry
```

From website GUI (Logged in as M005, this is data for **THIS SHELTER ONLY**:
(shelterLocation = '10776 King George Boulevard, Surrey, British Columbia' and
shelterName = 'Paws and Claws Animal Shelter')

Vet Information

Vet ID	Name	Specialty	Years of Experience	Vet Location
V001	Andy White	Cardiology	6	Surrey
V002	Jack Allen	Cardiology	4	Surrey
V003	Jackie Brown	Neurology	3	Surrey

Specialties

Specialty

During:
The user specifies the minimum years of experience and clicks on "Find Vets"

Specify experience level of Vet:

Enter a number below to see which specialties have vets in your shelter that match the minimum years of experience you specified.

Minimum Years of Experience: 4

[Find Vets]

Vet Information

Vet ID	Name	Specialty	Years of Experience	Vet Location
V001	Andy White	Cardiology	6	Surrey
V002	Jack Allen	Cardiology	4	Surrey
V003	Jackie Brown	Neurology	3	Surrey

Specialties

Specialty

After:
Since the only vet specialty above 4 years of experience was Cardiology, the user gets Cardiology under the Specialties table. Note that this displays the vets in this shelter only.

Vet Information

Vet ID	Name	Specialty	Years of Experience	Vet Location
V001	Andy White	Cardiology	6	Surrey
V002	Jack Allen	Cardiology	4	Surrey
V003	Jackie Brown	Neurology	3	Surrey

Specialties

Specialty
Cardiology

Nested Aggregation with GROUP BY:

File: cats.php -> line 104

Before:
This shows ALL cats in our DB

```
Animal ID                HasFur Social
------------------------ ------- -------
C000                        1       1
C001                        1       0
C002                        1       1
C003                        1       1
C004                        1       0
C005                        0       1
C006                        1       0
C007                        1       0
C008                        1       0
C009                        0       1
C010                        1       1
C011                        1       1
C012                        1       1
```

Logged in as M005, this is data for **THIS SHELTER ONLY**:
(shelterLocation = '10776 King George Boulevard, Surrey, British Columbia' and
shelterName = 'Paws and Claws Animal Shelter';)

```
Animal ID        HasFur Social Name         Adopted Description       Age Weight Breed       Shelter Location        Shelter Name
─────────────    ────── ──── ─────          ─────── ───────────       ─── ────── ─────       ────────────────        ────────────
C003                 1     1 Bambi              0 Bambi loves to be pe  1     13 Calico       10776 King George Bo Paws and Claws Anima
                                                 t.                                           ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
C007                 1     0 Kitty               0 Kitty is really cute  4     10 Calico       10776 King George Bo Paws and Claws Anima
                                                 .                                            ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
C008                 1     0 Mr. Cat             0 Fun cat               3      4 Siamese      10776 King George Bo Paws and Claws Anima
                                                                                              ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
C009                 0     1 Paws                1 Loves to run around   3      3 Siamese      10776 King George Bo Paws and Claws Anima
                                                                                              ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
C010                 1     1 Whiskers            1 Very active           5      5 Siamese      10776 King George Bo Paws and Claws Anima
                                                                                              ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
C011                 1     1 Stripes             0 Sleeps all day        7      6 Ragdoll      10776 King George Bo Paws and Claws Anima
                                                                                              ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
C012                 1     1 Fuzzy               0 Smart cat             3      5 Ragdoll      10776 King George Bo Paws and Claws Anima
                                                                                              ulevard, Surrey, Bri l Shelter
                                                                                              tish Columbia
```

During/After:
(We define overweight cats as those with weight > average weight)

List of Overweight Cats in this Shelter

AnimalID	Weight	Breed
C003	13	Calico
C007	10	Calico

Division:
file:routeHandler.php -> function handlecatUnvaccinatedRequest() -> line 140

Before:
This shows ALL cats in our DB

```
SQL> select * from cats;

Animal ID               HasFur Social
----------------------- ------ ------
C000                         1      1
C001                         1      0
C002                         1      1
C003                         1      1
C004                         1      0
C005                         0      1
C006                         1      0
C007                         1      0
C008                         1      0
C009                         0      1
C010                         1      1
C011                         1      1
C012                         1      1
```

Logged in as M005, this is data for **THIS SHELTER ONLY**:
(shelterLocation = '10776 King George Boulevard, Surrey, British Columbia' and
shelterName = 'Paws and Claws Animal Shelter';)

Animal ID	HasFur	Social	Name	Adopted	Description	Age	Weight	Breed	Shelter Location	Shelter Name
C003	1	1	Bambi	0	Bambi loves to be pet.	1	13	Calico	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C007	1	0	Kitty	0	Kitty is really cute.	4	10	Calico	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C008	1	0	Mr. Cat	0	Fun cat	3	4	Siamese	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C009	0	1	Paws	1	Loves to run around	3	3	Siamese	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C010	1	1	Whiskers	1	Very active	5	5	Siamese	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C011	1	1	Stripes	0	Sleeps all day	7	6	Ragdoll	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter
C012	1	1	Fuzzy	0	Smart cat	3	5	Ragdoll	10776 King George Boulevard, Surrey, British Columbia	Paws and Claws Animal Shelter

Vaccination shows data about all vaccines

```
Vaccine Name           Expiry Date            RecordID
--------------------   --------------------   ------------------
Rabies Vaccine         22-FEB-45              R123
Bordetella Vaccine     10-FEB-24              R111
Canine Parvovirus Va   06-JUN-30              R222
ccine


Feline Distemper Vac   09-FEB-34              R333
cine


Avian Influenza Vacc   02-SEP-29              R444
ine
```

getVaccination shows data about animals condition for getting vaccines.

```
Animal ID            Vaccine Name          Date of Vaccination
-------------------  --------------------  --------------------
C000                 Rabies Vaccine        20-JAN-22
C000                 Bordetella Vaccine    21-MAR-22
C000                 Canine Parvovirus Va  04-FEB-21
                     ccine

C000                 Feline Distemper Vac  09-SEP-22
                     cine

C000                 Avian Influenza Vacc  09-FEB-23
                     ine

C008                 Rabies Vaccine        22-JAN-22
C008                 Bordetella Vaccine    21-APR-22
C008                 Canine Parvovirus Va  04-JAN-20
                     ccine

C008                 Feline Distemper Vac  09-JUL-21
                     cine

C008                 Avian Influenza Vacc  09-FEB-20
                     ine

C010                 Rabies Vaccine        26-JAN-22
C010                 Bordetella Vaccine    26-MAR-22
C010                 Canine Parvovirus Va  04-DEC-21
                     ccine

C010                 Feline Distemper Vac  19-NOV-22
                     cine

C010                 Avian Influenza Vacc  19-OCT-23
                     ine

C012                 Bordetella Vaccine    26-MAY-22
C012                 Canine Parvovirus Va  13-OCT-21
                     ccine

C012                 Feline Distemper Vac  09-DEC-22
                     cine

C012                 Avian Influenza Vacc  20-JAN-23
```

```
C002              Avian Influenza Vacc 17-SEP-23
                  ine

C003              Rabies Vaccine       20-JAN-22
C003              Bordetella Vaccine   21-MAR-22
C003              Canine Parvovirus Va 04-FEB-21
                  ccine

C003              Feline Distemper Vac 09-SEP-22
                  cine

C003              Avian Influenza Vacc 09-FEB-23
                  ine

D001              Bordetella Vaccine   04-FEB-21
D003              Rabies Vaccine       20-JAN-22
D003              Bordetella Vaccine   21-MAR-22
D003              Canine Parvovirus Va 04-FEB-21
                  ccine

D003              Feline Distemper Vac 09-SEP-22
                  cine

D003              Avian Influenza Vacc 09-FEB-23
                  ine

D002              Bordetella Vaccine   09-SEP-22
D002              Feline Distemper Vac 09-FEB-23
                  cine

B001              Rabies Vaccine       20-JAN-22
B001              Bordetella Vaccine   21-MAR-22
B001              Canine Parvovirus Va 04-FEB-21
                  ccine

B001              Feline Distemper Vac 09-SEP-22
                  cine

B001              Avian Influenza Vacc 09-FEB-23
                  ine

B002              Rabies Vaccine       20-JAN-22
B003              Bordetella Vaccine   21-MAR-22
B002              Canine Parvovirus Va 04-FEB-21
                  ccine

B004              Feline Distemper Vac 09-SEP-22
                  cine
```

During: (User just click this button to view results)

List of Cats get all vaccines

[View Result]

After:

List of Cats get all vaccines in this shelter

View Result

AnimalID	Name
C003	Bambi
C008	Mr. Cat
C010	Whiskers