

Simon Fraser University
CMPT 354
Summer 2022

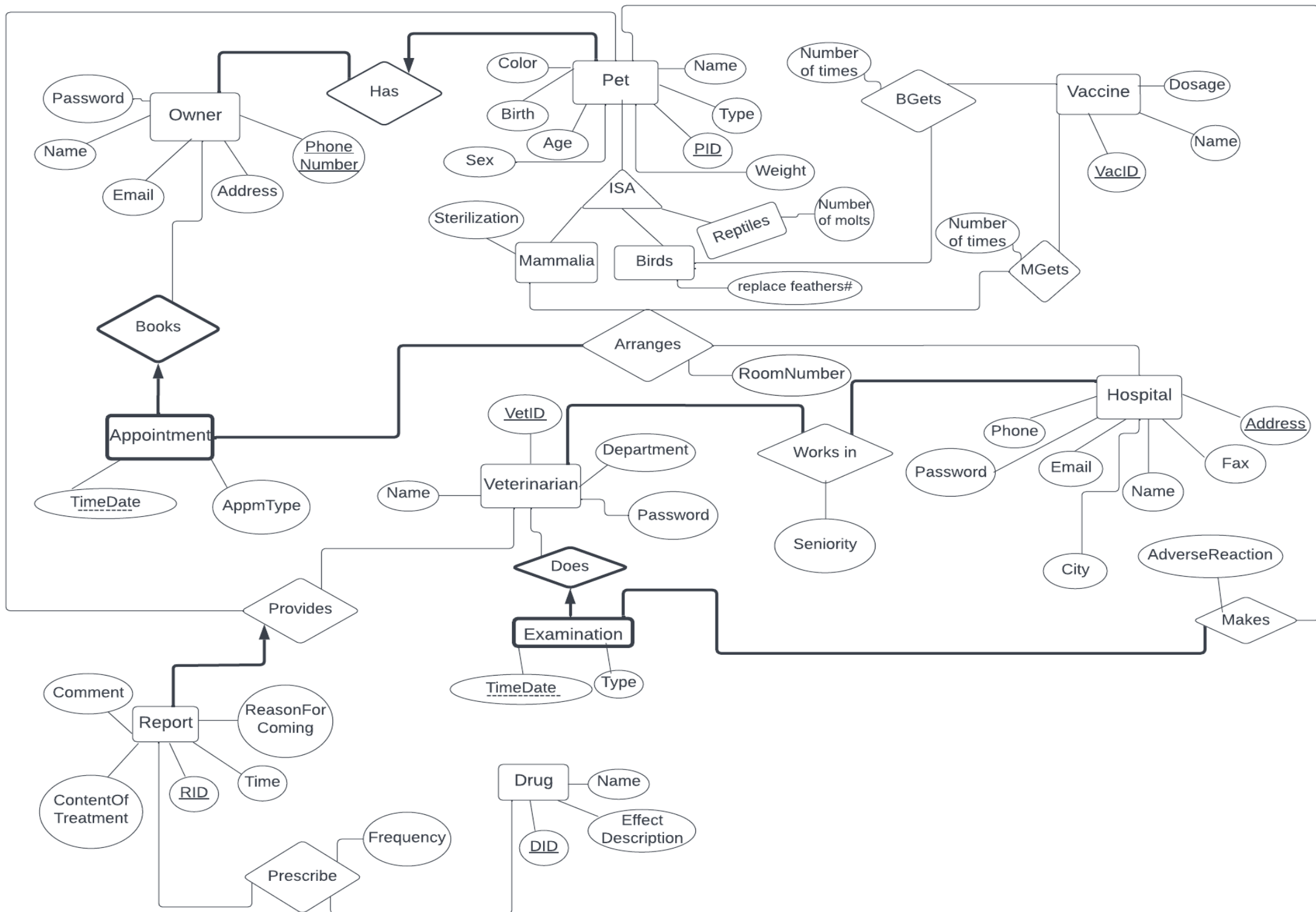
**Group Project - Implementation of a Relational
Database**

Project Title:	D100 Group12 "Pet Health System"
Project Milestone:	Milestone 4

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above.

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by Simon Fraser University.



Ideas:

PetHealthSystem

- UI:

1. Log in (hospital)
2. Log in (owner)
3. Log in (veterinarian)
4. Sign up (owner)
5. Home page (hospital)
6. Home page (owner)
7. Home page (veterinarian)

- Feature:

1. Sign up for new pet owner
2. Current pet owner log in
3. Hospital log in
4. Veterinarian log in
5. Add veterinarian (hospital)
6. Delete veterinarian (hospital)
7. Edit vet's information (hospital)
8. Edit hospital's information (hospital)
9. Arrange appointment (hospital)
10. Delay or cancel appointment(hospital)
11. Edit password (hospital)
12. Make appointment (owner)
13. Cancel appointment (owner)
14. View appointment (owner)
15. View previous report (owner)
16. View owner himself's info (owner)
17. View his pet's info (owner)
18. View his pet's examination (owner)
19. View his pet's vaccine status(owner)
20. View the info of drugs in the report (owner)
21. Edit owner himself's info (owner)
22. Edit his pet's info (owner)
23. Add new pet (owner)
24. Delete pet (owner)
25. Edit password (owner)
26. View hospital information(owner)
27. Add report (veterinarian)
28. Record Examination (veterinarian)
29. View the pet's info he has treated (veterinarian)
30. View previous reports he has made (veterinarian)
31. View previous Examination he has made (veterinarian)

- 32. View the pet's vaccine status (veterinarian)
- 33. Record vaccine status of the pet he treats (veterinarian)
- 34. Edit password (veterinarian)
- 35. Prescribe Drug (veterinarian)

Description

Our final project is a pet health system managing the data like the pet's owner, vaccination status, examination history, and the report of treatment. Users are able to sign up and log in to ensure the security of their information. The functions for various users – pet owners, veterinarians, and hospitals are different. Pet owners can edit the information of their pets and themselves. They can also add pets, delete pets, view their pets' vaccination status, examinations, reports, and drugs in the reports. Lastly, owners can view hospital information and book appointments for their pets. For hospitals, they can manage the veterinarians and arrange appointments. Veterinarians can also use this system to view the records of the pets they have treated and provide new reports, provide examinations and prescribe drugs.

We have made a lot of changes from the very beginning to now. Compared with the original proposal and Milestone 2, we have added many entities, attributes, and relationships to improve the functionality of our application, we also adjust and delete some functions due to the technical issues and logical rules. We changed PK of hospital from address and name to only address, considering the chain hospital; we deleted appointment id and turned it into a weak entity; we deleted examination id and turned it into a weak entity; we changed the line between veterinarian and worksin from an arrow to a straight line.

Under the initial Schema we submitted, we planned to have owners schedule appointments directly with the veterinarian. In the final Schema, the owner will schedule the appointment directly with the hospital, and the hospital will schedule the veterinarian and the room for the appointment. Thus, the hospital can better schedule the veterinarian's time in order to prevent improper arrangements and to reduce some of the veterinarian's workload. We also planned to let hospital users edit the reports for pets. But in our final schema, reports can only be added and edited by veterinarians in order to keep the privacy. Owners can view the reports of their pets afterwards.

Screenshots

1. Feature: owner sign up Operation: insert

```
$sql = "insert into owner(PhoneNumber, Address, Name, Email, Password)
values(?, ?, ?, ?, ?)";
```

SELECT * FROM `owner`

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

				PhoneNumber	Address	Name	Email	Password
<input type="checkbox"/>				232-156-7854	7890 Express St	Maria	Maria@mail.com	a45261752
<input type="checkbox"/>				232-157-1659	3456 Commercial St	Amy	Amyyy@mail.com	189a2484
<input type="checkbox"/>				232-456-1233	3677 Victoria Drive	Anna	Annaa@mail.com	a144624655
<input type="checkbox"/>				604-123-4562	788 Hamilton St	Ewa	Ewwa@mail.com	s465211892
<input type="checkbox"/>				604-332-3369	777 Richards Street	Jack	JJJJack@mail.com	0458a4662
<input type="checkbox"/>				604-756-1234	435 North Road	John	Johhhh@mail.com	a11147849
<input type="checkbox"/>				778-123-4563	435 North Road	Anna	Anna3@mail.com	v151510vnb
<input type="checkbox"/>				778-223-2232	679 E Cordova St	Jack	Jack33@mail.com	4859a4532

Owner table before signing up

Sign Up

Phone Number:

PASSWORD:

Address:

Name:

Email:

Already have an account? [Login here](#)

`SELECT * FROM `owner``

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

		PhoneNumber	Address	Name	Email	Password
<input type="checkbox"/>	Edit	Copy	Delete	123-456-7890	333 abc st	amy amy@mail.com 1111
<input type="checkbox"/>	Edit	Copy	Delete	232-156-7854	7890 Express St	Maria Maria@mail.com a45261752
<input type="checkbox"/>	Edit	Copy	Delete	232-157-1659	3456 Commercial St	Amy Amyyy@mail.com 189a2484
<input type="checkbox"/>	Edit	Copy	Delete	232-456-1233	3677 Victoria Drive	Anna Annaa@mail.com a144624655
<input type="checkbox"/>	Edit	Copy	Delete	604-123-4562	788 Hamilton St	Ewa Ewwwa@mail.com s465211892
<input type="checkbox"/>	Edit	Copy	Delete	604-332-3369	777 Richards Street	Jack JJJJack@mail.com 0458a4662
<input type="checkbox"/>	Edit	Copy	Delete	604-756-1234	435 North Road	John Johhhh@mail.com a11147849
<input type="checkbox"/>	Edit	Copy	Delete	778-123-4563	435 North Road	Anna Anna3@mail.com v151510vnb
<input type="checkbox"/>	Edit	Copy	Delete	778-223-2232	679 E Cordova St	Jack Jack33@mail.com 4859a4532

Owner table after signing up

2. Feature: owner delete pet Operation: delete

```
$sql = "DELETE FROM haspet WHERE PID = ? AND PhoneNumber = ?";
```

SELECT * FROM `haspet`

Profiling

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[Explain SQL]

[Create PHP code]

[Refresh]

Show all

Number of rows:

25

Filter rows:

Search this table

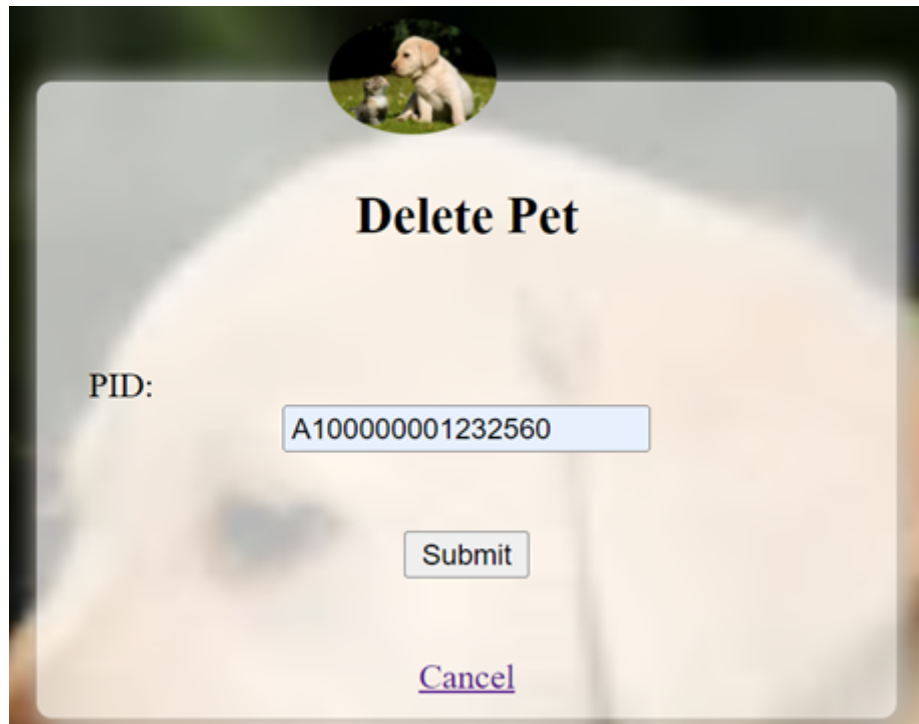
Sort by key:

None

Extra options

			Color	Name	Birth	Type	Weight	Sex	PID	PhoneNumber	
<input type="checkbox"/>				Blue Merle	Buddy	2018-08-07	Border Collie Dog	18lb	Male	A100000001232560	232-156-7854
<input type="checkbox"/>				Silver Shaded	Honey	2019-03-15	British Shorthair Cat	8lb	Female	A123456781256001	778-123-4563
<input type="checkbox"/>				Silver Shaded	Baby	2020-12-25	British Shorthair Cat	5lb	Female	A125624805456120	604-123-4562
<input type="checkbox"/>				Brown	Oliver	2020-03-15	Bahaman Anole	5g	Male	A445777124458950	232-157-1659
<input type="checkbox"/>				Brown	Sunny	2020-03-15	Bahaman Anole	3.5g	Female	A445777124458970	232-157-1659
<input type="checkbox"/>				Green	Five	2021-12-25	Green Anole	3g	Female	A456811454521914	604-123-4562
<input type="checkbox"/>				Green	Six	2021-12-25	Green Anole	3.5g	Female	A456811454521915	604-123-4562
<input type="checkbox"/>				Opaline	Light	2017-05-05	Budgerigar	48g	Male	A459871326512456	604-332-3369
<input type="checkbox"/>				Grewing	Dark	2017-05-05	Budgerigar	42g	Female	A459871326512478	604-332-3369

Haspet table before deleting pet "Buddy"



[SELECT](#) * FROM `haspet`

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 Filter rows: Search this table | Sort by key: None

Extra options

				Color	Name	Birth	Type	Weight	Sex	PID	PhoneNumber
<input type="checkbox"/>	Edit	Copy	Delete	Silver Shaded	Honey	2019-03-15	British Shorthair Cat	8lb	Female	A123456781256001	778-123-4563
<input type="checkbox"/>	Edit	Copy	Delete	Silver Shaded	Baby	2020-12-25	British Shorthair Cat	5lb	Female	A125624805456120	604-123-4562
<input type="checkbox"/>	Edit	Copy	Delete	Brown	Oliver	2020-03-15	Bahaman Anole	5g	Male	A445777124458950	232-157-1659
<input type="checkbox"/>	Edit	Copy	Delete	Brown	Sunny	2020-03-15	Bahaman Anole	3.5g	Female	A445777124458970	232-157-1659
<input type="checkbox"/>	Edit	Copy	Delete	Green	Five	2021-12-25	Green Anole	3g	Female	A456811454521914	604-123-4562
<input type="checkbox"/>	Edit	Copy	Delete	Green	Six	2021-12-25	Green Anole	3.5g	Female	A456811454521915	604-123-4562
<input type="checkbox"/>	Edit	Copy	Delete	Opaline	Light	2017-05-05	Budgerigar	48g	Male	A459871326512456	604-332-3369
<input type="checkbox"/>	Edit	Copy	Delete	Grewing	Dark	2017-05-05	Budgerigar	42g	Female	A459871326512478	604-332-3369

Haspet table after deleting pet "Buddy"

3. Feature: veterinarian change password Operation: update

```
mysqli_query($conn,"update veterinarian set password = '$npw' where password = '$opw'");
```

SELECT * FROM `veterinarian`

☐

Profiling

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☐

Show all

Number of rows:

25

▼

Filter rows:

Search this table

Sort by key:

None

▼

Extra options

⬅️ ➡️

▼

VetID

Department

Name

Password

☐

✏️ Edit

📄 Copy

🗑️ Delete

A1145297780

Surgery

Joson

1624154980

☐

✏️ Edit

📄 Copy

🗑️ Delete

A1545965621

Neurology

Joson

6549854zxf

☐

✏️ Edit

📄 Copy

🗑️ Delete

A1548795002

Cardiology

Nancy

9726dsf38415

☐

✏️ Edit

📄 Copy

🗑️ Delete

B4546263121

Surgery

Peter

6d5sa4f64

☐

✏️ Edit

📄 Copy

🗑️ Delete

CD154561212

Oncology

Zoey

cxzfv65d4165

Veterinarian table before changing password

[BACK TO HOME](#)

Enter old password Enter new password

`SELECT * FROM `veterinarian``

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows: Sort by key: None

Extra options

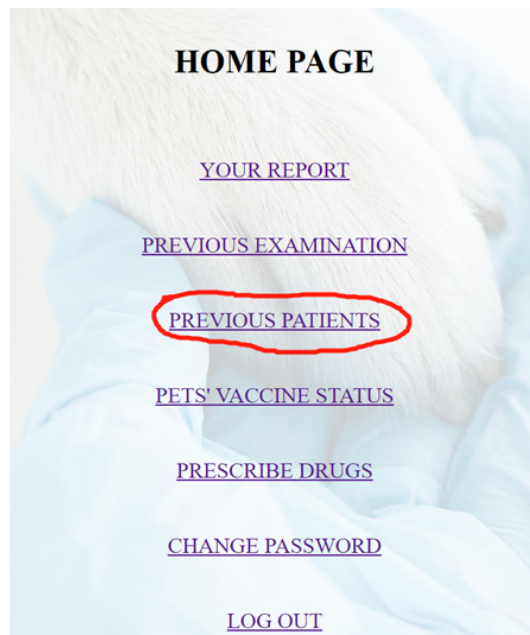
				VetID	Department	Name	Password
<input type="checkbox"/>	Edit	Copy	Delete	A1145297780	Surgery	Joson	123456789
<input type="checkbox"/>	Edit	Copy	Delete	A1545965621	Neurology	Joson	6549854zxf
<input type="checkbox"/>	Edit	Copy	Delete	A1548795002	Cardiology	Nancy	9726dsf38415
<input type="checkbox"/>	Edit	Copy	Delete	B4546263121	Surgery	Peter	6d5sa4f64
<input type="checkbox"/>	Edit	Copy	Delete	CD154561212	Oncology	Zoey	cxzfv65d4165

Veterinarian table after changing password

4. Feature: veterinarian view pets he treated

Operation: selection

```
$sql = "SELECT v.vetid, r.rid, rp.pid, p.color, p.name, p.birth,
p.type, p.weight, p.sex, p.pid, p.phonenumber, pm.pid,
pm.Sterilization, pbir.birth, pbir.age
FROM veterinarian v, providedreport r, ridpid rp, haspet p, mammalia
pm, petbirth pbir
WHERE v.vetid = r.vetid AND r.rid=rp.rid AND rp.pid=p.pid AND
p.pid=pm.pid AND pbir.birth=p.birth AND v.vetid='$vetid' " ;
```



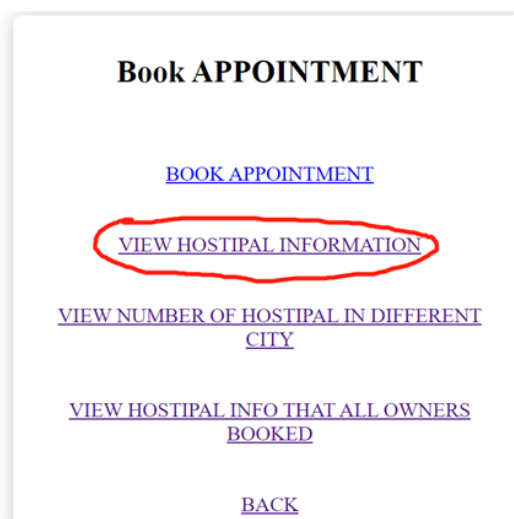
color	name	birth	type	weight	sex	pid	phonenumber	Sterilization	Number Of ReplaceFeathers	Number Of Molts	age
Blue Merle	Buddy	2018-08-07	Border Collie Dog	18lb	Male	A100000001232560	232-156-7854	Yes	N/A	N/A	3.5

[BACK TO HOME](#)

5. Feature: owner view hospital information

Operation: projection

```
$sql = "SELECT h.Name, h.Address, h.Phone, h.Email,h.Fax,h.City
FROM hospital h";
```



Name	Address	Phone	Email	Fax	City
Central City Animal Hospital	1-7834 6th St	604-522-3344	CentreC@gmail.com	604-895-5698	Burnaby
VCA Canada Como Lake Animal Hospital	1960 Como Lake Ave #156	604-931-7760	vachospital@gmail.com	604-987-2354	Coquitlam
North Road Animal Hospital	435 North Rd	604-936-3355	receptionnrah@gmail.com	604-936-3355	Coquitlam
Kensington Square Shopping Centre	6620 Hastings St	604-291-8387	kensing@gmail.com	604-294-8315	Burnaby
South Burnaby Veterinary Hospital	7665 Edmonds St	604-526-0034	southbvh@gmail.com	604-598-1258	Burnaby

6. Feature: owner view appointment (join)

```
$sql = " SELECT b.TimeDate, b.PhoneNumber, b.AppmType,
a.RoomNumber, h.Name, h.Address,
      h.Phone AS HOSPITALPHONE, h.Email,h.Fax
FROM bookedappointment b
JOIN arranges a on a.PhoneNumber = b.PhoneNumber AND
a.TimeDate = b.TimeDate
JOIN hospital h on h.Address = a.Address
WHERE b.PhoneNumber = ? ";
```

APPOINTMENT PAGE

[BOOK APPOINTMENT](#)

[VIEW YOUR APPOINTMENT](#)

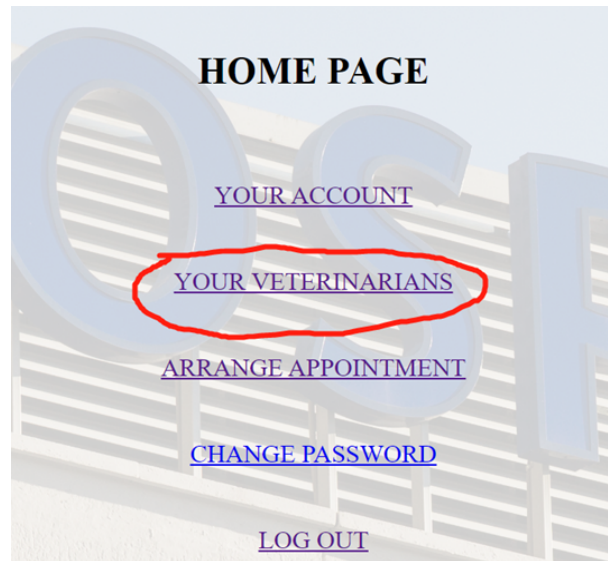
[DELETE APPOINTMENT](#)

[BACK](#)

Time of Date	PhoneNumber of owner	Type of Clinic	Room Number	Name of Hospital	Address of Hospital	Number of Hospital	Email of Hospital	Fax of Hospital
2022-07-01 16:00	232-156-7854	Specialist Clinic	110	South Burnaby Veterinary Hospital	7665 Edmonds St	604-526-0034	southbvh@gmail.com	604-598-1258
2022-07-20 11:30	232-156-7854	Specialist Clinic	100	Kensington Square Shopping Centre	6620 Hastings St	604-291-8387	kensing@gmail.com	604-294-8315

7. Feature: hospital view number of veterinarians (aggregation)

```
$sql2 = "SELECT COUNT(v.vetid) FROM veterinarian v, worksin w
WHERE v.vetid = w.vetid AND w.address='$hosaddr';"
```



vetid	department	name	working hospital	seniority		
A1145297780	Surgery	Joson	1-7834 6th St	6	Edit	Delete
number of veterinarianrians						
1						

Add

[BACK TO HOME](#)

8. Feature: owner view number of hospital in different city (nested aggregation)

```
$sql = "SELECT City, COUNT(h.City)
FROM hospital h
GROUP BY h.City";
```

Book APPOINTMENT

[BOOK APPOINTMENT](#)

[VIEW HOSTIPAL INFORMATION](#)

[VIEW NUMBER OF HOSTIPAL IN DIFFERENT CITY](#)

[VIEW HOSTIPAL INFO THAT ALL OWNERS BOOKED](#)

[BACK](#)

Name	Number of City
Burnaby	3
Coquitlam	2

9. Feature: Owners view information about the hospitals where all the owners who have made appointments are booked (division)

```
$sql = "SELECT
h.Name,h.Address,h.Phone,h.Email,h.Fax,h.Password,h.City
FROM hospital h
WHERE NOT EXISTS
(( SELECT p.PhoneNumber FROM bookedappointment as p )
EXCEPT
(SELECT sp.PhoneNumber FROM arranges sp WHERE sp.Address =
h.Address )); ";
```

Book APPOINTMENT

[BOOK APPOINTMENT](#)

[VIEW HOSTIPAL INFORMATION](#)

[VIEW NUMBER OF HOSTIPAL IN DIFFERENT
CITY](#)

[VIEW HOSTIPAL INFO THAT ALL OWNERS
BOOKED](#)

[BACK](#)

Name	Address	Phone	Email	Fax	City
Kensington Square Shopping Centre	6620 Hastings St	604-291-8387	kensing@gmail.com	604-294-8315	Burnaby

SQL QUERY

1. Owner log in

```
$sql = "SELECT PhoneNumber FROM owner WHERE PhoneNumber = ? and Password = ? ";
```

2. View all appointment by owner

```
$sql = " SELECT b.TimeDate, b.PhoneNumber, b.AppmType, a.RoomNumber, h.Name, h.Address, h.Phone AS HOSPITALPHONE, h.Email,h.Fax FROM bookedappointment b JOIN arranges a on a.PhoneNumber = b.PhoneNumber AND a.TimeDate = b.TimeDate JOIN hospital h on h.Address = a.Address WHERE b.PhoneNumber = ? ";
```

3. View all pets info by owner

```
$sql = "SELECT COLOR, Name, h.Birth, Type, Weight, Sex, PID, Age FROM haspet h, petbirth p WHERE PhoneNumber = ? AND h.Birth = p.Birth";
```

4. View all appointment in specific hospital

```
$sql = "SELECT b.timedate, b.phonenumber, b.appmtype, a.address, a.roomnumber FROM bookedappointment b,arranges a WHERE b.timedate = a.timedate AND b.phonenumber = a.phonenumber AND a.address='$hosaddr'";
```

5. View owner's info by themselves

```
$sql = "SELECT PhoneNumber, Address , Name, Email FROM owner WHERE PhoneNumber = ?";  
  
$mysqli_stmt = $mysqli->prepare($sql);
```

6. Change password by owner

```
$sql = "SELECT PhoneNumber, Password FROM owner WHERE PhoneNumber = ? AND Password = ?";
```

7. Change info by owner

```
$sql = "SELECT PhoneNumber, Address, Name, Email FROM owner WHERE PhoneNumber = ? ";  
  
$sql = "UPDATE owner set PhoneNumber = ?, Address = ?, Name = ?, Email = ? WHERE PhoneNumber = ?";
```

8. View Vaccine and Mammalia info by owner

```
$sql = "SELECT h.PID, h.Name, m.Sterilization, mg.NumberOfTimes,
V.Name
        FROM haspet h, mammalia m, mgets mg, vaccine v
        WHERE h.PhoneNumber = ? AND m.PID = h.PID AND mg.PID =
m.PID AND mg.VacID = v.VacID";
```

9. View Vaccine and Bird info by owner

```
$sql = "SELECT h.PID, h.Name, b.NumberOfReplaceFeathers,
bg.NumberOfTimes, V.Name
        FROM haspet h, birds b, bgets bg, vaccine v
        WHERE h.PhoneNumber = ? AND b.PID = h.PID AND bg.PID =
b.PID
        AND bg.VacID = v.VacID";
```

10. View Reptile info by owner

```
$sql = "SELECT COLOR, Name, Birth, Type, Weight, Sex, h.PID,
        NumberOfMolts FROM haspet h, reptiles r WHERE PhoneNumber =
? AND h.PID = r.PID";
```

11. View Examination of specific pet by owner

```
$sql = " SELECT h.PID, h.Name, mk.TimeDate,mk.AdverseReaction,d.Type,
ve.Name, ve.Department
        FROM haspet h, makes mk, doesexamination d,veterinarian ve
        WHERE PhoneNumber = ? AND h.PID = ? AND h.PID = mk.PID
        AND mk.TimeDate = d.TimeDate AND mk.VetID = d.VetID AND
d.VetID = ve.VetID ;";
```

12. View Report of specific pet by owner

```
$sql = "SELECT h.PID, h.Name, pr.Time, pr.ContentOfTreatment,
pr.ReasonForComing,
        pr.Comment, ve.Name, ve.Department
        FROM haspet h, ridpid rp, providedreport pr, veterinarian
ve
        WHERE PhoneNumber = ? AND h.PID = ? AND h.PID = rp.PID AND
rp.RID = pr.RID
        AND ve.VetID = pr.VetID";
```

13. View Drug of specific pet by owner

```
$sql = " SELECT h.PID, h.Name, pr.Time,
pe.Frequency,dd.Name,nf.EffectDescription
        FROM haspet h, ridpid rp, providedreport pr, prescribe pe,
didname dd, nameeffect nf
        WHERE PhoneNumber = ? AND h.PID = ? AND dd.Name = nf.Name
```

```

        AND dd.DID = pe.DID AND pe.RID = pr.RID AND rp.RID = pr.RID
AND h.PID = rp.PID;";

```

14. Add new pet by owner

```

$sql = "SELECT PID FROM haspet WHERE PID = ?";

```

```

$sql = "SELECT Birth FROM petbirth WHERE Birth = ?";

```

15. Edit pet info by owner

```

$sql = "SELECT PhoneNumber, Color, Name, Birth, Type, Weight, Sex
        FROM haspet WHERE PhoneNumber = ? AND PID = ?" ;
    $mysqli_stmt = $mysqli->prepare($sql);

```

16. Book appointment by owner

```

$sql = "SELECT a.TimeDate, a.Address
FROM arranges a
WHERE a.TimeDate = ? AND a.Address = ? ";

```

17. View hospital info by owner

```

$sql = "SELECT h.Name, h.Address, h.Phone, h.Email,h.Fax,h.City
FROM hospital h";

```

18. View number of hospital in different cities by owner

```

$sql = "SELECT City, COUNT(h.City)
FROM hospital h
GROUP BY h.City";

```

19. Owners view information about the hospitals where all the owners who have made appointments are booked

```

$sql = "SELECT
h.Name,h.Address,h.Phone,h.Email,h.Fax,h.Password,h.City
FROM hospital h
WHERE NOT EXISTS
(( SELECT p.PhoneNumber FROM bookedappointment as p )
EXCEPT
(SELECT sp.PhoneNumber FROM arranges sp WHERE sp.Address =
h.Address )); ";

```

20. Hospital log in

```

$sql = "SELECT Address FROM hospital WHERE Address = ? and password = ?
";

```


21. Hospital change password

```
$sql = "SELECT address, password FROM hospital WHERE address=
'$hosaddr'";
```

22. View all examinations by specific veterinarian

```
$sql = "SELECT v.vetid, v.department, v.name, d.timedate, d.type,
m.pid, m.adversereaction
FROM veterinarian v, doesexamination d, makes m WHERE v.vetid =
d.vetid AND m.timedate=d.timedate AND v.vetid='$vetid' " ;
```

23. View all report by specific veterinarian

```
$sql = "SELECT v.vetid, v.department, v.name, p.rid, p.time,
p.contentoftreatment, p.reasonforcoming, p.comment, rp.pid
FROM veterinarian v, providedreport p, ridpid rp WHERE v.vetid =
p.vetid AND p.rid=rp.rid AND v.vetid='$vetid' " ;
```

24. Prescribe drugs

```
$sql = "SELECT r.rid, r.vetid, rp.rid, rp.pid
FROM providedreport r, ridpid rp
WHERE r.rid=rp.rid AND r.rid='$rid' " ;
```

```
$sql = "SELECT d.did, pr.did, pr.frequency, pr.rid, pr.vetid, pr.pid
FROM prescribe pr, nameeffect n, didname d
WHERE pr.did=d.did" ;
```

25. Request pid

```
$sql = "SELECT pid FROM haspet";
```

26. Request rid

```
$sql = "SELECT rid FROM ridpid";
```

27. Veterinarian edit password

```
$sql = "SELECT vetid, password FROM veterinarian WHERE vetid=
'$vetid'";
```

28. View hospital itself information

```
$sql = "SELECT name, address, phone, email, fax FROM hospital WHERE
address='$hosaddr'";
```

29. Veterinarian views treated pets

```
$sql = "SELECT v.vetid, r.rid, rp.pid, p.color, p.name, p.birth,
p.type, p.weight, p.sex, p.pid, p.phonenumber, pm.pid,
pm.Sterilization, pbir.birth, pbir.age
```

```
FROM veterinarian v, providedreport r, ridpid rp, haspet p, mammalia
pm, petbirth pbir
WHERE v.vetid = r.vetid AND r.rid=rp.rid AND rp.pid=p.pid AND
p.pid=pm.pid AND pbir.birthe=p.birthe AND v.vetid='$vetid' ;
```

```
$sql = "SELECT v.vetid, r.rid, rp.pid, p.color, p.name, p.birthe,
p.type, p.weight, p.sex, p.pid, p.phonenumber, pb.pid,
pb.NumberOfReplaceFeathers, pbir.birthe, pbir.age
FROM veterinarian v, providedreport r, ridpid rp, haspet p, birds pb,
petbirth pbir
WHERE v.vetid = r.vetid AND r.rid=rp.rid AND rp.pid=p.pid AND
p.pid=pb.pid AND pbir.birthe=p.birthe AND v.vetid='$vetid' ;
```

```
$sql = "SELECT v.vetid, r.rid, rp.pid, p.color, p.name, p.birthe,
p.type, p.weight, p.sex, p.pid, p.phonenumber, pr.pid,
pr.NumberOfMolts, pbir.birthe, pbir.age
FROM veterinarian v, providedreport r, ridpid rp, haspet p, reptiles
pr, petbirth pbir
WHERE v.vetid = r.vetid AND r.rid=rp.rid AND rp.pid=p.pid AND
p.pid=pr.pid AND pbir.birthe=p.birthe AND v.vetid='$vetid' ;
```

30. Veterinarian views pets' vaccine status

```
$sql = "SELECT bg.vacid, bg.pid, bg.NumberOfTimes, vac.vacid, vac.name
FROM bgets bg, vaccine vac
WHERE bg.pid='$pid'AND bg.vacid=vac.vacid" ;
```

```
$sql = "SELECT mg.vacid, mg.pid, mg.NumberOfTimes, vac.vacid, vac.name
FROM mgets mg, vaccine vac
WHERE mg.pid='$pid' AND mg.vacid=vac.vacid " ;
```

Add new vaccine to specific pet

```
$sql = "SELECT pid
FROM mammalia
WHERE pid='$pid'" ;
$sql = "SELECT pid
FROM birds
WHERE pid='$pid' " ;
```

31. Hospital view veterinarians that works in it

```
$sql = "SELECT v.vetid, v.department, v.name, w.address, w.seniority
FROM veterinarian v, worksin w
WHERE v.vetid = w.vetid AND w.address='$hosaddr' ;
```

Aggregation, count the number of veterinarian in specific hospital

```
$sql2 = "SELECT COUNT(v.vetid) FROM veterinarian v, worksin w
```

```
WHERE v.vetid = w.vetid AND w.address='$hosaddr';
```

32. Veterinarian log in

```
$sql = "SELECT VetID FROM veterinarian WHERE VetID = ? and password = ?  
";
```