

WACS database physical design

Comp6212 Assignment 2



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Lukas jeremias roessner

30021032

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# Introduction

This Report goes in-depth about the Physical design of a database designed for Wopwop Animal Care Service to keep track of vets, clients, employees, animals, treatments etc.

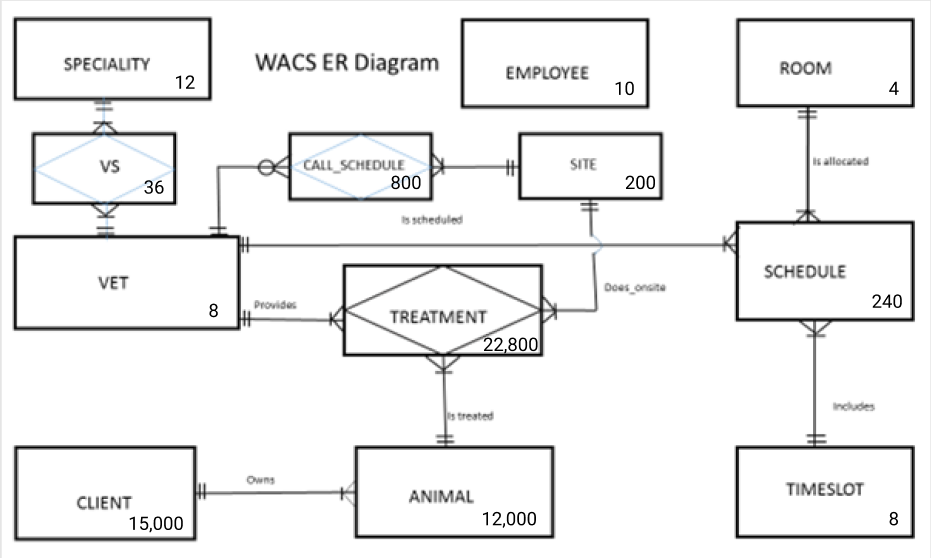
# Assumptions

The assumption that a Date\_of\_Schedule and Date\_of\_Call\_Schedule were needed was made. This assumption has been made to record the date of when a client is scheduled to come in or a vet is scheduled to do a call out.

# Physical Design

## Data Volume Map

24



Employee: 10  
Client: 15,000  
Animal: 12,000  
Vet: 8  
Room: 4  
Specialty: 12  
Timeslot: 8  
Schedule: 240  
Site: 200  
Call Schedule: 800  
VS: 24  
Treatment: 22,800

## Tables SQL Commands

--EMPLOYEE(E#, E\_Firstname, E\_Surname, StreetNo, StreetName, Suburb)

--PK- E#

CREATE TABLE EMPLOYEE(

E# int IDENTITY(1,1),

E\_Firstname varchar(40),

E\_Surname varchar(40),

StreetNo varchar(10),

StreetName varchar(50),

Suburb varchar(50),

CONSTRAINT PK\_E PRIMARY KEY(E#));

--ROOM(R#, RoomName)

--PK- R#

CREATE TABLE ROOM(

R# int IDENTITY(1,1),

RoomName varchar(30),

CONSTRAINT PK\_R PRIMARY KEY(R#));

--TIMESLOT(Slot#, From, To)

--PK- Slot#

CREATE TABLE TIMESLOT(

Slot# int IDENTITY(1,1),

Fromm TIME(0),

Too TIME(0),

CONSTRAINT PK\_Slot# PRIMARY KEY(Slot#));

--VET (V#, V\_Firstname, V\_Surname, StreetNo, StreetName, Suburb, ContactNo)

--PK- V#

CREATE TABLE VET(

V# int IDENTITY(1,1),

V\_Firstname varchar(40),

V\_Surname varchar(40),

StreetNo varchar(10),

StreetName varchar(50),

Suburb varchar(50),

ContactNo varchar(35),

CONSTRAINT PK\_V PRIMARY KEY(V#));

--SPECIALITY(SP#, Description)

--PK- SP#

CREATE TABLE SPECIALITY(

SP# int IDENTITY(1,1),

Description varchar(200),

CONSTRAINT PK\_SP PRIMARY KEY(SP#));

--SITE(Site#, SiteType, StreetNo, StreetName, Suburb)

--PK- Site#

CREATE TABLE SITE(

Site# int IDENTITY(1,1),

SiteType varchar(25),

StreetNo varchar(10),

StreetName varchar(50),

Suburb varchar(50),

CONSTRAINT PK\_Site PRIMARY KEY(Site#));

--VS (V#, SP#)

--PK � (V#, SP#) � composite key

--FK � V#, and SP#

CREATE TABLE VS (

    V# int,

    SP# int,

CONSTRAINT PK\_VSP PRIMARY KEY(V#,SP#),

CONSTRAINT FK\_V\_VSP FOREIGN KEY(V#) REFERENCES VET(V#) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT FK\_SP\_VSP FOREIGN KEY(SP#) REFERENCES SPECIALITY(SP#) ON DELETE CASCADE ON UPDATE CASCADE);

--CLIENT(C#, C\_Firstname, C\_Surname, StreetNo, StreetName, Suburb, ContactNo)

--PK- C#

CREATE TABLE CLIENT(

C# int IDENTITY(1,1),

C\_Firstname varchar(40),

C\_Surname varchar(40),

StreetNo varchar(10),

StreetName varchar(50),

Suburb varchar(50),

ContactNo varchar(35),

CONSTRAINT PK\_C PRIMARY KEY(C#));

--ANIMAL(A#, AName, C#)

--PK- A#

--FK � C#

CREATE TABLE ANIMAL (

    A# int IDENTITY(1,1),

    AName# varchar(60),

    C# int,

CONSTRAINT PK\_A PRIMARY KEY(A#),

CONSTRAINT FK\_C\_A FOREIGN KEY(C#) REFERENCES CLIENT(C#) ON DELETE CASCADE ON UPDATE CASCADE);

--SCHEDULE(Sch#, V#, Slot#, R#,Oncall)

--R#, V# and Slot# nulls should be allowed

--PK - Sch#

--FK � V#, Slot# and R#

CREATE TABLE SCHEDULE (

    Sch# int IDENTITY(1,1),

    V# int,

    Slot# int,

    R# int,

    Date\_of\_Schedule date,

    Oncall BIT,

CONSTRAINT PK\_Sch PRIMARY KEY(Sch#),

CONSTRAINT FK\_V\_Sch FOREIGN KEY(V#) REFERENCES VET(V#) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT FK\_Slot\_Sch FOREIGN KEY(Slot#) REFERENCES TIMESLOT(Slot#) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT FK\_R\_Sch FOREIGN KEY(R#) REFERENCES ROOM(R#) ON DELETE CASCADE ON UPDATE CASCADE);

--CALL\_SCHEDULE (V#, Site#, From, To)

--PK � (V#, Site#) � composite key

--FK � V#, and Site#

CREATE TABLE CALL\_SCHEDULE (

    V# int,

    Site# int,

    Fromm TIME(0),

    Too TIME(0),

    Date\_of\_Call\_Schedule date,

CONSTRAINT PK\_VSite PRIMARY KEY(V#, Site#),

CONSTRAINT FK\_V\_VSite FOREIGN KEY(V#) REFERENCES VET(V#) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT FK\_Site\_VSite FOREIGN KEY(Site#) REFERENCES SITE(Site#) ON DELETE CASCADE ON UPDATE CASCADE);

--TREATMENT(T#, Date\_of\_Treatment, V#, A#, Site#, Treatment\_Given)

--Site# - nulls should be allowed

--PK - T#

--FK � V#, A# and Site#

CREATE TABLE TREATMENT (

    T# int IDENTITY(1,1),

    Date\_of\_Treatment date,

    V# int,

    A# int,

    Site# int,

    Treatment\_Given varchar(200),

CONSTRAINT PK\_T PRIMARY KEY(T#),

CONSTRAINT FK\_V\_T FOREIGN KEY(V#) REFERENCES VET(V#) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT FK\_A\_T FOREIGN KEY(A#) REFERENCES ANIMAL(A#) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT FK\_Site\_T FOREIGN KEY(Site#) REFERENCES SITE(Site#) ON DELETE CASCADE ON UPDATE CASCADE);

## Data Insert Commands

--EMPLOYEE data insert

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Arthur','Goff','61','Elit, St.','Austin');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Acton','Silva','29','Maecenas Rd.','Aosta');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Yuli','Calhoun','74','Venenatis St.','Baiso');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Callie','Roth','75','Ullamcorper Street','Nashville');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Tarik','Landry','100','Sed, Street','Chépica');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Stacey','Salas','130','Justo Road','Llanidloes');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Rahim','Yang','113','Ultrices St.','Bhusawal');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Iris','Snyder','99','Ornare, Avenue','Koszalin');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Rashad','Baker','54','Neque Rd.','Chimbarongo');

INSERT INTO EMPLOYEE([E\_Firstname],[E\_Surname],[StreetNo],[StreetName],[Suburb]) VALUES('Abra','Hinton','127','Fermentum Avenue','Chantemelle');

--ROOM data insert

INSERT INTO ROOM([RoomName]) VALUES('Red Room');

INSERT INTO ROOM([RoomName]) VALUES('X-Ray');

INSERT INTO ROOM([RoomName]) VALUES('Treatment Room 1');

INSERT INTO ROOM([RoomName]) VALUES('Treatment Room 2');

INSERT INTO ROOM([RoomName]) VALUES('Treatment Room 3');

--TIMESLOT data insert

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('07:00:00', '07:30:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('07:45:00', '08:15:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('08:30:00', '09:00:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('09:15:00', '09:45:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('10:00:00', '10:30:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('10:45:00', '11:15:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('11:30:00', '12:00:00');

INSERT INTO TIMESLOT([Fromm],[Too]) VALUES('12:15:00', '12:45:00');

--VET data insert

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Ferdinand','Cobb','91','Venenatis Rd.','Devizes','1694111035599');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Bevis','Fields','18','Accumsan St.','Solihull','1623041589899');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Harlan','Estes','90','Ligula. Rd.','SŽlange','1685021802299');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Luke','Howard','12','Phasellus Rd.','Gaggio Montano','1674032563399');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Nero','Rutledge','122','Accumsan Rd.','Rankweil','1633031790399');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Madison','Valentine','95','Molestie Road','Thane','1617071402699');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Winter','Copeland','120','Phasellus Rd.','Ancona','1643102355199');

INSERT INTO VET([V\_Firstname],[V\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Cadman','Vinson','10','Parturient Rd.','Çeşme','1645060648799');

--SPECIALITY data insert

INSERT INTO SPECIALITY([Description]) VALUES('Anaesthesiology');

INSERT INTO SPECIALITY([Description]) VALUES('Cardiology');

INSERT INTO SPECIALITY([Description]) VALUES('Dentistry');

INSERT INTO SPECIALITY([Description]) VALUES('Internal medicine');

INSERT INTO SPECIALITY([Description]) VALUES('Porcine');

INSERT INTO SPECIALITY([Description]) VALUES('Preventive medicine');

--SITE data insert

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','25','Ipsum Street','Farciennes');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','15','Mollis Ave','Diets-Heur');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','39','Scelerisque Street','Vichy');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','143','Lorem St.','Aydın');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','17','Vehicula St.','Dilsen-Stokkem');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','3','Ornare St.','Roux-Miroir');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','113','Mauris Rd.','Chiny');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','124','Sit St.','Coleville Lake');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','97','Iaculis St.','Olivar');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','49','Magna. Av.','Gresham');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','39','Faucibus Rd.','Coinco');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','118','Nam Rd.','Leffinge');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','87','Ac St.','Baie-Comeau');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','38','Tristique Rd.','Kingston-on-Thames');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','143','Ante St.','Omaha');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','121','Nulla Avenue','Ruddervoorde');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','53','Diam. Av.','Castelbianco');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','24','Vestibulum, Street','Orsogna');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','112','Tristique St.','Wichita');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','138','Nunc Street','Osgoode');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','70','Vulputate, St.','Coquimbo');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Farm','98','Mauris Rd.','Bonnyville Municipal District');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','90','Non Rd.','Stalhille');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','70','Egestas Avenue','Gdańsk');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','67','Sit St.','Baunatal');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','146','At Rd.','Kilwinning');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','54','In Road','Salzwedel');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('Clinic','59','Nam Ave','Jerez de la Frontera');

INSERT INTO SITE([SiteType],[StreetNo],[StreetName],[Suburb]) VALUES('House','90','Pulvinar Rd.','Reutlingen');

--VS data insert

INSERT INTO VS([V#],[SP#]) VALUES(1,1);

INSERT INTO VS([V#],[SP#]) VALUES(2,4);

INSERT INTO VS([V#],[SP#]) VALUES(2,5);

INSERT INTO VS([V#],[SP#]) VALUES(3,3);

INSERT INTO VS([V#],[SP#]) VALUES(4,5);

INSERT INTO VS([V#],[SP#]) VALUES(5,6);

INSERT INTO VS([V#],[SP#]) VALUES(6,2);

INSERT INTO VS([V#],[SP#]) VALUES(7,5);

INSERT INTO VS([V#],[SP#]) VALUES(8,4);

--CLIENT data insert

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Ashely','Hooper','58','Nam Rd.','Zeebrugge','1659100177999');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Rhona','Shepherd','51','Adipiscing Rd.','Compiano','1662121092499');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Blaze','Nolan','102','Dapibus Street','Town of Yarmouth','1650100273799');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Ferdinand','Oneal','132','Cursus Avenue','Heidenheim','1612112135099');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Kameko','Pena','74','Euismod St.','Alto del Carmen','1664092578499');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Chadwick','Ortega','95','Sapien. St.','Plainevaux','1653021115299');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Davis','Flynn','140','Euismod Street','Brescia','1676071947399');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Cain','Marquez','144','In Av.','Tredegar','1683012204399');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Axel','Miller','33','Urna Rd.','Orsogna','1669020400199');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Ramona','Munoz','88','Augue Ave','Katowice','1602122749699');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Conan','Howe','139','Aliquet Av.','Kapolei','1669022610699');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Keegan','Love','58','Amet Av.','Turriaco','1630080806199');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Donovan','Floyd','128','Integer Road','Miami','1663011549799');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Scarlett','Mcclure','27','Amet Road','Moose Jaw','1647070745699');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Rylee','Mullen','46','Habitant Road','Ruisbroek','1672120518699');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Montana','Fuentes','25','Dui, Rd.','Jerez de la Frontera','1685091201799');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Camilla','Tillman','45','Eget, Road','Brodick','1605061184199');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Perry','Walters','81','Odio. Av.','Sandy','1623102475899');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Yardley','Hebert','63','Tristique Av.','Jonesboro','1642080338499');

INSERT INTO CLIENT([C\_Firstname],[C\_Surname],[StreetNo],[StreetName],[Suburb],[ContactNo]) VALUES('Michelle','Waters','127','Interdum. Ave','Wepion','1665061934499');

--ANIMAL data insert

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Cedric',1);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Slade',7);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Carla',16);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Julie',20);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Cailin',14);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Gemma',14);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Jakeem',14);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Lillith',6);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Doris',15);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Gannon',1);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Keane',14);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Urielle',13);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Ivan',6);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Burke',18);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Eleanor',2);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Rhona',17);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Bradley',2);

INSERT INTO ANIMAL([AName#],[C#]) VALUES('Remedios',10);

--SCHEDULE data insert

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(1,1,2,'2019-11-07',0);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(1,3,1,'2019-11-07',0);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(1,5,3,'2019-11-08',0);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(1,6,2,'2019-11-08',0);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(2,2,2,'2019-11-06',0);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(2,4,1,'2019-11-08',1);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(2,7,2,'2019-11-07',1);

INSERT INTO SCHEDULE([V#],[Slot#],[R#],[Date\_of\_Schedule],[Oncall]) VALUES(2,8,2,'2019-11-07',0);

--CALL\_SCHEDULE data insert

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(1,10,'07:00:00','09:00:00','2019-11-07');

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(4,15,'12:00:00','14:00:00','2019-11-07');

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(2,11,'13:00:00','16:00:00','2019-11-07');

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(8,2,'08:00:00','08:30:00','2019-11-07');

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(6,23,'08:00:00','09:00:00','2019-11-07');

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(2,12,'11:00:00','12:00:00','2019-11-07');

INSERT INTO CALL\_SCHEDULE([V#],[Site#],[Fromm],[Too],[Date\_of\_Call\_Schedule]) VALUES(3,6,'10:00:00','13:00:00','2019-11-07');

--TREATMENT data insert

INSERT INTO TREATMENT([Date\_of\_Treatment],[V#],[A#],[Site#],[Treatment\_Given]) VALUES('2019-10-07',5,11,19,'Antibiotics given');

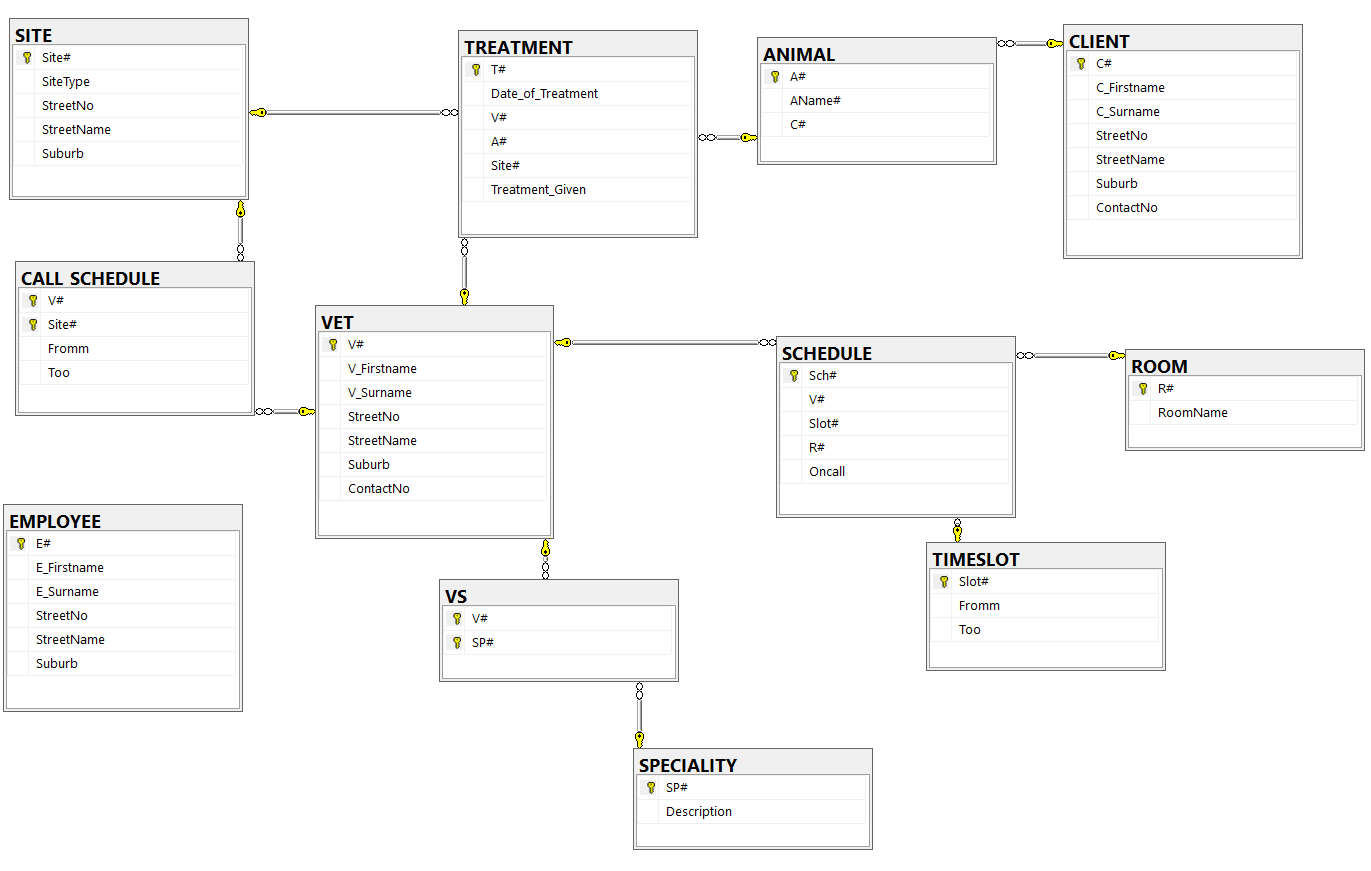
INSERT INTO TREATMENT([Date\_of\_Treatment],[V#],[A#],[Site#],[Treatment\_Given]) VALUES('2019-11-02',5,1,20,'Ambutated left rear foot');

INSERT INTO TREATMENT([Date\_of\_Treatment],[V#],[A#],[Site#],[Treatment\_Given]) VALUES('2019-10-19',5,6,4,'Pain killers for next two weeks');

INSERT INTO TREATMENT([Date\_of\_Treatment],[V#],[A#],[Site#],[Treatment\_Given]) VALUES('2019-10-25',5,15,15,'Therapy recommended');

INSERT INTO TREATMENT([Date\_of\_Treatment],[V#],[A#],[Site#],[Treatment\_Given]) VALUES('2019-10-25',2,8,21,'Administered injection');

## Database Diagram



## Index Files

CREATE INDEX ind\_EMP\_Fn\_Ln

ON EMPLOYEE (E\_Firstname, E\_Surname);

CREATE INDEX ind\_VET\_Fn\_Ln

ON VET (V\_Firstname, V\_Surname);

CREATE INDEX ind\_CLI\_Fn\_Ln

ON CLIENT (C\_Firstname, C\_Surname);

## Possible De-Normalization

A suggestion for a De-Normalization would be the ROOM table with the SCHEDULE table

|  |  |  |
| --- | --- | --- |
| Column | PK/FK | Data Type |
| Sch# | PK | int |
| *V#\** | FK | int |
| *Slot#\** | FK | int |
| Date\_of\_Schedule |  | date |
| Oncall |  | BIT |
| RoomName |  | varchar(30) |

A positive impact of this de-normalization would be that the ROOM table has now merged with the SCHEDULE table and therefore we have one less table which decreases the storage space needed.

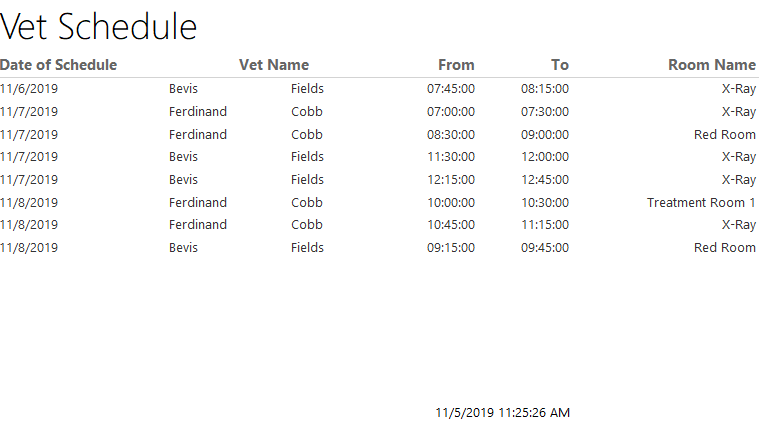
A negative impact of this de-normalization would be that we now have too write a long string, the room name, into every record under the RoomName column where we used to just have the

## Reports

### List of Clients, Animals and Treatments



### List of Scheduled Vets



## Data Dictionary

### EMPLOYEE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| E# | int |  | identity |  |
| E\_Firstname | varchar(40) |  |  |  |
| E\_Surname | varchar(40) |  |  |  |
| StreetNo | varchar(10) |  |  |  |
| StreetName | varchar(50) |  |  |  |
| Suburb | varchar(50) |  |  |  |

### ROOM

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| R# | int |  | identity |  |
| RoomName | varchar(30) |  |  |  |

### TIMESLOT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| Slot# | int |  | identity |  |
| Fromm | TIME(0) |  |  |  |
| Too | TIME(0) |  |  |  |

### VET

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| V# | int |  | identity |  |
| V\_Firstname | varchar(40) |  |  |  |
| V\_Surname | varchar(40) |  |  |  |
| StreetNo | varchar(10) |  |  |  |
| StreetName | varchar(50) |  |  |  |
| Suburb | varchar(50) |  |  |  |
| ContactNo | varchar(35) |  |  |  |

### SPECIALITY

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| SP# | int |  | identity |  |
| Description | varchar(200) |  |  |  |

### SITE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| Site# | int |  | identity |  |
| SiteType | varchar(25) |  |  |  |
| StreetNo | varchar(10) |  |  |  |
| StreetName | varchar(50) |  |  |  |
| Suburb | varchar(50) |  |  |  |

### VS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| V# | int | VET |  |  |
| SP# | int | SPECIALITY |  |  |

### CLIENT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| C# | int |  | identity |  |
| C\_Firstname | varchar(40) |  |  |  |
| C\_Surname | varchar(40) |  |  |  |
| StreetNo | varchar(10) |  |  |  |
| StreetName | varchar(50) |  |  |  |
| Suburb | varchar(50) |  |  |  |
| ContactNo | varchar(35) |  |  |  |

### ANIMAL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| A# | int |  | identity |  |
| AName | varchar(60) |  |  |  |
| C# | int | CLIENT |  |  |

### SCHEDULE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| Sch# | int |  | identity |  |
| V# | int | VET |  | Y |
| Slot# | int | TIMESLOT |  | Y |
| R# | int | ROOM |  | Y |
| Date\_of\_Schedule | date |  |  |  |
| Oncall | BIT |  |  |  |

### CALL\_SCHEDULE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| V# | int | VET |  |  |
| Site# | int | SITE |  |  |
| Fromm | TIME(0) |  |  |  |
| Too | TIME(0) |  |  |  |
| Date\_of\_Call\_Schedule | date |  |  |  |

### TREATMENT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column | Data Type | References | Default | Not Null |
| T# | int |  | identity |  |
| Date\_of\_Treatment | date |  |  |  |
| V# | int | VET |  |  |
| A# | int | ANIMAL |  |  |
| Site | int | SITE |  |  |
| Treatment\_Given | varchar(200) |  |  |  |