OMIS 652 – Business Application of Database Management Systems

Database Project

Presented to

Dr. Kishen Iyengar

By
Team: Group – F
Venkata Anirudh Thota(Z1861188)
Arjun Soni (Z1863168)
Prakhar Jadon(Z1858482)
Rahul Kanth Keerthi (Z1854562)

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STORY

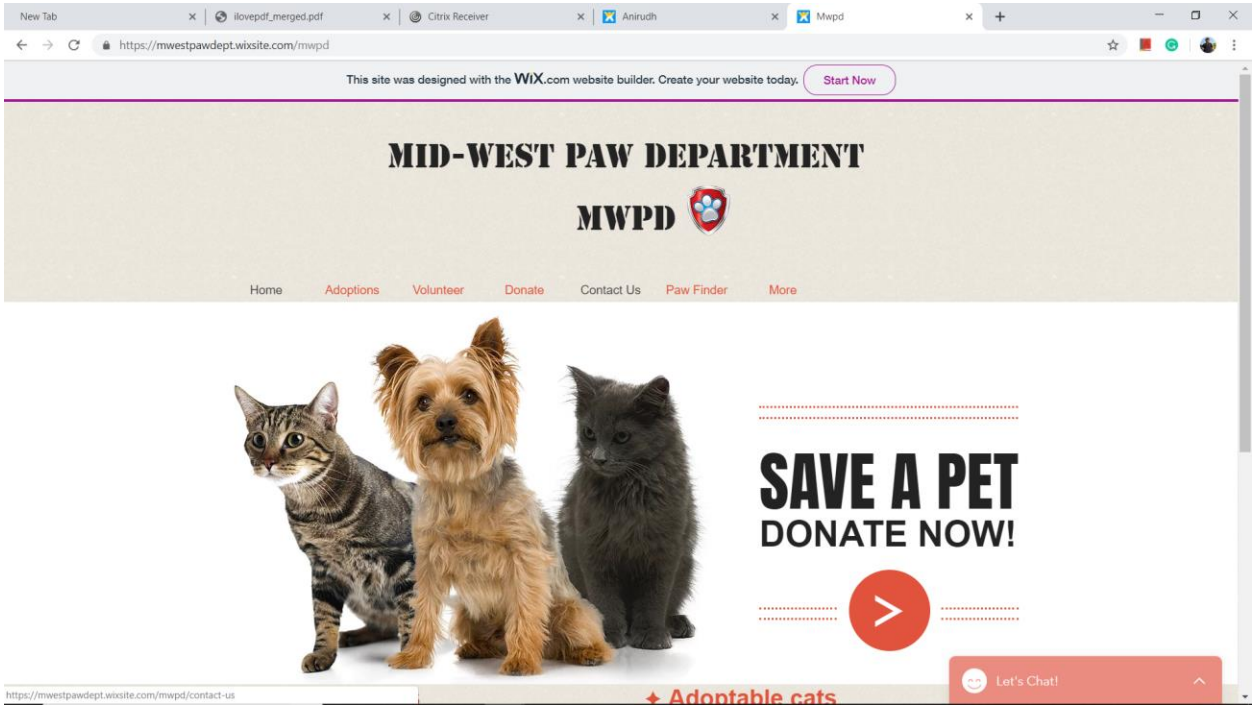
MID WEST PAW DEPARTMENT (M.W.P.D)

Midwest Paw Department (M.W.P.D) a nonprofit organization that was founded in the year 2012 by 12 friends from IIT Chicago. The founders were all from different background but with a common motto to save domestic animals. They started small with their own city (Chicago), and as the idea was of a good deed, many people started to join the organization and now the organization has volunteers all around the Midwest with office in each of the Midwest states. To guide all these volunteers, the 12 friends decided to split into 12 different states of the Midwest taking on the role of a leader in each of the office locations.

In 2014, 4 students from NIU, who were also active volunteers came up with an idea of helping the Organization better manage information of its operations by implementing an IT based Information system for the organization. As most of you might be already aware, for any big organization to have an Information System, having database is one of the basic prerequisites for storing as well as managing the data.

The organization works as follow: The Organization has an office number where whenever someone (reporter) sees an animal who needs help or is stranded can call on the office helpline number nearest to the location to report about the situation. The office leader then engages the volunteers under his leadership through collaboration application such as GroupMe. The volunteers come to aid and takes the rescue animal to the nearest shelter. The caretaker of the shelter is also a trained veterinarian does a complete medical checkup of the animal, the he assigns a unique RFID to the animal for identification purpose and then the caretaker feeds the animal information into the database. The organization has 20 shelters across the Midwest. Each shelter has sectors in which specific animal categories are housed (E.g. Dogs Sector, Cats Sector etc.).The Organization also provides facility where people(adopters) can adopt animals. Many people from the US visit the shelter to adopt an animal.

As part of promoting the organization, the leaders have come up with a plan of implementing an application for pets, that will enable Owners to find match for their pets. The application works similar to that of Tinder app, so the owner has to first register his and his pets details on the application. The owners is presented with options of choosing to match is pet with either another pet animal belonging to a different Owner or one of the rescue animals. The matching system uses a like or dislike system where if there is a mutual like opinion from either parties, the application will shows them a match and the respective owners will communicate regarding further proceedings.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Anirudh
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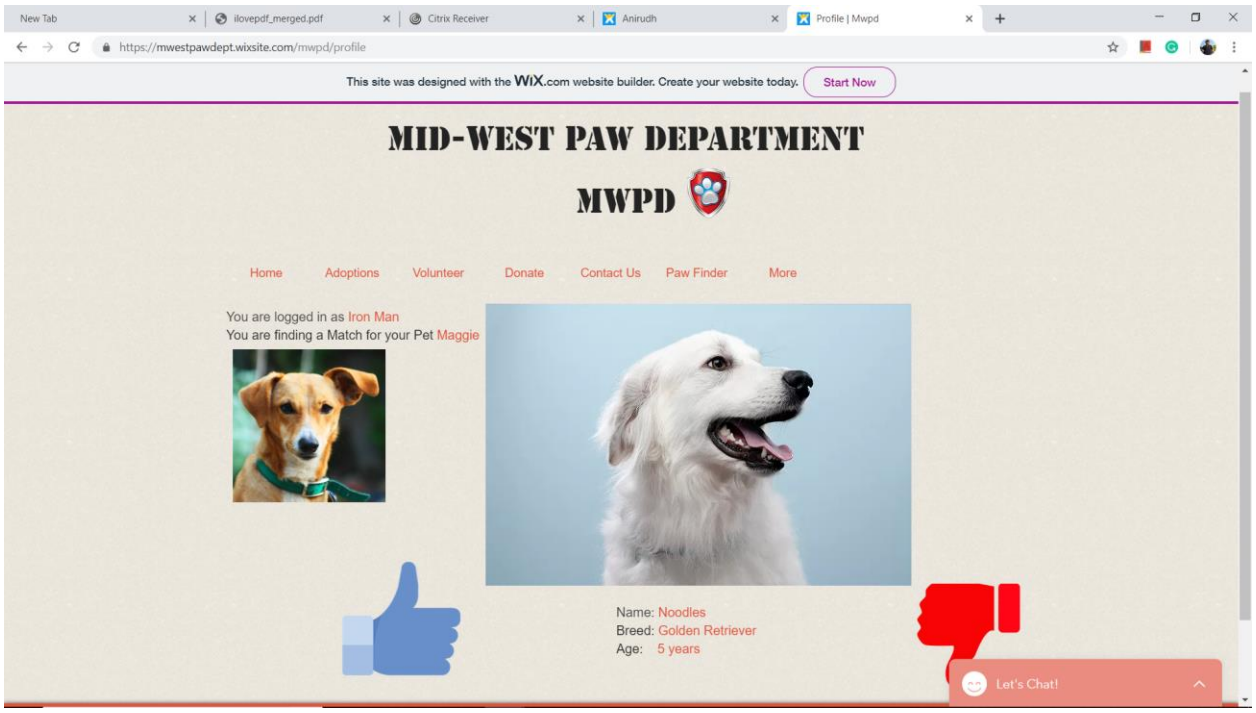
Start Now
MID-WEST PAW DEPARTMENT
MWPD
Home
Adoptions
Volunteer
Donate
Contact Us
Paw Finder
More
SAVE A PET
DONATE NOW!
Let's Chat!
https://mwestpawdept.wixsite.com/mwpd/contact-us
Adoptable cats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Anirudh
Profile | Mwpd
https://mwestpawdept.wixsite.com/mwpd/profile
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Start Now
MID-WEST PAW DEPARTMENT
MWPD
Home
Adoptions
Volunteer
Donate
Contact Us
Paw Finder
More
You are logged in as Iron Man
You are finding a Match for your Pet Maggie
Name: Noodles
Breed: Golden Retriever
Age: 5 years
Let's Chat!

Entities:

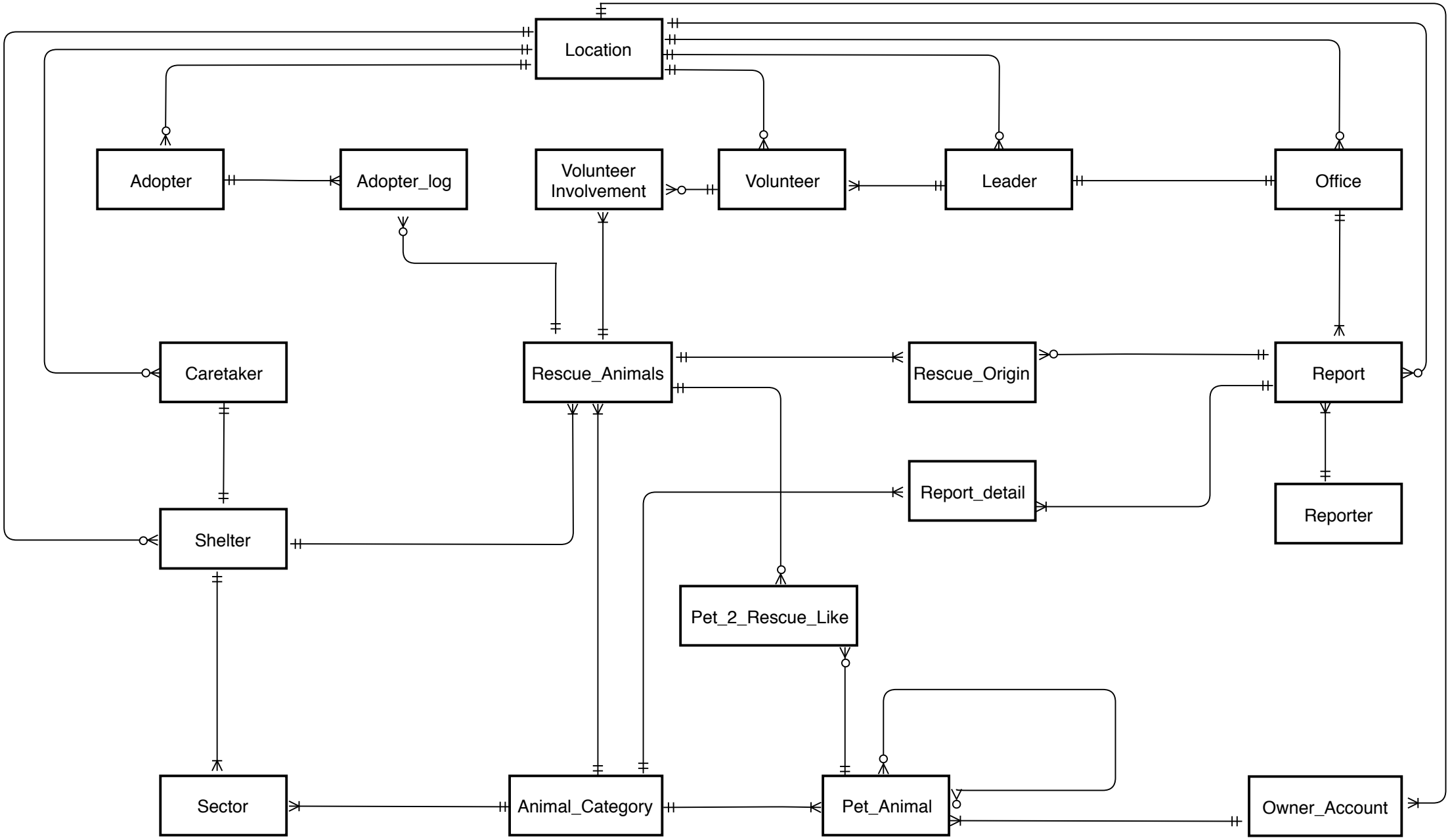
- Reporter
- Office
- Leader
- Volunteer
- Rescue_Animal
- Adopter
- Caretaker
- Shelter
- Animal_Category
- Pet_Animal
- Owner_Account
- Location

Bridging Entities:

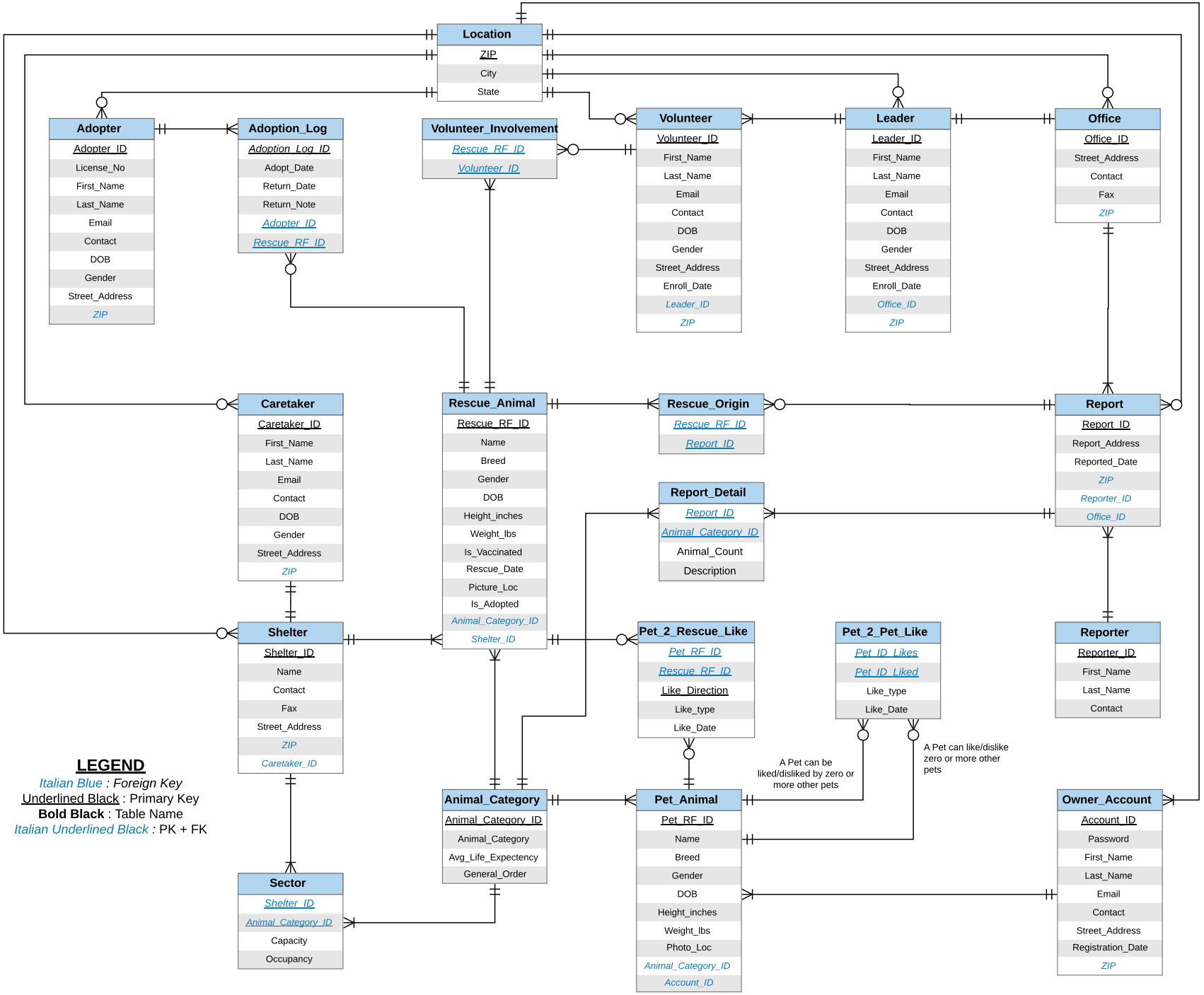
- Report
- Rescue_Origin
- Report_Detail
- Volunteer_Involvement
- Adoption_Log
- Sector
- Pet_2_Rescue_Like
- Pet_2_Pet_Like (Unary Relation)

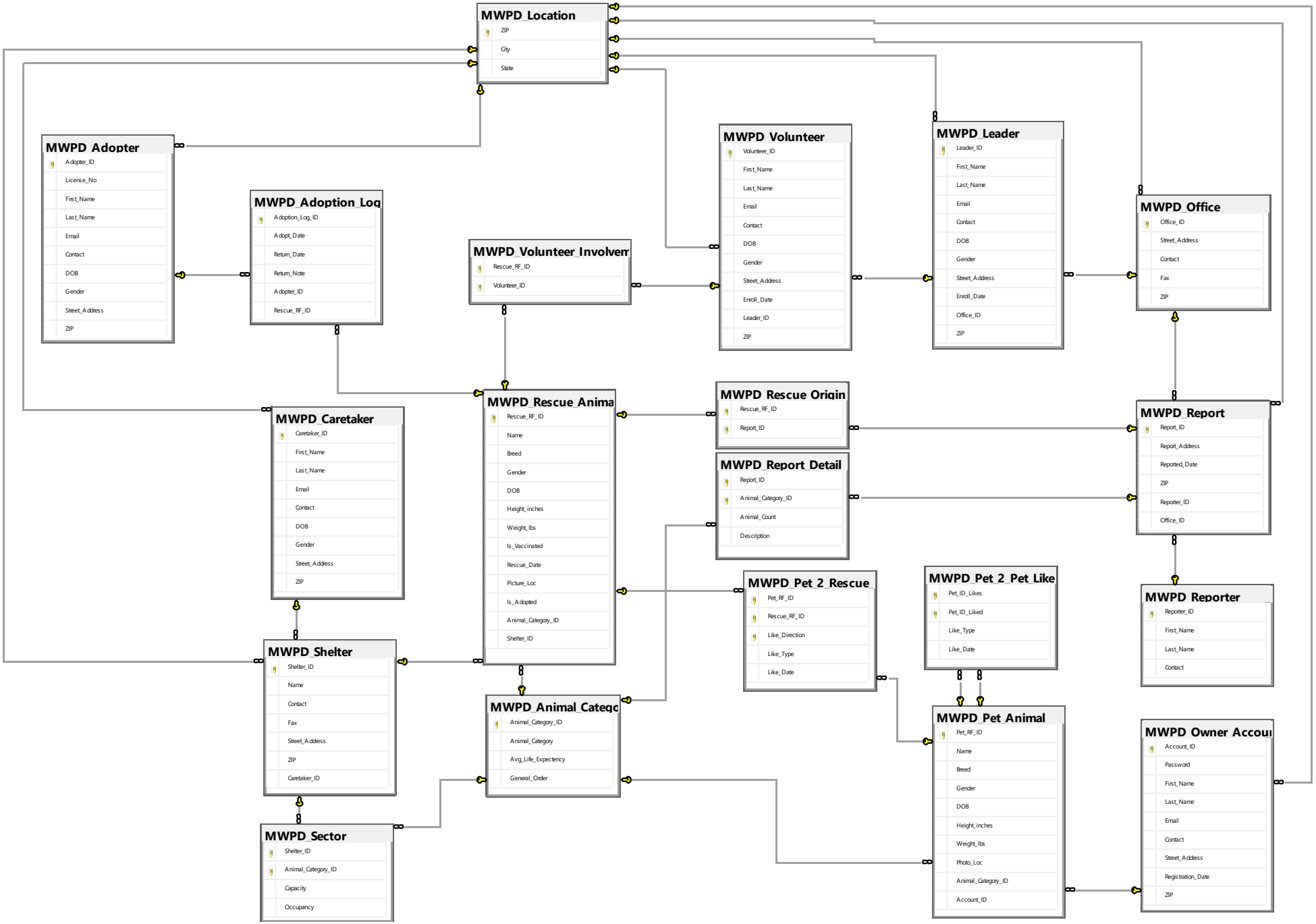
Assumptions:

- Every volunteer reports to only one leader. A leader can have many volunteers under him.
- A volunteer can rescue many animals and a animal can be rescued by many volunteers.
- A reporter can report to many offices and an office can receive reports from many reporters.
- A report can have details of different category of animals as well as varying count.
- Adopter can adopt many rescue animals
- A rescue animal can be adopted by multiple adopters. That is, there may be a chance that the adopter returns the animal back to shelter which later could be picked by a different adopter.
- A Owner can have many pets associated to him
- A Pet animal can either like a pet or rescue animal


Location
Adopter
Adopter_log
Volunteer Involvement
Volunteer
Leader
Office
Caretaker
Rescue_Animals
Rescue_Origin
Report
Report_detail
Reporter
Shelter
Pet_2_Rescue_Like
Sector
Animal_Category
Pet_Animal
Owner_Account

ERD DIAGRAM


Location
ZIP
City
State
Adopter
Adopter_ID
License_No
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
ZIP
Adoption_Log
Adoption_Log_ID
Adopt_Date
Return_Date
Return_Note
Adopter_ID
Rescue_RF_ID
Volunteer_Involvement
Rescue_RF_ID
Volunteer_ID
Volunteer
Volunteer_ID
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
Enroll_Date
Leader_ID
ZIP
Leader
Leader_ID
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
Enroll_Date
Office_ID
ZIP
Office
Office_ID
Street_Address
Contact
Fax
ZIP
Caretaker
Caretaker_ID
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
ZIP
Rescue_Animal
Rescue_RF_ID
Name
Breed
Gender
DOB
Height_inches
Weight_lbs
Is_Vaccinated
Rescue_Date
Picture_Loc
Is_Adopted
Animal_Category_ID
Shelter_ID
Rescue_Origin
Rescue_RF_ID
Report_ID
Report
Report_ID
Report_Address
Reported_Date
ZIP
Reporter_ID
Office_ID
Report_Detail
Report_ID
Animal_Category_ID
Animal_Count
Description
Shelter
Shelter_ID
Name
Contact
Fax
Street_Address
ZIP
Caretaker_ID
Pet_2_Rescue_Like
Pet_RF_ID
Rescue_RF_ID
Like_Direction
Like_type
Like_Date
Pet_2_Pet_Like
Pet_ID_Likes
Pet_ID_Liked
Like_type
Like_Date
Reporter
Reporter_ID
First_Name
Last_Name
Contact
A Pet can be liked/disliked by zero or more other pets
A Pet can like/dislike zero or more other pets
Animal_Category
Animal_Category_ID
Animal_Category
Avg_Life_Expectency
General_Order
Pet_Animal
Pet_RF_ID
Name
Breed
Gender
DOB
Height_inches
Weight_lbs
Photo_Loc
Animal_Category_ID
Account_ID
Owner_Account
Account_ID
Password
First_Name
Last_Name
Email
Contact
Street_Address
Registration_Date
ZIP
Sector
Shelter_ID
Animal_Category_ID
Capacity
Occupancy
LEGEND
Italian Blue : Foreign Key
Underlined Black : Primary Key
Bold Black : Table Name
Italian Underlined Black : PK + FK


MWPD_Location
ZIP
City
State
MWPD_Adopter
Adopter_ID
License_No
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
ZIP
MWPD_Adoption_Log
Adoption_Log_ID
Adopt_Date
Return_Date
Return_Note
Adopter_ID
Rescue_RF_ID
MWPD_Volunteer_Involvem
Rescue_RF_ID
Volunteer_ID
MWPD_Volunteer
Volunteer_ID
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
Enroll_Date
Leader_ID
ZIP
MWPD_Leader
Leader_ID
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
Enroll_Date
Office_ID
ZIP
MWPD_Office
Office_ID
Street_Address
Contact
Fax
ZIP
MWPD_Caretaker
Caretaker_ID
First_Name
Last_Name
Email
Contact
DOB
Gender
Street_Address
ZIP
MWPD_Rescue_Anima
Rescue_RF_ID
Name
Breed
Gender
DOB
Height_inches
Weight_lbs
Is_Vaccinated
Rescue_Date
Picture_Loc
Is_Adopted
Animal_Category_ID
Shelter_ID
MWPD_Rescue_Origin
Rescue_RF_ID
Report_ID
MWPD_Report_Detail
Report_ID
Animal_Category_ID
Animal_Count
Description
MWPD_Report
Report_ID
Report_Address
Reported_Date
ZIP
Reporter_ID
Office_ID
MWPD_Pet_2_Rescue_
Pet_RF_ID
Rescue_RF_ID
Like_Direction
Like_Type
Like_Date
MWPD_Pet_2_Pet_Like
Pet_ID_Likes
Pet_ID_Liked
Like_Type
Like_Date
MWPD_Reporter
Reporter_ID
First_Name
Last_Name
Contact
MWPD_Shelter
Shelter_ID
Name
Contact
Fax
Street_Address
ZIP
Caretaker_ID
MWPD_Animal_Categc
Animal_Category_ID
Animal_Category
Avg_Life_Expectency
General_Order
MWPD_Pet_Animal
Pet_RF_ID
Name
Breed
Gender
DOB
Height_inches
Weight_lbs
Photo_Loc
Animal_Category_ID
Account_ID
MWPD_Owner_Accou
Account_ID
Password
First_Name
Last_Name
Email
Contact
Street_Address
Registration_Date
ZIP
MWPD_Sector
Shelter_ID
Animal_Category_ID
Capacity
Occupancy

TABLES

OMISBI6.z1861188 - dbo.MWPD_Adopter | OMISBI6.z1861188 - MWPD_

Column Name	Data Type	Allow Nulls
Adopter_ID	int	☐
License_No	varchar(50)	☐
First_Name	varchar(50)	☐
Last_Name	varchar(50)	☐
Email	varchar(50)	☐
Contact	varchar(10)	☐
DOB	date	☑
Gender	char(1)	☑
Street_Address	varchar(100)	☐
ZIP	varchar(5)	☐
		☐

OMISBI6.z1861188...WPD_Adoption_Log | OMISBI6.z1861188 - MWPD_

Column Name	Data Type	Allow Nulls
Adoption_Log_ID	int	☐
Adopt_Date	date	☐
Return_Date	date	☑
Return_Note	varchar(100)	☑
Adopter_ID	int	☐
Rescue_RF_ID	int	☐
		☐

OMISBI6.z1861188...PD_Animal_Category | OMISBI6.z1861188 - MWPD

Column Name	Data Type	Allow Nulls
Animal_Category_ID	int	☐
Animal_Category	varchar(50)	☐
Avg_Life_Expectency	decimal(5, 1)	☑
General_Order	varchar(50)	☐
		☐

OMISBI6.z1861188...bo.MWPD_Caretaker

Column Name	Data Type	Allow Nulls
Caretaker_ID	int	☐
First_Name	varchar(50)	☐
Last_Name	varchar(50)	☐
Email	varchar(50)	☐
Contact	varchar(10)	☐
DOB	date	☑
Gender	char(1)	☑
Street_Address	varchar(100)	☐
ZIP	varchar(5)	☐
		☐

OMISBI6.z1861188 - dbo.MWPD_Leader | OMISBI6.z1861188...bo.MW

Column Name	Data Type	Allow Nulls
Leader_ID	int	☐
First_Name	varchar(50)	☐
Last_Name	varchar(50)	☐
Email	varchar(50)	☐
Contact	varchar(10)	☐
DOB	date	☑
Gender	char(1)	☑
Street_Address	varchar(100)	☐
Enroll_Date	date	☐
Office_ID	int	☐
ZIP	varchar(5)	☐
		☐

OMISBI6.z1861188...bo.MWPD_Location | OMISBI6.z1861188 - dbo.MW

Column Name	Data Type	Allow Nulls
ZIP	varchar(5)	☐
City	varchar(50)	☐
State	varchar(50)	☐
		☐

OMISBI6.z1861188 - dbo.MWPD_Office | OMISBI6.z1861188...bo.MWP

Column Name	Data Type	Allow Nulls
Office_ID	int	☐
Street_Address	varchar(100)	☐
Contact	varchar(10)	☐
Fax	varchar(10)	☐
ZIP	varchar(5)	☐
		☐

OMISBI6.z1861188...PD_Owner_Account | OMISBI6.z1861188 - dbo.MW

Column Name	Data Type	Allow Nulls
Account_ID	int	☐
Password	nvarchar(50)	☐
First_Name	varchar(50)	☐
Last_Name	varchar(50)	☐
Email	varchar(50)	☐
Contact	varchar(10)	☐
Street_Address	varchar(100)	☐
Registration_Date	date	☐
ZIP	varchar(5)	☐
		☐

OMISBI6.z1861188...WPD_Pet_2_Pet_Like | OMISBI6.z1861188...PD_Ov

Column Name	Data Type	Allow Nulls
Pet_ID_Likes	int	☐
Pet_ID_Liked	int	☐
Like_Type	varchar(10)	☐
Like_Date	date	☐
		☐

OMISBI6.z1861188 -..._Pet_2_Rescue_Like | OMISBI6.z1861188...WPD_P

Column Name	Data Type	Allow Nulls
Pet_RF_ID	int	☐
Rescue_RF_ID	int	☐
Like_Direction	bit	☐
Like_Type	varchar(10)	☐
Like_Date	date	☐
		☐

OMISBI6.z1861188....MWPD_Pet_Animal | OMISBI6.z1861188 -..._Pet_

Column Name	Data Type	Allow Nulls
Pet_RF_ID	int	☐
Name	varchar(50)	☐
Breed	varchar(50)	☑
Gender	char(1)	☐
DOB	date	☑
Height_inches	decimal(11, 1)	☑
Weight_lbs	decimal(11, 1)	☑
Photo_Loc	varchar(100)	☑
Animal_Category_ID	int	☐
Account_ID	int	☐
		☐

OMISBI6.z1861188 - dbo.MWPD_Report | OMISBI6.z1861188....MWPD_

Column Name	Data Type	Allow Nulls
Report_ID	int	☐
Report_Address	varchar(50)	☐
Reported_Date	date	☐
ZIP	varchar(5)	☐
Reporter_ID	int	☐
Office_ID	int	☐
		☐

OMISBI6.z1861188...WPD_Report_Detail | OMISBI6.z1861188 - dbo.MW

Column Name	Data Type	Allow Nulls
Report_ID	int	☐
Animal_Category_ID	int	☐
Animal_Count	int	☐
Description	varchar(100)	☑
		☐

OMISBI6.z1861188...dbo.MWPD_Reporter | OMISBI6.z1861188...WPD_

Column Name	Data Type	Allow Nulls
Reporter_ID	int	☐
First_Name	varchar(50)	☐
Last_Name	varchar(50)	☐
Contact	varchar(10)	☐
		☐

OMISBI6.z1861188...WPD_Rescue_Animal

Column Name	Data Type	Allow Nulls
Rescue_RF_ID	int	☐
Name	varchar(50)	☐
Breed	varchar(50)	☑
Gender	char(1)	☐
DOB	date	☑
Height_inches	decimal(11, 1)	☑
Weight_lbs	decimal(11, 1)	☑
Is_Vaccinated	bit	☑
Rescue_Date	date	☐
Picture_Loc	varchar(100)	☑
Is_Adopted	bit	☑
Animal_Category_ID	int	☐
Shelter_ID	int	☐
		☐

OMISBI6.z1861188...WPD_Rescue_Origin

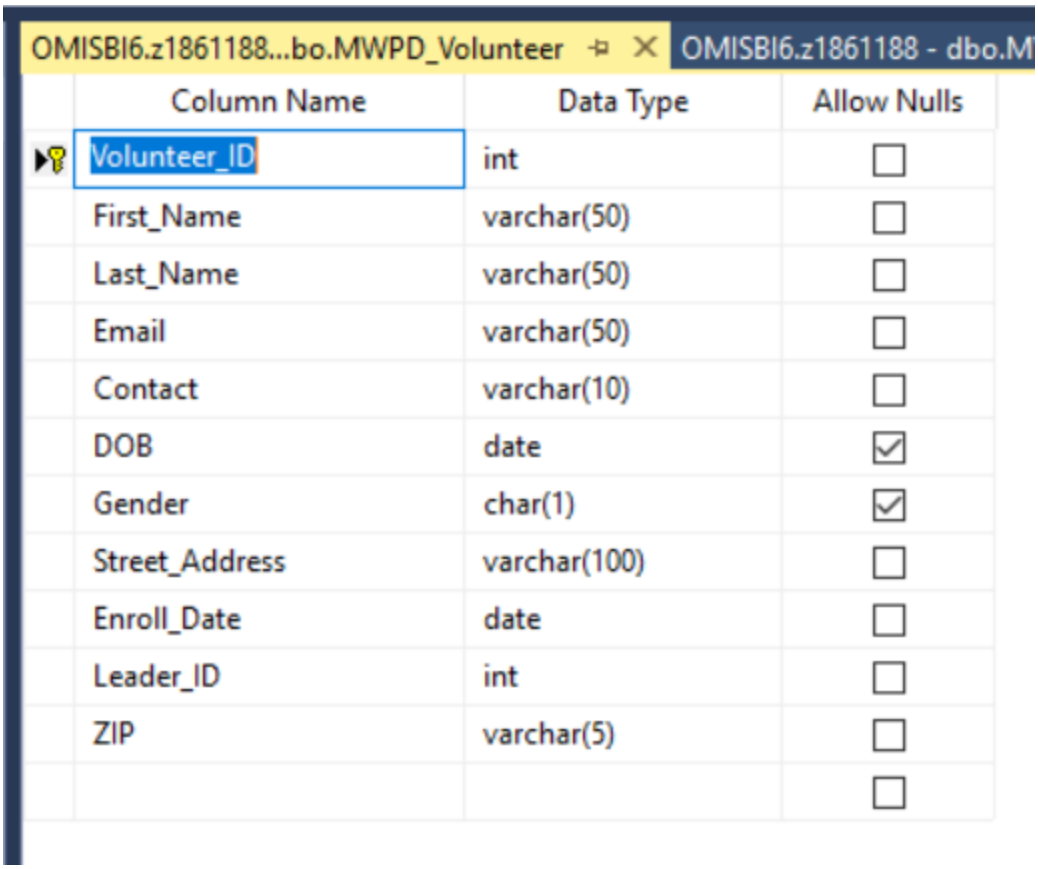
Column Name	Data Type	Allow Nulls
Rescue_RF_ID	int	☐
Report_ID	int	☐
		☐

OMISBI6.z1861188 - dbo.MWPD_Sector | OMISBI6.z1861188...WPD_Re

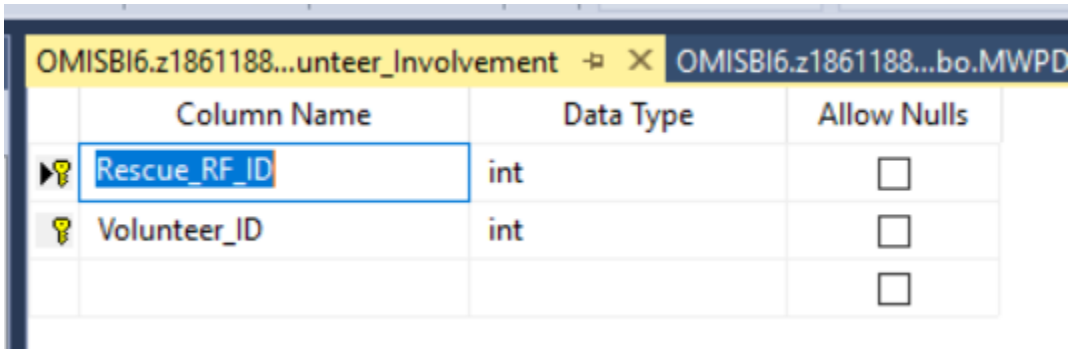
Column Name	Data Type	Allow Nulls
Shelter_ID	int	☐
Animal_Category_ID	int	☐
Capacity	int	☐
Occupancy	int	☐
		☐

OMISBI6.z1861188 - dbo.MWPD_Shelter | OMISBI6.z1861188 - dbo.MW

Column Name	Data Type	Allow Nulls
Shelter_ID	int	☐
Name	varchar(50)	☐
Contact	varchar(10)	☐
Fax	varchar(10)	☐
Street_Address	varchar(100)	☐
ZIP	varchar(5)	☐
Caretaker_ID	int	☐
		☐



Column Name	Data Type	Allow Nulls
Volunteer_ID	int	☐
First_Name	varchar(50)	☐
Last_Name	varchar(50)	☐
Email	varchar(50)	☐
Contact	varchar(10)	☐
DOB	date	☑
Gender	char(1)	☑
Street_Address	varchar(100)	☐
Enroll_Date	date	☐
Leader_ID	int	☐
ZIP	varchar(5)	☐
		☐

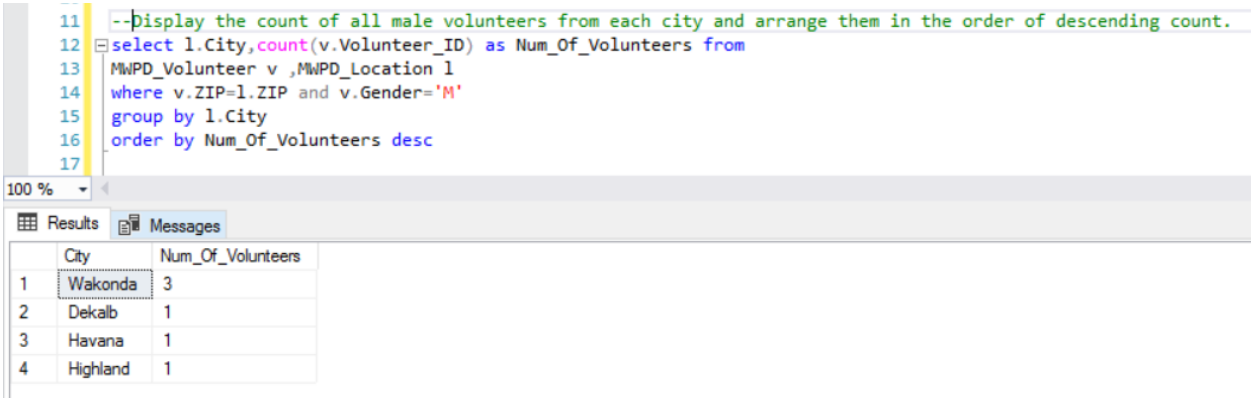


Column Name	Data Type	Allow Nulls
Rescue_RF_ID	int	☐
Volunteer_ID	int	☐
		☐

QUERIES

1. Display the count of all male volunteers from each city and arrange them in the orders of descending.

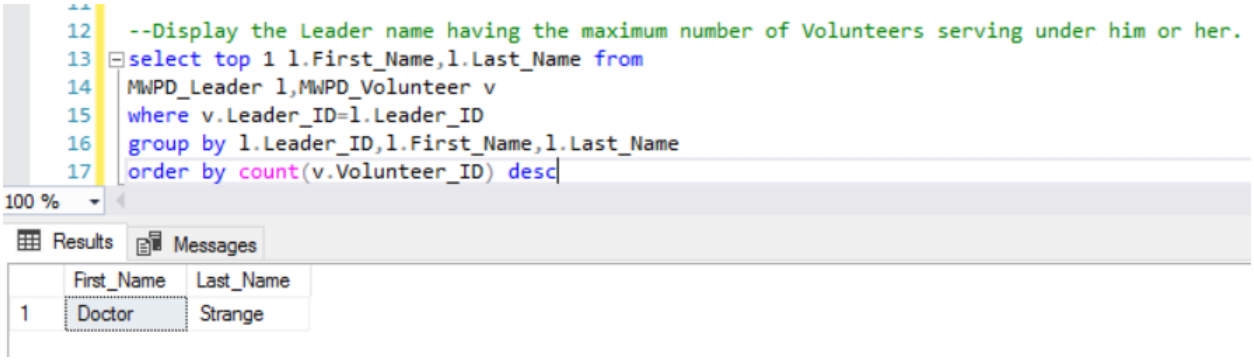
```
select l.City,count(v.Volunteer_ID) as Num_Of_Volunteers from
MWPD_Volunteer v ,MWPD_Location l
where v.ZIP=l.ZIP and v.Gender='M'
group by l.City
order by Num_Of_Volunteers desc
```



	City	Num_Of_Volunteers
1	Wakonda	3
2	Dekalb	1
3	Havana	1
4	Highland	1

2. Display the Leader name having the maximum number of Volunteers serving under him or her.

```
select top 1 l.First_Name,l.Last_Name from
MWPD_Leader l,MWPD_Volunteer v
where v.Leader_ID=l.Leader_ID
group by l.Leader_ID,l.First_Name,l.Last_Name
order by count(v.Volunteer_ID) desc
```



	First_Name	Last_Name
1	Doctor	Strange

3. Display Volunteer ID and Name, of Volunteers who have been involved in rescues of atleast two animal

```
select v.Volunteer_ID,v.First_Name,v.Last_Name from
MWPD_Volunteer v,MWPD_Volunteer_Involvement i
where v.Volunteer_ID=i.Volunteer_ID
group by v.Volunteer_ID,v.First_Name,v.Last_Name
having (count(i.Rescue_RF_ID)>=2)
```

```
11  --3. Display Volunteer ID and Name, of Volunteers who have been involved in atleast rescuing two animal
12  select v.Volunteer_ID,v.First_Name,v.Last_Name from
13  MWPD_Volunteer v,MWPD_Volunteer_Involvement i
14  where v.Volunteer_ID=i.Volunteer_ID
15  group by v.Volunteer_ID,v.First_Name,v.Last_Name
16  having (count(i.Rescue_RF_ID)>=2)
17
```

100 %

Results | Messages

	Volunteer_ID	First_Name	Last_Name
1	20000000	Daphne	Yerkes
2	20000003	Jonah	Metts
3	20000004	Toya	Burchill
4	20000006	William	Hinojos
5	20000007	Faye	Hine
6	20000008	Jodi	Birden
7	20000013	Savanna	Nixon
8	20000014	Elbert	Castiglione

4. Display a list containing names of Caretakers along with the total count of animals they are currently taking care

```
select c.First_Name,c.Last_Name,count(r.Rescue_RF_ID) as Count_of_Animals from
MWPD_Caretaker c,MWPD_Shelter s,MWPD_Rescue_Animal r
where c.Caretaker_ID=s.Caretaker_ID and s.Shelter_ID=r.Shelter_ID and r.Is_Adopted='0'
group by c.Caretaker_ID,c.First_Name,c.Last_Name
```

```
12  --Display list containing names of Caretakers along with the total count of animals they are currently taking care
13  select c.First_Name,c.Last_Name,count(r.Rescue_RF_ID) as Count_of_Animals from
14  MWPD_Caretaker c,MWPD_Shelter s,MWPD_Rescue_Animal r
15  where c.Caretaker_ID=s.Caretaker_ID and s.Shelter_ID=r.Shelter_ID and r.Is_Adopted='0'
16  group by c.Caretaker_ID,c.First_Name,c.Last_Name
17
```

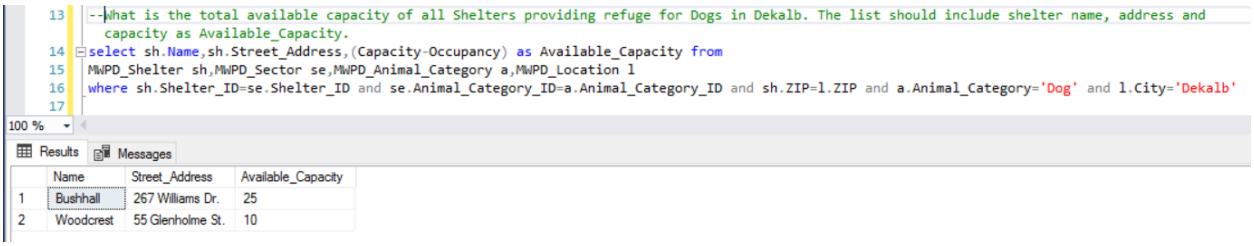
100 %

Results | Messages

	First_Name	Last_Name	Count_of_Animals
1	Lucia	Huff	1
2	America	Leonard	1
3	Phillip	Hoover	1
4	Dario	Khan	1
5	Quincy	Evans	1
6	Brielle	Cain	1
7	Fatima	Bullock	1
8	Kingston	Schmitt	1
9	Karma	Young	1
10	Quinten	Valencia	1
11	Kenya	Greene	1

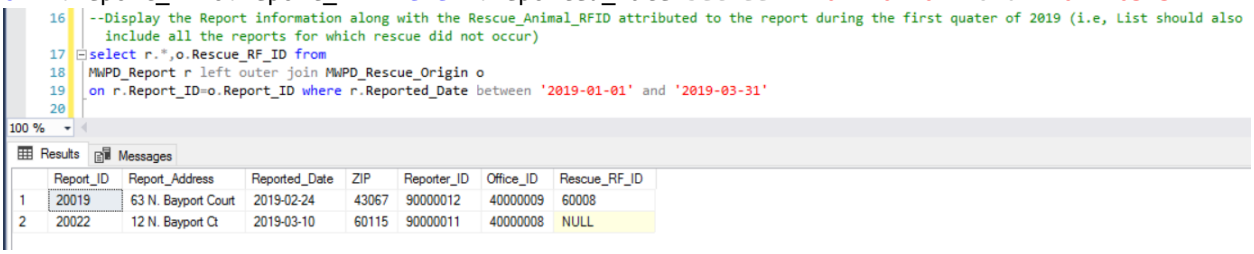
5. What is the current available capacity of all Shelters providing refuge for Dogs in Dekalb. The list should include shelter name, address and capacity as Available_Capacity.

```
select sh.Name,sh.Street_Address,Capacity-Occupancy as Available_Capacity from
MWPD_Shelter sh,MWPD_Sector se,MWPD_Animal_Category a,MWPD_Location l
where sh.Shelter_ID=se.Shelter_ID and se.Animal_Category_ID=a.Animal_Category_ID and
sh.ZIP=l.ZIP and a.Animal_Category='Dog' and l.City='Dekalb'
```



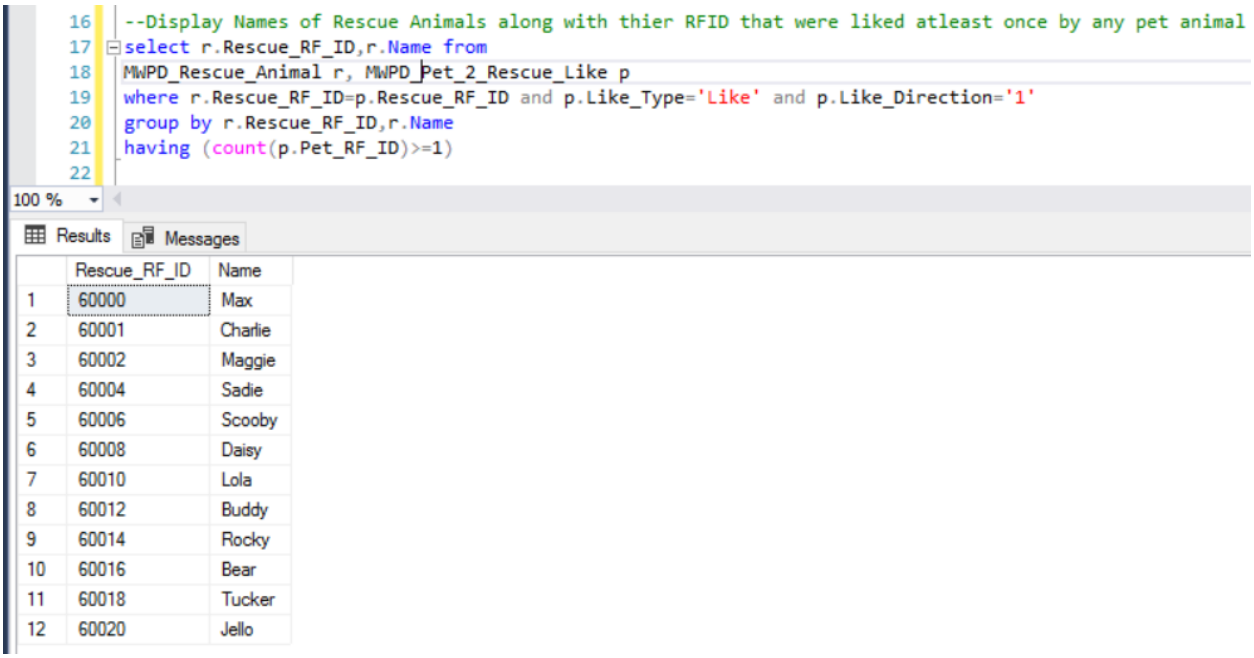
6. Display the Report information along with the Rescue_Animal_RFID attributed to the report during the first quarter of 2019 (i.e, List should also include all the reports for which rescue did not occur)

```
select r.*,o.Rescue_RF_ID from
MWPD_Report r left outer join MWPD_Rescue_Origin o
on r.Report_ID=o.Report_ID where r.Reported_Date between '2019-01-01' and '2019-03-31'
```



7. Display all the Names of Rescue Animals along with thier RFID that were liked at least once by any pet animal

```
select r.Rescue_RF_ID,r.Name from
MWPD_Rescue_Animal r, MWPD_Pet_2_Rescue_Like p
where r.Rescue_RF_ID=p.Rescue_RF_ID and p.Like_Type='Like' and p.Like_Direction='1'
group by r.Rescue_RF_ID,r.Name
having (count(p.Pet_RF_ID)>=1)
```



```
--Display Names of Rescue Animals along with thier RFID that were liked atleast once by any pet animal
select r.Rescue_RF_ID,r.Name from
MWPD_Rescue_Animal r, MWPD_Pet_2_Rescue_Like p
where r.Rescue_RF_ID=p.Rescue_RF_ID and p.Like_Type='Like' and p.Like_Direction='1'
group by r.Rescue_RF_ID,r.Name
having (count(p.Pet_RF_ID)>=1)
```

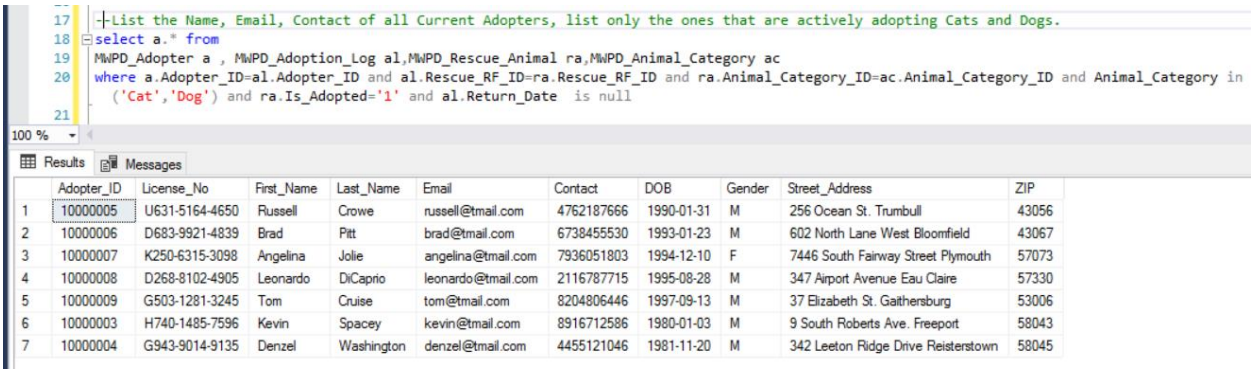
100 %

Results | Messages

	Rescue_RF_ID	Name
1	60000	Max
2	60001	Charlie
3	60002	Maggie
4	60004	Sadie
5	60006	Scooby
6	60008	Daisy
7	60010	Lola
8	60012	Buddy
9	60014	Rocky
10	60016	Bear
11	60018	Tucker
12	60020	Jello

8. List the Name, Email, Contact of all Current Adopters, list only the ones that are actively adopting Cats and Dogs.

```
select a.* from
MWPD_Adopter a , MWPD_Adoption_Log al,MWPD_Rescue_Animal ra,MWPD_Animal_Category ac
where a.Adopter_ID=al.Adopter_ID and al.Rescue_RF_ID=ra.Rescue_RF_ID and
ra.Animal_Category_ID=ac.Animal_Category_ID and Animal_Category in ('Cat','Dog') and
ra.Is_Adopted='1' and al.Return_Date  is null
```



```
--List the Name, Email, Contact of all Current Adopters, list only the ones that are actively adopting Cats and Dogs.
select a.* from
MWPD_Adopter a , MWPD_Adoption_Log al,MWPD_Rescue_Animal ra,MWPD_Animal_Category ac
where a.Adopter_ID=al.Adopter_ID and al.Rescue_RF_ID=ra.Rescue_RF_ID and ra.Animal_Category_ID=ac.Animal_Category_ID and Animal_Category in
  ('Cat','Dog') and ra.Is_Adopted='1' and al.Return_Date  is null
```

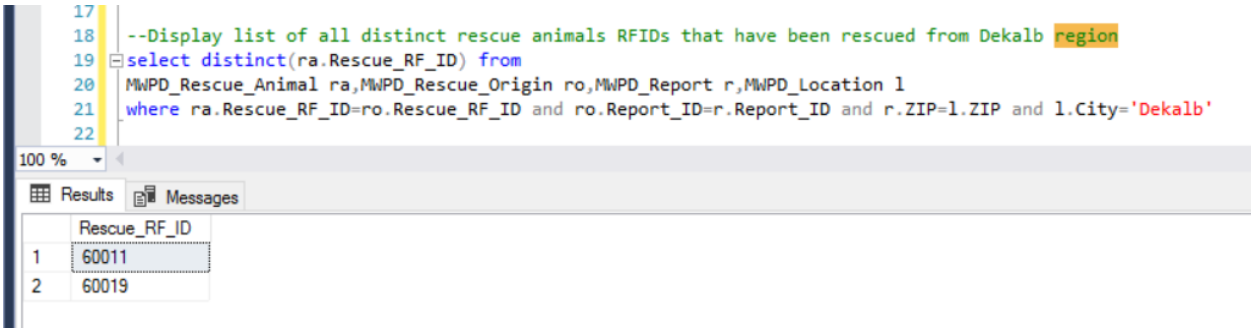
100 %

Results | Messages

	Adopter_ID	License_No	First_Name	Last_Name	Email	Contact	DOB	Gender	Street_Address	ZIP
1	10000005	U631-5164-4650	Russell	Crowe	russell@tmail.com	4762187666	1990-01-31	M	256 Ocean St. Trumbull	43056
2	10000006	D683-9921-4839	Brad	Pitt	brad@tmail.com	6738455530	1993-01-23	M	602 North Lane West Bloomfield	43067
3	10000007	K250-6315-3098	Angelina	Jolie	angelina@tmail.com	7936051803	1994-12-10	F	7446 South Fairway Street Plymouth	57073
4	10000008	D268-8102-4905	Leonardo	DiCaprio	leonardo@tmail.com	2116787715	1995-08-28	M	347 Airport Avenue Eau Claire	57330
5	10000009	G503-1281-3245	Tom	Cruise	tom@tmail.com	8204806446	1997-09-13	M	37 Elizabeth St. Gaithersburg	53006
6	10000003	H740-1485-7596	Kevin	Spacey	kevin@tmail.com	8916712586	1980-01-03	M	9 South Roberts Ave. Freeport	58043
7	10000004	G943-9014-9135	Denzel	Washington	denzel@tmail.com	4455121046	1981-11-20	M	342 Leeton Ridge Drive Reisterstown	58045

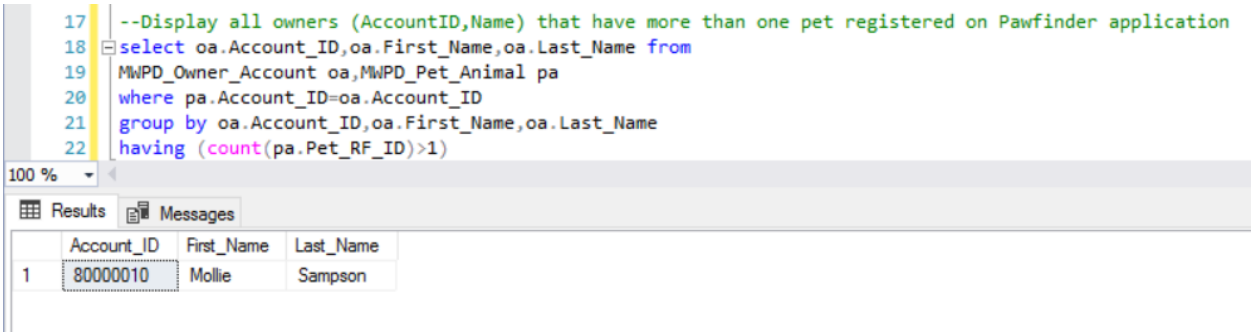
9. Display list of all distinct rescue animals RFIDs that have been rescued from Dekalb region

```
select distinct(ra.Rescue_RF_ID) from
MWPD_Rescue_Animal ra,MWPD_Rescue_Origin ro,MWPD_Report r,MWPD_Location l
where ra.Rescue_RF_ID=ro.Rescue_RF_ID and ro.Report_ID=r.Report_ID and r.ZIP=l.ZIP and
l.City='Dekalb'
```



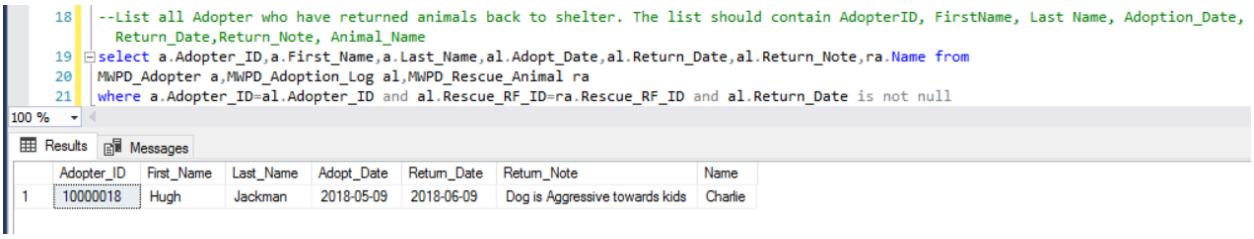
10. Display all owners (AccountID,Name) that have more than one pet registered on Pawfinder application

```
select oa.Account_ID,oa.First_Name,oa.Last_Name from
MWPD_Owner_Account oa,MWPD_Pet_Animal pa
where pa.Account_ID=oa.Account_ID
group by oa.Account_ID,oa.First_Name,oa.Last_Name
having (count(pa.Pet_RF_ID)>1)
```



11. List all Adopter who have returned animals back to shelter. The list should contain AdopterID, FirstName, Last Name, Adoption_Date, Return_Date,Return_Note, Animal_Name

```
select
a.Adopter_ID,a.First_Name,a.Last_Name,al.Adopt_Date,al.Return_Date,al.Return_Note,ra.Name
from
MWPD_Adopter a,MWPD_Adoption_Log al,MWPD_Rescue_Animal ra
where a.Adopter_ID=al.Adopter_ID and al.Rescue_RF_ID=ra.Rescue_RF_ID and al.Return_Date
is not null
```



```
--List all Adopter who have returned animals back to shelter. The list should contain AdopterID, FirstName, Last Name, Adoption_Date,
  Return_Date,Return_Note, Animal_Name
select a.Adopter_ID,a.First_Name,a.Last_Name,al.Adopt_Date,al.Return_Date,al.Return_Note,ra.Name from
MWPD_Adopter a,MWPD_Adoption_Log al,MWPD_Rescue_Animal ra
where a.Adopter_ID=al.Adopter_ID and al.Rescue_RF_ID=ra.Rescue_RF_ID and al.Return_Date is not null
```

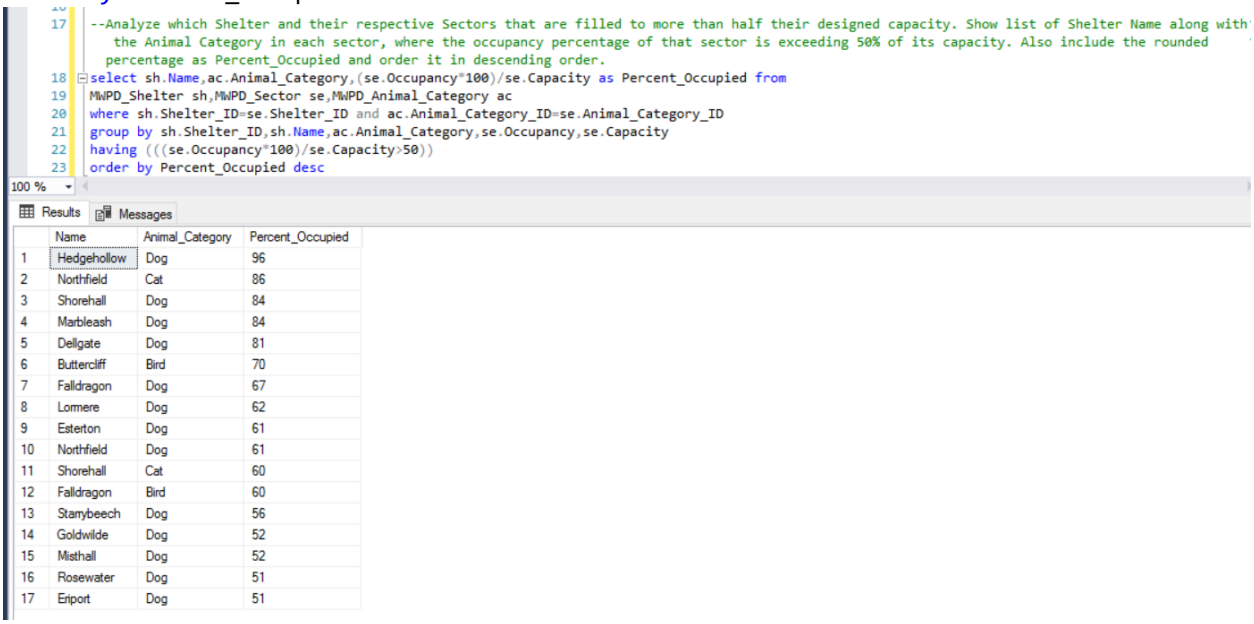
100 %

Results | Messages

	Adopter_ID	First_Name	Last_Name	Adopt_Date	Return_Date	Return_Note	Name
1	10000018	Hugh	Jackman	2018-05-09	2018-06-09	Dog is Aggressive towards kids	Charlie

12. Analyze which shelters and their respective sectors that are filled to more than half their designed capacity. Show list of Shelter Name along with the Animal Category in each sector, where the occupancy percentage of that sector is exceeding 50% of its capacity. Also include the percentage as Percent_Occupied and order it in descending order.

```
select sh.Name,ac.Animal_Category,(se.Occupancy*100)/se.Capacity as Percent_Occupied from
MWPD_Shelter sh,MWPD_Sector se,MWPD_Animal_Category ac
where sh.Shelter_ID=se.Shelter_ID and ac.Animal_Category_ID=se.Animal_Category_ID
group by sh.Shelter_ID,sh.Name,ac.Animal_Category,se.Occupancy,se.Capacity
having (((se.Occupancy*100)/se.Capacity>50))
order by Percent_Occupied desc
```



```
--Analyze which Shelter and their respective Sectors that are filled to more than half their designed capacity. Show list of Shelter Name along with
  the Animal Category in each sector, where the occupancy percentage of that sector is exceeding 50% of its capacity. Also include the rounded
  percentage as Percent_Occupied and order it in descending order.
select sh.Name,ac.Animal_Category,(se.Occupancy*100)/se.Capacity as Percent_Occupied from
MWPD_Shelter sh,MWPD_Sector se,MWPD_Animal_Category ac
where sh.Shelter_ID=se.Shelter_ID and ac.Animal_Category_ID=se.Animal_Category_ID
group by sh.Shelter_ID,sh.Name,ac.Animal_Category,se.Occupancy,se.Capacity
having (((se.Occupancy*100)/se.Capacity>50))
order by Percent_Occupied desc
```

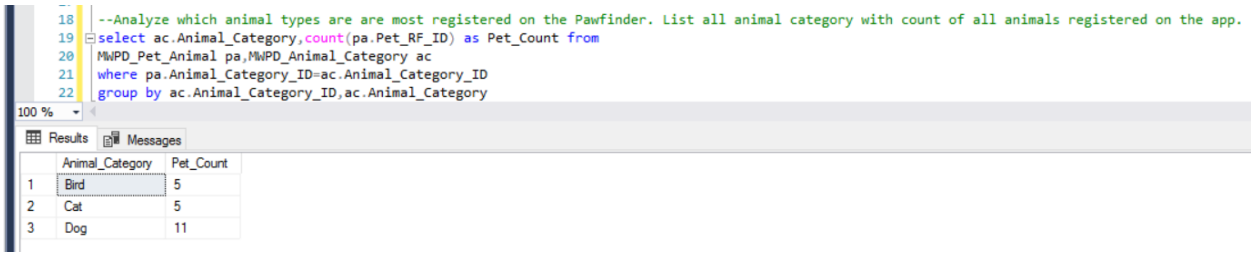
100 %

Results | Messages

	Name	Animal_Category	Percent_Occupied
1	Hedgehollow	Dog	96
2	Northfield	Cat	86
3	Shorehall	Dog	84
4	Marbleash	Dog	84
5	Dellgate	Dog	81
6	Buttercliff	Bird	70
7	Falldragon	Dog	67
8	Lormere	Dog	62
9	Esterton	Dog	61
10	Northfield	Dog	61
11	Shorehall	Cat	60
12	Falldragon	Bird	60
13	Starrybeech	Dog	56
14	Goldwilde	Dog	52
15	Misthall	Dog	52
16	Rosewater	Dog	51
17	Eriport	Dog	51

13. Analyze which animal types are are most registered on the Pawfinder. List all animal category with count of all animals registered on the app.

```
select ac.Animal_Category,count(pa.Pet_RF_ID) as Pet_Count from
MWPD_Pet_Animal pa,MWPD_Animal_Category ac
where pa.Animal_Category_ID=ac.Animal_Category_ID
group by ac.Animal_Category_ID,ac.Animal_Category
```



```
--Analyze which animal types are are most registered on the Pawfinder. List all animal category with count of all animals registered on the app.
select ac.Animal_Category,count(pa.Pet_RF_ID) as Pet_Count from
MWPD_Pet_Animal pa,MWPD_Animal_Category ac
where pa.Animal_Category_ID=ac.Animal_Category_ID
group by ac.Animal_Category_ID,ac.Animal_Category
```

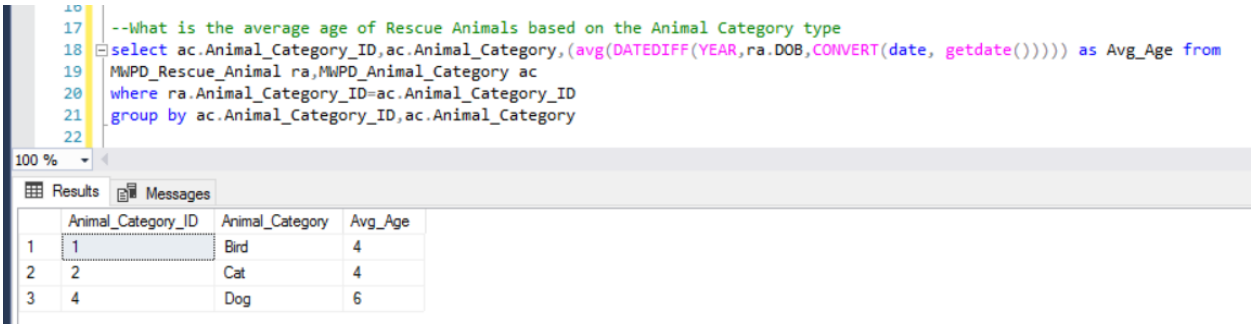
100 %

Results | Messages

	Animal_Category	Pet_Count
1	Bird	5
2	Cat	5
3	Dog	11

14. What is the average age of Rescue Animals based on the Animal Category type

```
select ac.Animal_Category_ID,ac.Animal_Category,(avg(DATEDIFF(YEAR,ra.DOB,CONVERT(date,
getdate())))) as Avg_Age from
MWPD_Rescue_Animal ra,MWPD_Animal_Category ac
where ra.Animal_Category_ID=ac.Animal_Category_ID
group by ac.Animal_Category_ID,ac.Animal_Category
```



```
--What is the average age of Rescue Animals based on the Animal Category type
select ac.Animal_Category_ID,ac.Animal_Category,(avg(DATEDIFF(YEAR,ra.DOB,CONVERT(date, getdate())))) as Avg_Age from
MWPD_Rescue_Animal ra,MWPD_Animal_Category ac
where ra.Animal_Category_ID=ac.Animal_Category_ID
group by ac.Animal_Category_ID,ac.Animal_Category
```

100 %

Results | Messages

	Animal_Category_ID	Animal_Category	Avg_Age
1	1	Bird	4
2	2	Cat	4
3	4	Dog	6

15. Display Name of the pet the accrued the highest likes from other pet animals

```
select top 1 pa.Name,count(pl.Pet_ID_Likes) as Pet_like_count from
MWPD_Pet_Animal pa,MWPD_Pet_2_Pet_Like pl
where pa.Pet_RF_ID=pl.Pet_ID_Liked and Like_Type='Like'
group by pa.Pet_RF_ID,pa.Name
order by  Pet_like_count desc
```

```
26  --Display Name of the pet the accrued the highest likes from other pet animals
27  select top 1 pa.Name,count(pl.Pet_ID_Likes) as Pet_like_count from
28  MWPD_Pet_Animal pa,MWPD_Pet_2_Pet_Like pl
29  where pa.Pet_RF_ID=pl.Pet_ID_Liked and Like_Type='Like'
30  group by pa.Pet_RF_ID,pa.Name
31  order by  Pet_like_count desc
```

Results | Messages

Name	Pet_like_count
Emie	2

16. Display top 3 states where Pawfinder application being extensively used. Use Owner_Account table to determine the user count in each state.

```
select top 3 l.State,count(oa.Account_ID) as User_count from
MWPD_Owner_Account oa,MWPD_Location l
where oa.ZIP=l.ZIP
group by l.State
order by User_count desc
```

```
26  --Display top 3 states where Pawfinder application being extensively used. Use Owner_Account table to determine the user count in each state.
27  select top 3 l.State,count(oa.Account_ID) as User_count from
28  MWPD_Owner_Account oa,MWPD_Location l
29  where oa.ZIP=l.ZIP
30  group by l.State
31  order by User_count desc
```

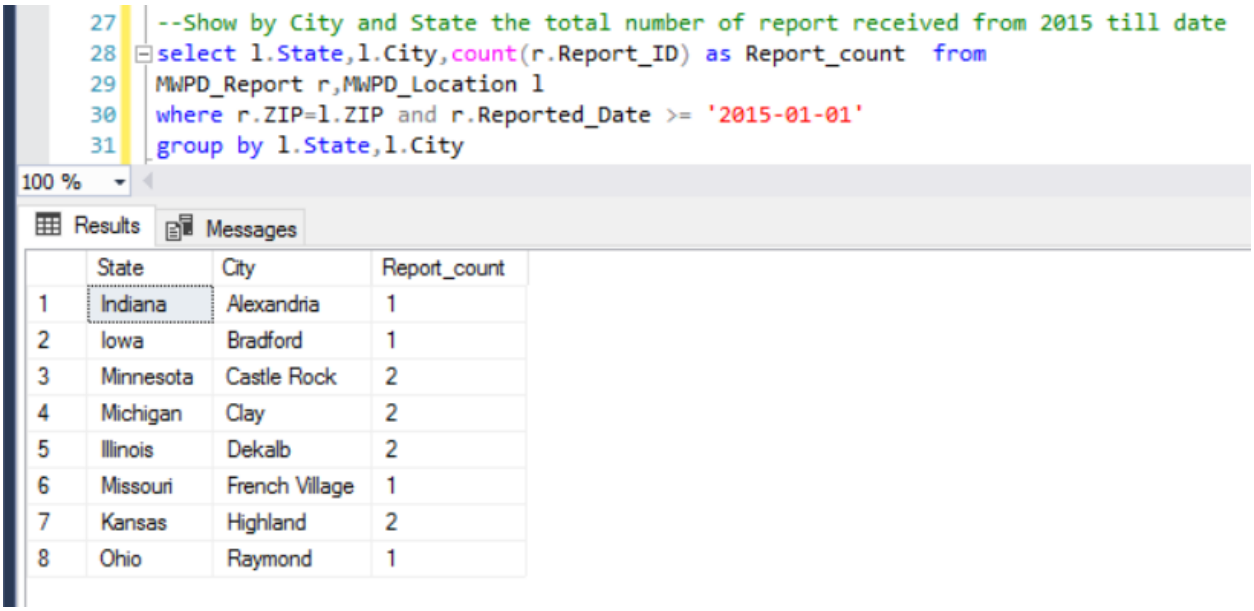
100 %

Results | Messages

	State	User_count
1	Louisiana	4
2	Arkansas	3
3	Michigan	3

17. Show by City and State the total number of reports received from 2015 till date

```
select l.State,l.City,count(r.Report_ID) as Report_count  from
MWPD_Report r,MWPD_Location l
where r.ZIP=l.ZIP and r.Reported_Date >= '2015-01-01'
group by l.State,l.City
```



```
--Show by City and State the total number of report received from 2015 till date
select l.State,l.City,count(r.Report_ID) as Report_count  from
MWPD_Report r,MWPD_Location l
where r.ZIP=l.ZIP and r.Reported_Date >= '2015-01-01'
group by l.State,l.City
```

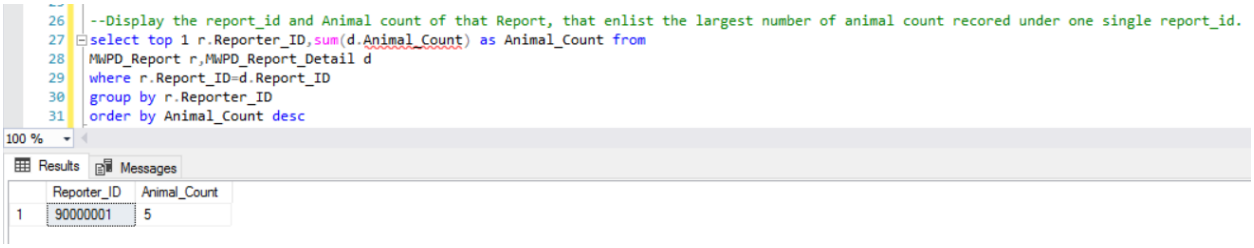
100 %

Results | Messages

	State	City	Report_count
1	Indiana	Alexandria	1
2	Iowa	Bradford	1
3	Minnesota	Castle Rock	2
4	Michigan	Clay	2
5	Illinois	Dekalb	2
6	Missouri	French Village	1
7	Kansas	Highland	2
8	Ohio	Raymond	1

18. Display the report_id and animal count of that report, that enlist the largest number of animal count recorded under one single report_id

```
select top 1 r.Reporter_ID,sum(d.Animal_Count) as Animal_Count from
MWPD_Report r,MWPD_Report_Detail d
where r.Report_ID=d.Report_ID
group by r.Reporter_ID
order by Animal_Count desc
```



```
--Display the report_id and Animal count of that Report, that enlist the largest number of animal count recored under one single report_id.
select top 1 r.Reporter_ID,sum(d.Animal_Count) as Animal_Count from
MWPD_Report r,MWPD_Report_Detail d
where r.Report_ID=d.Report_ID
group by r.Reporter_ID
order by Animal_Count desc
```

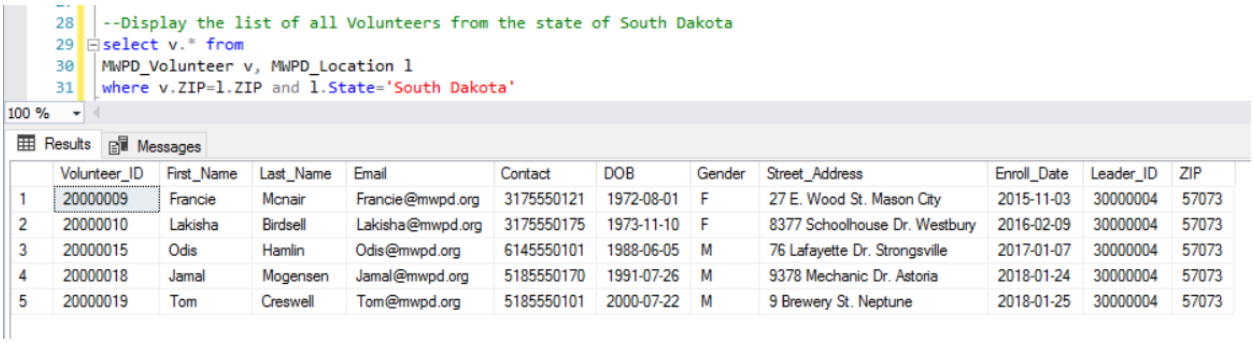
100 %

Results | Messages

	Reporter_ID	Animal_Count
1	90000001	5

19. Display the list of all Volunteers from the state of South Dakota

```
select v.* from
MWPD_Volunteer v, MWPD_Location l
where v.ZIP=l.ZIP and l.State='South Dakota'
```



```
--Display the list of all Volunteers from the state of South Dakota
select v.* from
MWPD_Volunteer v, MWPD_Location l
where v.ZIP=l.ZIP and l.State='South Dakota'
```

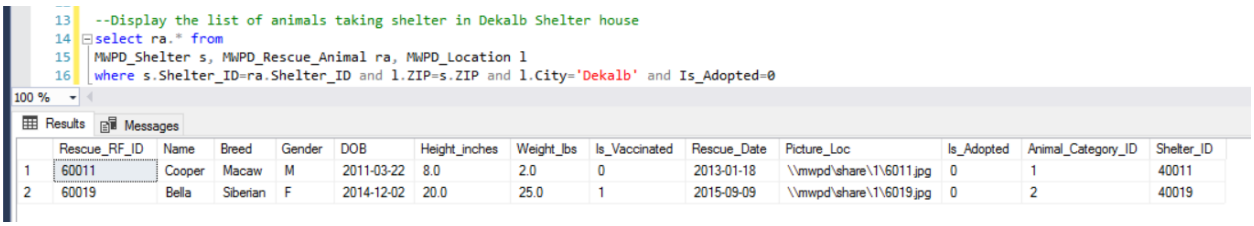
100 %

Results | Messages

	Volunteer_ID	First_Name	Last_Name	Email	Contact	DOB	Gender	Street_Address	Enroll_Date	Leader_ID	ZIP
1	20000009	Francie	Mcnair	Francie@mwpd.org	3175550121	1972-08-01	F	27 E. Wood St. Mason City	2015-11-03	30000004	57073
2	20000010	Lakisha	Birdsell	Lakisha@mwpd.org	3175550175	1973-11-10	F	8377 Schoolhouse Dr. Westbury	2016-02-09	30000004	57073
3	20000015	Odis	Hamlin	Odis@mwpd.org	6145550101	1988-06-05	M	76 Lafayette Dr. Strongsville	2017-01-07	30000004	57073
4	20000018	Jamal	Mogensen	Jamal@mwpd.org	5185550170	1991-07-26	M	9378 Mechanic Dr. Astoria	2018-01-24	30000004	57073
5	20000019	Tom	Creswell	Tom@mwpd.org	5185550101	2000-07-22	M	9 Brewery St. Neptune	2018-01-25	30000004	57073

20. Display the list of animals taking shelter in Dekalb Shelter house

```
select ra.* from
MWPD_Shelter s, MWPD_Rescue_Animal ra, MWPD_Location l
where s.Shelter_ID=ra.Shelter_ID and l.ZIP=s.ZIP and l.City='Dekalb' and Is_Adopted=0
```



```
--Display the list of animals taking shelter in Dekalb Shelter house
select ra.* from
MWPD_Shelter s, MWPD_Rescue_Animal ra, MWPD_Location l
where s.Shelter_ID=ra.Shelter_ID and l.ZIP=s.ZIP and l.City='Dekalb' and Is_Adopted=0
```

100 %

Results | Messages

	Rescue_RF_ID	Name	Breed	Gender	DOB	Height_inches	Weight_lbs	Is_Vaccinated	Rescue_Date	Picture_Loc	Is_Adopted	Animal_Category_ID	Shelter_ID
1	60011	Cooper	Macaw	M	2011-03-22	8.0	2.0	0	2013-01-18	\\mwpd\share\1\6011.jpg	0	1	40011
2	60019	Bella	Siberian	F	2014-12-02	20.0	25.0	1	2015-09-09	\\mwpd\share\1\6019.jpg	0	2	40019

References and Credits:

https://www.wix.com

https://www.lucidchart.com/

https://scribblenauts.fandom.com

https://www.freepik.com/

https://vippets.net

https://commons.wikimedia.org

http://www.freepngclipart.com

https://pngtree.com