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Project #2  
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### **Database Creation:**

```
CREATE TABLE OWNER (
    OWNERID NUMBER(4,0) PRIMARY KEY,
    OFIRST VARCHAR(20) NOT NULL,
    OLAST VARCHAR(20) NOT NULL,
    ONUMBER CHAR(12) NOT NULL,
    EMAIL VARCHAR(25) NOT NULL,
    STREET VARCHAR(35) NOT NULL,
    CITY VARCHAR(20) NOT NULL,
    STATE VARCHAR(2) NOT NULL,
    ZIPCODE NUMBER(5) NOT NULL
);

CREATE TABLE DOG (
    DOGID NUMBER(8) PRIMARY KEY,
    DNAME VARCHAR(25) NOT NULL,
    BREED VARCHAR(50) NOT NULL,
    GENDER VARCHAR(1) NOT NULL,
    DATEOFBIRTH DATE NOT NULL,
    REGISTRATIONDATE DATE,
    BOROUGH VARCHAR(15),
    ZIPCODE NUMBER(5) NOT NULL
);

CREATE TABLE CURRENT_DOG (
    OWNERID NUMBER(4,0),
    FOREIGN KEY (OWNERID) REFERENCES OWNER (OWNERID),
    DOGID NUMBER(8),
    FOREIGN KEY (DOGID) REFERENCES DOG (DOGID)
);
```

```
CREATE TABLE PREVIOUS_DOG (
    OWNERID NUMBER(4,0),
    FOREIGN KEY (OWNERID) REFERENCES OWNER (OWNERID),
    DOGID NUMBER(8),
    FOREIGN KEY (DOGID) REFERENCES DOG (DOGID)
);

CREATE TABLE TICKET (
    TICKETID NUMBER(4,0) PRIMARY KEY,
    OWNERID NUMBER(4,0),
    DOGID NUMBER(8),
    VIOLATIONID NUMBER(4,0),
    TSTATUS VARCHAR(10) NOT NULL,
    TFINE NUMBER(7,2) NOT NULL,
    TDATE DATE NOT NULL,
    FOREIGN KEY (OWNERID) REFERENCES OWNER (OWNERID),
    FOREIGN KEY (DOGID) REFERENCES DOG (DOGID),
    FOREIGN KEY (VIOLATIONID) REFERENCES VIOLATION (VIOLATIONID)
);

CREATE TABLE VIOLATION (
    VIOLATIONID NUMBER(4,0) PRIMARY KEY,
    VIOLATIONTYPE VARCHAR(15) NOT NULL
);

CREATE TABLE PHOTO (
    PHOTOID NUMBER(4,0) PRIMARY KEY,
    PHOTONAME VARCHAR(15) NOT NULL,
    DATETAKEN DATE NOT NULL,
    DOGID NUMBER(8),
    FOREIGN KEY (DOGID) REFERENCES DOG (DOGID),
```

```
OWNERID NUMBER(4,0),  
FOREIGN KEY (OWNERID) REFERENCES OWNER(OWNERID)  
);
```

### **Sequence Creation for OwnerID and TicketID :**

```
CREATE SEQUENCE ENUM  
START WITH 1  
INCREMENT BY 1;
```

### **Inserting Data Into Owner (Atleast 20 Owners):**

```
INSERT INTO OWNER (OWNERID, OFIRST, OLAST, ONUMBER, EMAIL, STREET, CITY,  
STATE, ZIPCODE)  
VALUES  
(inc.NEXTVAL, 'JAMES', 'SMITH', '845-590-9481', 'johnsmith12@yahoo.com', '85  
SE. Penn Circle', 'Bronx', 'NY', 10465)  
  
(INC.NEXTVAL, 'BRUCE', 'JOHNSHON', '620-786-3935',  
'BRUCEJOHNSON@HOTMAIL.COM', '133 Rockcrest Street', 'FRESH MEADOWS', 'NY',  
11365)  
  
(INC.NEXTVAL, 'JUSTINA', 'RAGLAND', '863-673-1825',  
'JustinaBRagland@GMAIL.com', '145 Grant Ave.', 'Bronx', 'NY', 10466)  
  
(INC.NEXTVAL, 'ALVIN', 'DONAHUE', '832-260-7904', 'AlvinLDonahue@rhyta.com',  
'920 Indian Spring Lane', 'FLUSHING', 'NY', 11354)  
  
(INC.NEXTVAL, 'WILBERT', 'TRACY', '615-560-2742', 'WILBERTTRACY33@GMAIL.COM',  
'616 ASPEN CIRCLE', 'ASTORIA', 'NY', 11106)  
  
(inc.NEXTVAL, 'Denice', 'Bryant', '618-718-  
3338', 'denicebryant12@yahoo.com', '395 University Street', 'Brooklyn', 'NY',  
11216);  
  
(inc.NEXTVAL, 'Serena', 'Ray', '718-285-4485', 'serenaray33@gmail.com', '519  
Rock Creek St', 'Brooklyn', 'NY', 11236);
```

```
(inc.NEXTVAL, 'Malcom', 'Talley', '646-853-  
9633', 'malcomtalley@hotmail.com', '4 Water Avenue', 'Brooklyn', 'NY', 11206);
```

```
(inc.NEXTVAL, 'Carl', 'Teeter', '989-666-2906', 'teeterj331@yahoo.com', '8635  
Beach Ave', 'Brooklyn', 'NY', 11238);
```

```
(inc.NEXTVAL, 'Shane', 'Ruffin', '919-929-5085', 'shaneruffin@yahoo.com', '377  
1st Ave', 'Brooklyn', 'NY', 11223);
```

```
(inc.NEXTVAL, 'Shawn', 'Hansen', '347-175-8887', 'shawn32@gmail.com', '9789  
North York', 'East Elmhurst', 'NY', 11370);
```

```
(inc.NEXTVAL, 'Juan', 'Gonzalez', '718-548-7771', 'Gonzalez91@yahoo.com', '17  
Newport St', 'Flushing', 'NY', 11355);
```

```
(inc.NEXTVAL, 'Chelsey', 'Allen', '917-778-3255', 'chelsey21@yahoo.com', '759  
Crescent Ave', 'Staten Island', 'NY', 10306);
```

```
(inc.NEXTVAL, 'Samantha', 'Anderson', '517-357-  
3395', 'smanderson35@yahoo.com', '317 Yukon Drive', 'Jamaica', 'NY', 11432);
```

```
(inc.NEXTVAL, 'Amy', 'Rios', '646-888-4215', 'rios3716@hotmail.com', '173  
Chapel St', 'Flushing', 'NY', 11354);
```

```
(inc.NEXTVAL, 'Alex', 'Charles', '646-547-5587', 'alexc@yahoo.com', '21 2nd  
Ave', 'New York', 'NY', 10034);
```

```
(inc.NEXTVAL, 'Eduardo', 'Medina', '718-471-  
9631', 'eduardomedina33@gmail.com', '394 Southhampton St', 'New York', 'NY',  
10016);
```

```
(inc.NEXTVAL, 'Sarah', 'Miller', '917-331-4533', 'smiller235@yahoo.com', '262  
Euclid Rd.', 'New York', 'NY', 10027);
```

```
(inc.NEXTVAL, 'Maria', 'Sanchez', '347-679-1147', 'msanchez21@yahoo.com', '18  
Peninsula St.', 'Rego Pard', 'NY', 11374);
```

```
(inc.NEXTVAL, 'William', 'Brown', '212-575-1859', 'williambrown74@gmail.com', '622 Proctor Rd', 'New York', 'NY', 10024);
```

### Inserting into Current Dog (multi value):

```
insert into CURRENT_DOG (ownerid, dogid)
values (1, 1)
```

### Inserting into Ticket:

```
insert into ticket (ticketid, ownerid, dogid, violationid, tstatus, tfine, tdate)
values
(tinc.nextval, 1, 1, 2, 'UNPAID', 50, '04/01/18')
```

### Data:

1. At least 20 dog owners.

```
select * from owner
order by ownerid;
```

OWNERID	OFIRST	OLAST	ONUMBER	EMAIL	STREET	CITY	STATE	ZIPCODE
1	JAMES	SMITH	845-590-9481	johnsmith12@yahoo.com	85 SE. Penn Circle	Bronx	NY	10465
2	BRUCE	JOHNSHON	620-786-3935	BRUCEJOHNSON@HOTMAIL.COM	133 Rockcrest Street	FRESH MEADOWS	NY	11365
3	JUSTINA	RAGLAND	863-673-1825	JustinaBRagland@GMAIL.com	145 Grant Ave.	Bronx	NY	10466
4	ALVIN	DONAHUE	832-260-7904	AlvinLDonahue@rhyta.com	920 Indian Spring Lane	FLUSHING	NY	11354
5	WILBERT	TRACY	615-560-2742	WILBERTTRACY33@GMAIL.COM	616 ASPEN CIRCLE	ASTORIA	NY	11106
6	Denice	Bryant	618-718-3338	denicebryant12@yahoo.com	395 University Street	Brooklyn	NY	11216
7	Serena	Ray	718-285-4485	serenaray33@gmail.com	519 Rock Creek St	Brooklyn	NY	11236
8	Malcom	Talley	646-853-9633	malcomtalley@hotmail.com	4 Water Avenue	Brooklyn	NY	11206
9	Carl	Teeter	989-666-2906	teeterj331@yahoo.com	8635 Beach Ave	Brooklyn	NY	11238
10	Shane	Ruffin	919-929-5085	shaneruffin@yahoo.com	377 1st Ave	Brooklyn	NY	11223
11	Shawn	Hansen	347-175-8887	shawn32@gmail.com	9789 North York	East Elmhurst	NY	11370
12	Juan	Gonzalez	718-548-7771	Gonzalez91@yahoo.com	17 Newport St	Flushing	NY	11355
13	Chelsey	Allen	917-778-3255	chelsey21@yahoo.com	759 Crescent Ave	Staten Island	NY	10306
15	Samantha	Anderson	517-357-3395	smmanderson35@yahoo.com	317 Yukon Drive	Jamaica	NY	11432
16	Amy	Rios	646-888-4215	rios3716@hotmail.com	173 Chapel St	Flushing	NY	11354
17	Alex	Charles	646-547-5587	alexc@yahoo.com	21 2nd Ave	New York	NY	10034
18	Eduardo	Medina	718-471-9631	eduardomedina33@gmail.com	394 Southhampton St	New York	NY	10016
19	Sarah	Miller	917-331-4533	smiller235@yahoo.com	262 Euclid Rd.	New York	NY	10027
20	Maria	Sanchez	347-679-1147	msanchez21@yahoo.com	18 Peninsula St.	Rego Pard	NY	11374
21	William	Brown	212-575-1859	williambrown74@gmail.com	622 Proctor Rd	New York	NY	10024

2. Atleast 50% of the owners will own more that one dog. One owner with atleast 10 dogs.

```
select * from current_dog
```

order by ownerid;

OWNERID	DOGID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
10	10
10	11
11	13
11	12
12	15
15	18
15	19
16	20
16	21
17	22
17	23
18	25
18	24
21	32
21	33
21	34
21	36
21	37
21	39
21	40
21	38
21	31
21	30
21	35

Owner 21 with 11 dogs.

3. At least 5 violation types:

```
select * from violation
```

VIOLATIONID	VIOLATIONTYPE
1	No Leash
2	Loud Barking
3	Littering
4	Trespassing
5	Negligence

4. At least 10 tickets:

```
select * from ticket  
order by ticketid
```

TICKETID	OWNERID	DOGID	VIOLATIONID	TSTATUS	TFINE	TDATE
1	1	1	2	UNPAID	50	04/01/2018
2	2	2	1	PAID	50	01/17/2018
3	7	7	1	UNPAID	50	04/23/2018
4	5	5	3	PAID	100	09/12/2017
5	10	10	1	PAID	50	05/01/2017
6	10	11	2	PAID	50	06/19/2017
7	15	19	4	UNPAID	150	04/12/2018
8	18	25	2	PAID	50	03/01/2018
9	21	40	4	UNPAID	150	04/17/2018
10	21	36	5	UNPAID	250	04/25/2018

5. Import at least 1,000 dog records from NYC Open Data

```
select count(*)  
from dog
```

COUNT(*)
1132



### Query Questions:

1. Identify dogs without violations in the last 30 days. Display the owner name, dog name, breed and email. Use a nested select to answer this question.

```
select olast, ofirst, dname, breed, email from
(dog inner join owner inner join current_dog
on owner.ownerid = current_dog.ownerid
on dog.dogid = current_dog.dogid)

where dog.dogid not in (select dogid from ticket
                        where tdate >= '04/01/2018')
```

FIRST	LAST	DOGNAME	BREED	EMAIL
Juan	Gonzalez	REMY	Bichon Frise	Gonzalez91@yahoo.com
JUSTINA	RAGLAND	ROCKY	Maltese	JustinaBRagland@GMAIL.com
Amy	Rios	TEDDY	West High White Terrier	rios3716@hotmail.com
Shane	Ruffin	BEETHOVEN	Cocker Spaniel	shaneruffin@yahoo.com
Samantha	Anderson	ROXY	Silky Terrier	smanderson35@yahoo.com
William	Brown	ROMEO	Unknown	williambrown74@gmail.com
ALVIN	DONAHUE	GUS	Boston Terrier	AlvinLDonahue@rhyta.com
Alex	Charles	CHARLIE	Golden Retriever	alexc@yahoo.com
Eduardo	Medina	LEO	Havanese	eduardomedina33@gmail.com
Eduardo	Medina	BOSS	American Pit Bull Mix / Pit Bull Mix	eduardomedina33@gmail.com
BRUCE	JOHNSHON	PACKARD	Labrador Retriever Crossbreed	BRUCEJOHNSON@HOTMAIL.COM
William	Brown	WINSTON	Scottish Terrier	williambrown74@gmail.com
William	Brown	SOPHIE	"Poodle, Standard"	williambrown74@gmail.com
WILBERT	TRACY	ROCKY	Shih Tzu	WILBERTTRACY33@GMAIL.COM
Shawn	Hansen	BLITZ	Boston Terrier	shawn32@gmail.com
Malcom	Talley	BETTY	"Bull Dog, French"	malcomtalley@hotmail.com
William	Brown	PICKLE	Silky Terrier	williambrown74@gmail.com
Shawn	Hansen	PEPPY	Maltese	shawn32@gmail.com
William	Brown	ODIN	American Pit Bull Mix / Pit Bull Mix	williambrown74@gmail.com
William	Brown	RINRIN	"Poodle, Toy"	williambrown74@gmail.com
Alex	Charles	KEY	Belgian Malinois	alexc@yahoo.com
William	Brown	LULU	"Mastiff, Old English"	williambrown74@gmail.com
Amy	Rios	GUS	Boston Terrier	rios3716@hotmail.com
Shane	Ruffin	CYCLOPSE	Shih Tzu	shaneruffin@yahoo.com
Denice	Bryant	BLU	Cane Corso	denicebryant12@yahoo.com
William	Brown	RAJAH	"Poodle, Toy"	williambrown74@gmail.com
William	Brown	JAMES	Australian Shepherd	williambrown74@gmail.com

2. Identify zip codes without registered Beagle in 2016. Display the zip code. Remove duplicate zip codes. Use a nested select to answer this question.

```
select unique zipcode from dog
where zipcode not in
(select zipcode from dog where
breed = 'Beagle' and registrationdate > '1/01/2016' and registrationdate <
'01/01/2017')
order by zipcode
```

ZIPCODE
10001
10002
10005
10006
10007
10009
10010
10011
10012
10013

3. Identify dogs without owners in April 2016. Display the dog name, gender, breed and age. Use a nested select to answer this question.

```
select dname DogName, gender Gender, breed Breed,
floor(months_between(sysdate,dateofbirth)/12) Age from dog
where dogid not in
(select dog.dogid from dog
inner join current_dog
on dog.dogid = current_dog.dogid
where registrationdate > '04/01/2016' and registrationdate
< '04/30/2016')
```

DOGNAME	GENDER	BREED	AGE
TERRY	M	Beagle	2
TIKI	F	Shih Tzu	8
TINA	F	Staffordshire Bull Terrier	6
TOBY	M	Havanese	11
PUGGY	M	Pug	6
PRINCESS	F	Poodle	2
PINK	F	Chihuahua Crossbreed	4
PIPER	F	Unknown	8
MACK	M	Boxer	3
ELLIE	F	Boxer Crossbreed	9
ELLIE	F	American Bully	3
LUCKY	M	Lhasa Apso	9
LUCKY	M	Shih Tzu	2

4. Identify current dog owners with a residence near American museum of Natural History(10024). Display the owner name, dog name and breed.

```
select owner.ofirst First, owner.olast Last, dog.dname DogName,
dog.breed Breed from
(dog inner join current_dog inner join owner
on current_dog.ownerid = owner.ownerid
on current_dog.dogid = dog.dogid)
where owner.zipcode = '10024'
```

FIRST	LAST	DOGNAME	BREED
William	Brown	ROMEO	Unknown
William	Brown	WINSTON	Scottish Terrier
William	Brown	PICKLE	Silky Terrier
William	Brown	RINRIN	"Poodle, Toy"
William	Brown	JAMES	Australian Shepherd
William	Brown	RAJAH	"Poodle, Toy"
William	Brown	GIGI	Shih Tzu
William	Brown	SOPHIE	"Poodle, Standard"
William	Brown	LULU	"Mastiff, Old English"
William	Brown	TUCKER	Labrador Retriever
William	Brown	ODIN	American Pit Bull Mix / Pit Bull Mix

5. Identify pictures of Boston Terrier older than 10 years old. Display the dog name, age and all photos.

```
select dog.dname DogName,
floor(months_between(sysdate,dog.dateofbirth)/12) Age, photo.photoname
Image from
dog inner join photo
on dog.dogid = photo.dogid
```

DOGNAME	AGE	IMAGE
GUS	14	Gus_Fring.jpg
GUS	14	Just_Gus.jpg

6. Identify dogs owned by William Brown with violations in the last month. Display the owner name, dog name, violation, date of violation and fine.

```
select owner.ofirst First, owner.olast Last, dog.dname DogName,
violation.violationtype Violation, to_char(tfine,
'FM$999,999,999,990.00') Fine
from
(violation inner join owner inner join ticket inner join dog
on dog.dogid = ticket.dogid
on ticket.ownerid = owner.ownerid
on violation.violationid = ticket.violationid)
where
owner.ownerid = (select ownerid from owner where ofirst = 'Wiliam' and
olast = 'Brown')
and tdate > '04/01/2018' and tdate < '04/30/2018'
```

FIRST	LAST	DOGNAME	VIOLATION	FINE
Wiliam	Brown	TUCKER	Trespassing	\$150.00
Wiliam	Brown	GIGI	Negligence	\$250.00

7. Identify the number of dogs by gender. Display two columns and one row for each gender. The two output columns are gender and number of dogs with that gender. Use a function to answer this question.

```
select
count(case when gender = 'M' then 1 end) as Male,
count(case when gender = 'F' then 1 end) as Female
from dog
```

MALE	FEMALE
627	505

8. Identify zip codes with the most beagles. Display two columns and one row for each zip code. The two output columns are zip code and number of dogs in that zip code. Display the zip code with the most beagles first. Use a function to answer this question.

```
select zipcode, count(zipcode) NumberOfBeagles from dog where breed =
'Beagle' group by zipcode
```

order by NumberofBeagles desc

ZIPCODE	NUMBEROFBEAGLES
10016	2
11377	2
10314	1
11106	1
11249	1
11209	1
11428	1
11222	1
11697	1
11432	1
11411	1
10023	1
11218	1
10458	1
10028	1
11419	1
11433	1
10003	1
11385	1
11236	1
11358	1

9. Identify the number of total fines by owner in the last year. Display three columns and one row for each owner. The three columns are owner name, number of violations and total dollar amount of fines. Display owners with the most fines first. Use a function to answer this question.

```
select owner.ofirst || ' ' || owner.olast Name,  
       count(violationid) Violations,  
       to_char(sum(ticket.tfine), 'FM$999,999,999,990.00') TotalFine  
from  
ticket inner join owner  
on ticket.ownerid = owner.ownerid  
  
group by owner.ofirst || ' ' || owner.olast  
  
ORDER BY SUM(TICKET.TFINE) DESC
```

NAME	VIOLATIONS	TOTALFINE
William Brown	2	\$400.00
Samantha Anderson	1	\$150.00
Shane Ruffin	2	\$100.00
WILBERT TRACY	1	\$100.00
Serena Ray	1	\$50.00
Eduardo Medina	1	\$50.00
JAMES SMITH	1	\$50.00
BRUCE JOHN SHON	1	\$50.00

10. Increase all fines by 50%. Identify the SQL to perform this operation and the fine before and after this operation.

Unpaid Fines without increase:

TICKETID	OWNERID	DOGID	VIOLATIONID	TSTATUS	TFINE	TDATE
1	1	1	2	UNPAID	50	04/01/2018
3	7	7	1	UNPAID	50	04/23/2018
7	15	19	4	UNPAID	150	04/12/2018
9	21	40	4	UNPAID	150	04/17/2018
10	21	36	5	UNPAID	250	04/25/2018

```
update ticket
set tfine = tfine * 1.50
where tstatus = 'UNPAID'
```

TICKETID	OWNERID	DOGID	VIOLATIONID	TSTATUS	TFINE	TDATE
1	1	1	2	UNPAID	75	04/01/2018
3	7	7	1	UNPAID	75	04/23/2018
7	15	19	4	UNPAID	225	04/12/2018
9	21	40	4	UNPAID	225	04/17/2018
10	21	36	5	UNPAID	375	04/25/2018

11. Display the structure of all tables using the SQL Describe operation.

Owner:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>OWNER</u>	<u>OWNERID</u>	NUMBER	-	4	0	1	-	-	-
	<u>OFIRST</u>	VARCHAR2	20	-	-	-	-	-	-
	<u>OLAST</u>	VARCHAR2	20	-	-	-	-	-	-
	<u>ONUMBER</u>	CHAR	12	-	-	-	-	-	-
	<u>EMAIL</u>	VARCHAR2	25	-	-	-	-	-	-
	<u>STREET</u>	VARCHAR2	35	-	-	-	-	-	-
	<u>CITY</u>	VARCHAR2	20	-	-	-	-	-	-
	<u>STATE</u>	VARCHAR2	2	-	-	-	-	-	-
	<u>ZIPCODE</u>	NUMBER	-	5	0	-	-	-	-
									1 - 9

Dog:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>DOG</u>	<u>DOGID</u>	NUMBER	-	8	0	1	-	-	-
	<u>DNAME</u>	VARCHAR2	25	-	-	-	-	-	-
	<u>BREED</u>	VARCHAR2	50	-	-	-	-	-	-
	<u>GENDER</u>	VARCHAR2	1	-	-	-	-	-	-
	<u>DATEOFBIRTH</u>	DATE	7	-	-	-	-	-	-
	<u>REGISTRATIONDATE</u>	DATE	7	-	-	-	✓	-	-
	<u>BOROUGH</u>	VARCHAR2	15	-	-	-	✓	-	-
	<u>ZIPCODE</u>	NUMBER	-	5	0	-	-	-	-
									1 - 8

Current\_Dog:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>CURRENT_DOG</u>	<u>OWNERID</u>	NUMBER	-	4	0	-	✓	-	-
	<u>DOGID</u>	NUMBER	-	8	0	-	✓	-	-
									1 - 2

Previous\_Dog:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>PREVIOUS_DOG</u>	<u>OWNERID</u>	NUMBER	-	4	0	-	✓	-	-
	<u>DOGID</u>	NUMBER	-	8	0	-	✓	-	-
									1 - 2

Ticket:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>TICKET</u>	<u>TICKETID</u>	NUMBER	-	4	0	1	-	-	-
	<u>OWNERID</u>	NUMBER	-	4	0	-	✓	-	-
	<u>DOGID</u>	NUMBER	-	8	0	-	✓	-	-
	<u>VIOLATIONID</u>	NUMBER	-	4	0	-	✓	-	-
	<u>TSTATUS</u>	VARCHAR2	10	-	-	-	-	-	-
	<u>TFINE</u>	NUMBER	-	7	2	-	-	-	-
	<u>TDATE</u>	DATE	7	-	-	-	-	-	-
1 - 7									

#### Violation:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>VIOLATION</u>	<u>VIOLATIONID</u>	NUMBER	-	4	0	1	-	-	-
	<u>VIOLATIONTYPE</u>	VARCHAR2	15	-	-	-	-	-	-
1 - 2									

#### Photo:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>PHOTO</u>	<u>PHOTOID</u>	NUMBER	-	4	0	1	-	-	-
	<u>PHOTONAME</u>	VARCHAR2	15	-	-	-	-	-	-
	<u>DATETAKEN</u>	DATE	7	-	-	-	-	-	-
	<u>DOGID</u>	NUMBER	-	8	0	-	✓	-	-
	<u>OWNERID</u>	NUMBER	-	4	0	-	✓	-	-
1 - 5									

12. Display the Oracle version by entering  

```
select *
from product_component_version;
```

PRODUCT	VERSION	STATUS
NLSRTL	11.2.0.2.0	Production
Oracle Database 11g Express Edition	11.2.0.2.0	64bit Production
PL/SQL	11.2.0.2.0	Production
TNS for 64-bit Windows:	11.2.0.2.0	Production