Deliverable 1 — Group 68

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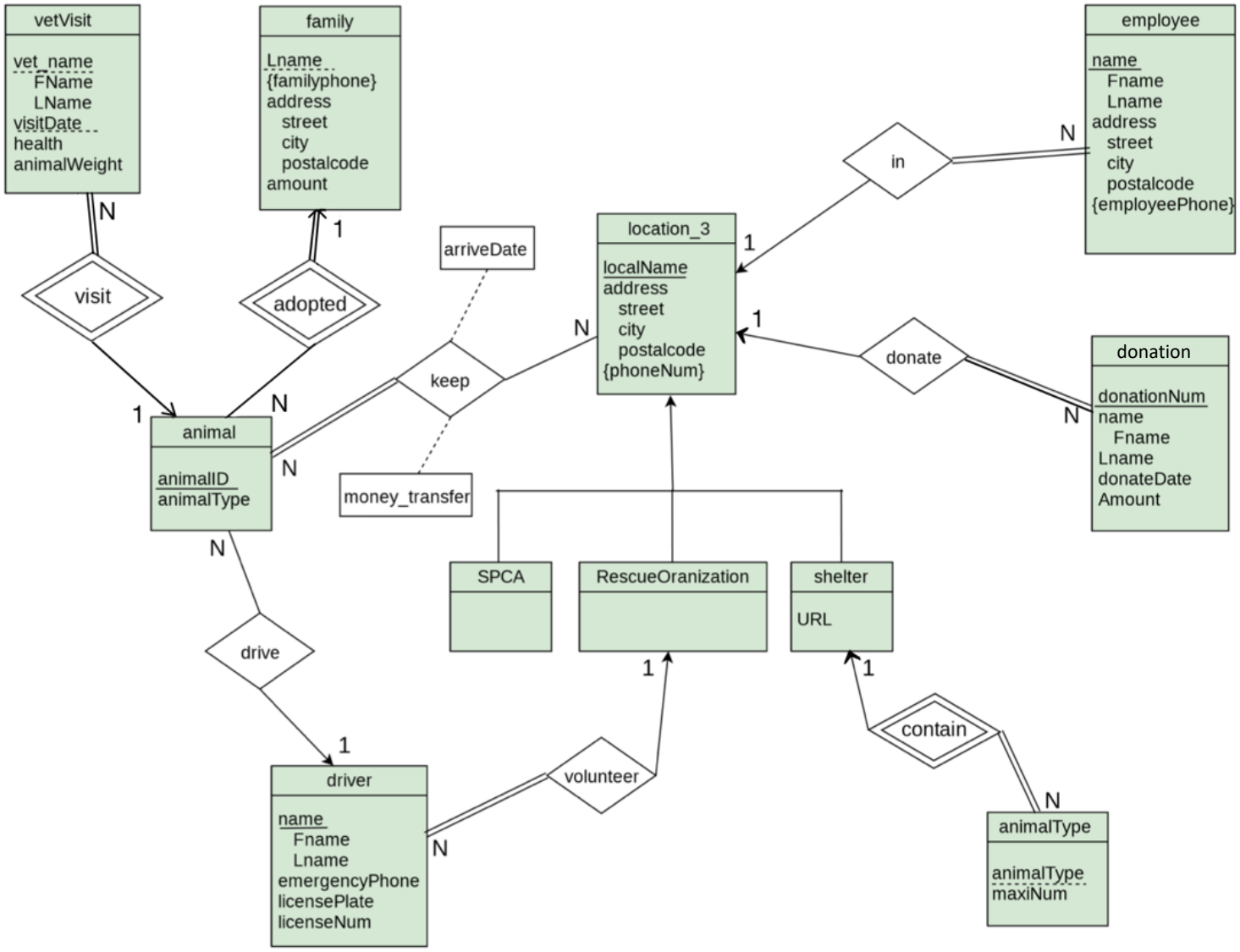
Assumption:

We assume the following:

1. There are only 3 kinds of locations which are SPCA, rescue organizations, and shelters.
2. All locations have their own unique location names, but different phone numbers.
3. All animals in the database that we have are dogs, cats, rabbits and rodents.
4. Each animal will be assigned to a unique 6-digit animal ID.
5. One animal can be kept in many locations. There will be money transfers happening while one animal's transferring, and the arrive date will also be updated. One location can have many animals apparently.
6. All the arrive dates for an animal to a new location will be considered as the leave dates from the previous location.
7. One location can have many employees, and one employee can only be employed by one location. Assuming each employee has a unique name, but different phone numbers.
8. All the three types of locations have the location name, the address and the phone number as common attributes, and each location has multiple phone numbers.
9. One location can get many donations, and one specific donation can only go to one location.
10. There is a donation number uniquely identifying one donation at a time.
11. All donations will be donated to locations.
12. One animal can get many vet visits, and one vet visit can be only associated with one animal.
13. A vet (vet name) can only check a specific animal's condition on a specific day, thus the combination of these three attributes uniquely identify the relationship. Also all the vet visits involved are total participation, therefore this relation is a weak entity.
14. One animal can be transferred by one driver, and one driver can drive many animals.
15. One driver can volunteer one particular rescue organization, while one rescue organization can have many voluntary drivers.
16. One animal can only be adopted by one family, while a family can adopt many animals. Each family has multiple phone numbers. And all the families involved in the adoption are a total participation.

17. All animals in the database are kept in many different SPCA branches in the beginning.
18. For all animals which leave the shelters are alive and well.
19. Animals can only be adopted from the SPCA or the shelters.
20. The animals' vet visits will be deleted from the system after an animal has been adopted.
21. The adopted animals will never be returned to the shelter or the SPCA.
22. A shelter has different animal types, and one animal type in one specific shelter are unique which is a weak entity.

ER Diagram



DDL:

```
create table location_3(
localName varchar(100) not null primary key,
street varchar(100),
city varchar(100),
postalCode char(6));

create table driver(
FName varchar(50) not null,
LName varchar(50) not null,
emergencyPhone char(10) not null,
licensePlate char(6) not null,
licenseNum char(10) not null,
primary key (Fname, Lname));

create table animal(
animalID char(6) not null primary key,
locationName varchar(100),
animalType varchar(100),
FName varchar(50),
LName varchar(50),
foreign key (locationName) references location_3 (localName) on delete cascade,
foreign key (FName, LName) references driver (FName, LName) on delete set null);

create table family(
Lname varchar(50) not null,
animalID char(6) not null,
street varchar(100),
city varchar(100),
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postalCode char(6),
Amount integer,
primary key (animalID, Lname),
foreign key (animalID) references animal (animalID) on delete cascade);

create table familyphone(
animalID char(6) not null,
Lname varchar(50) not null,
phone char(10),
primary key (animalID, Lname, phone),
foreign key (animalID, Lname) references family (animalID, Lname) on delete cascade);

create table vetVisit(
FName varchar(50) not null,
Lname varchar(50) not null,
visitDate date not null,
health varchar(100),
animalWeight integer,
animalID char(6) not null,
primary key (Fname, Lname, visitDate, animalId),
foreign key (animalId) references animal (animalID) on delete cascade);

create table keep(
animalID char(6) not null,
locationName varchar(50) not null,
arriveDate date,
money_transfer integer,
primary key (animalID, locationName),
foreign key (animalID) references animal (animalID) on delete cascade,
foreign key (locationName) references location_3 (localName) on delete cascade);
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```
create table locationPhone(
locationName varchar(50) not null,
phone char(10),
primary key (locationName, phone),
foreign key (locationName) references location_3 (localName) on delete cascade);

create table SPCA(
localName varchar(100),
foreign key (localName) references location_3 (localName) on delete cascade);

create table RescueOrganization(
localName varchar(100),
foreign key (localName) references location_3 (localName) on delete cascade);

create table shelter(
localName varchar(100),
s_url varchar(50) not null,
foreign key (localName) references location_3 (localName) on delete cascade);

create table animalType(
localName varchar(100) not null,
animalType varchar(100) not null,
maxiNum integer,
foreign key (localName) references shelter (localName) on delete cascade,
primary key (localName, animalType));

create table donation(
donationNum char(4) not null primary key,
Fname varchar(50) not null,
Lname varchar(50) not null,
donateDate date,
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```
Amount integer);

create table employee(
Fname varchar(50) not null,
Lname varchar(50) not null,
street varchar(100),
city varchar(100),
postalCode char(6),
locationName varchar(100),
primary key (Fname, Lname),
foreign key (locationName) references location_3 (localName) on delete cascade);

create table employeePhone(
Fname varchar(50) not null,
Lname varchar(50) not null,
phone char(10),
primary key (Fname, Lname, phone),
foreign key (Fname, Lname)  references employee (Fname, Lname) on delete cascade);
```

imported data:

```
delete from location_3;
delete from driver;
delete from animal;
delete from family;
delete from familyphone;
delete from vetVisit;
delete from keep;
delete from locationPhone;
delete from SPCA;
delete from RescueOrganization;
delete from shelter;
delete from animalType;
delete from donation;
delete from employee;
delete from employeePhone;

insert into location_3 values ('A_SPCA', 'York Street', 'Toronto', 'K8K6F3');
insert into location_3 values ('B_SPCA', 'Johnson Street', 'Kingston', 'K1E6F2');
insert into location_3 values ('shelterOne', 'Alfred Street', 'Montreal', 'K7K3Z4');
insert into location_3 values ('shelterTwo', 'Barrie Street', 'Ottawa', 'K7N2Z4');
insert into location_3 values ('rescueOne', 'West Street', 'Montreal', 'K8M3Z4');
insert into location_3 values ('rescueTwo', 'North Street', 'Montreal', 'K6H2J5');

insert into driver values ('Peter', 'Tyler', '6551111111', 'CKCZ11', '1234567890');
insert into driver values ('Randy', 'Gilmore', '6112222222', 'CKCJ22', '1357908642');
insert into driver values ('Erica', 'Smith', '6223333333', 'NZND99', '2346789765');

insert into animal values ('111111', 'A_SPCA', 'dog','Randy', 'Gilmore');
insert into animal values ('222222', 'B_SPCA','cat', 'Peter', 'Tyler');
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insert into animal values ('333333', 'shelterOne', 'rabbit', 'Peter', 'Tyler');

insert into family values ('Yang', '111111', 'Albert Street', 'Kingston', 'K7L2N3', '100');
insert into family values ('Xu', '222222', 'Division Street', 'Ottawa', 'K2K3Z6', '200');
insert into family values ('Sun', '333333', 'Stuart Street', 'Kingston', 'K7K8N8', '180');

insert into familyphone values ('111111', 'Yang', '6106666666');
insert into familyphone values ('222222', 'Xu', '6107777777');
insert into familyphone values ('333333', 'Sun', '6108888888');

insert into vetVisit values ('Jason', 'Adrian', '2020-01-22', 'healthy', '20', '111111');
insert into vetVisit values ('Boris', 'Alex', '2019-11-20', 'healthy', '18', '222222');
insert into vetVisit values ('Paul', 'Rach', '2020-01-18', 'healthy', '15', '333333');

insert into keep values ('111111', 'rescueOne', '2019-08-29', '300');
insert into keep values ('333333', 'shelterOne', '2020-01-05', '280');

insert into locationPhone values ('A_SPCA', '6101231234');
insert into locationPhone values ('B_SPCA', '6111231234');
insert into locationPhone values ('shelterOne', '6121231234');
insert into locationPhone values ('shelterTwo', '6131231234');
insert into locationPhone values ('rescueOne', '6141231234');
insert into locationPhone values ('rescueOne', '6151231234');

insert into SPCA values ('A_SPCA');
insert into SPCA values ('B_SPCA');

insert into RescueOrganization values ('rescueOne');
insert into RescueOrganization values ('rescueTwo');

insert into shelter values ('shelterOne','www.rescueOne.ca');
```

```
insert into shelter values ('shelterTwo','www.rescueTwo.ca');

insert into animalType values ('shelterOne', 'cat', '30');
insert into animalType values ('shelterTwo', 'cat', '45');
insert into animalType values ('shelterOne', 'dog', '20');

insert into donation values ('0000', 'Alice', 'Cao', '2019-09-26', '500');
insert into donation values ('1111', 'Vicky', 'Yan', '2019-10-08', '800');
insert into donation values ('2222', 'Jenny', 'Yi', '2019-08-20', '680');

insert into employee values ('Adam', 'Smith', 'Kings Street', 'Kingston', 'N9I8KJ', 'A_SPCA');
insert into employee values ('Jack', 'Wilson', 'Yonge Street', 'Toronto', 'Z65N87', 'shelterOne');
insert into employee values ('Kate', 'Miller', 'Queen Street', 'Kingston', 'N77KZ3', 'rescueOne');


insert into employeePhone values ('Adam', 'Smith', '6131111111');
insert into employeePhone values ('Jack', 'Wilson', '6132222222');
insert into employeePhone values ('Kate', 'Miller', '6133333333');
```