

DBMS - Homework 1

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Database Details		
Database Name	Username	Password
Menagerie1	paramps	cpssc46206620

Pet Table					
name	owner	species	sex	birth	death
Fluffy	Harold	cat	f	1993-02-04	NULL
Claws	Gwen	cat	m	1994-03-17	NULL
Buffy	Harold	dog	f	1989-05-13	NULL
Fang	Benny	dog	m	1990-08-27	NULL
Bowser	Diane	dog	m	1979-08-31	1995-07-29
Chirpy	Gwen	bird	f	1998-09-11	NULL
Whistler	Gwen	bird	NULL	1997-12-09	NULL
Slim	Benny	snake	m	1996-04-29	NULL
Puffball	Diane	hamster	f	1999-03-30	NULL

Event Table			
name	date	type	remark
Fluffy	1995-05-15	litter	4 kittens, 3 female, 1 male
Buffy	1993-06-23	litter	5 puppies, 2 female, 3 male
Buffy	1994-06-19	litter	3 puppies, 3 female
Chirpy	1999-03-21	vet	needed beak straightened
Slim	1997-08-03	vet	broken rib
Bowser	1991-10-12	kennel	NULL
Fang	1991-10-12	kennel	NULL
Fang	1998-08-28	birthday	Gave him a new chew toy
Claws	1998-03-17	birthday	Gave him a new flea collar
Whistler	1998-12-09	birthday	First birthday

Query 1: Display the structure for pet and event tables respectively.

DESCRIBE pet;					
Field	Type	Null	Key	Default	Extra
name	varchar(20)	YES		NULL	
owner	varchar(20)	YES		NULL	
species	varchar(20)	YES		NULL	
sex	char(1)	YES		NULL	
birth	date	YES		NULL	
death	date	YES		NULL	

DESCRIBE event;					
Field	Type	Null	Key	Default	Extra
name	varchar(20)	YES		NULL	
date	date	YES		NULL	
type	varchar(15)	YES		NULL	
remark	varchar(255)	YES		NULL	

Query 2: Retrieve the information for all female dogs from pet table.

SELECT * FROM pet WHERE sex = 'f' AND species = 'dog';					
name	owner	species	sex	birth	death
Buffy	Harold	dog	f	1989-05-13	NULL

Query3: Display owner, name, sex, and species of the youngest pet.

SELECT owner, name, sex, species FROM pet WHERE birth = (SELECT Max(birth) from pet);			
owner	name	sex	species
Diane	Puffball	f	hamster

Query 4: Use MySQL pattern matching to retrieve information from table pet for pets whose name starts with 'B' and ends with 'Y'.

SELECT * FROM pet WHERE name LIKE 'b%y';					
name	owner	species	sex	birth	death
Buffy	Harold	dog	f	1989-05-13	NULL

Query 5: List owner, name, species, event type, and event remark of the pets who had 'litter' event.

SELECT owner, pet.name, species, type, remark FROM pet INNER JOIN event on pet.name = event.name WHERE event.type = 'litter';				
owner	name	species	type	remark
Harold	Fluffy	cat	litter	4 kittens, 3 female, 1 male
Harold	Buffy	dog	litter	5 puppies, 2 female, 3 male
Harold	Buffy	dog	litter	3 puppies, 3 female

Query 6: List the owner who has the most number of female pets.

CREATE TABLE num_fpets AS (SELECT owner, COUNT(*) AS num FROM pet where sex = 'f' GROUP BY owner); SELECT owner FROM num_fpets WHERE num = (SELECT MAX(num) FROM num_fpets); DROP TABLE num_fpets;	
owner	Harold

Query 7: Use regular expression pattern matching to show name, owner, and birth date of the pets whose names start with 'F' and end with 'y' or 'r' in table pet.

SELECT name, owner, birth FROM pet WHERE name REGEXP '^F' AND name REGEXP '[ry]\$'; DROP TABLE max_female_pets;		
name	owner	birth
Fluffy	Harold	1993-02-04

Query 8: Query table pet to show sex and the number of pets in different sex categories as num.

SELECT sex, count(*) as num FROM pet GROUP BY sex;

sex	num
NULL	1
f	4
m	4

Query 9: Change the sex of pet named “Whistler” to “m”.

UPDATE pet SET sex = 'm' WHERE name = 'Whistler';

name	owner	species	sex	birth	death
Fluffy	Harold	cat	f	1993-02-04	NULL
Claws	Gwen	cat	m	1994-03-17	NULL
Buffy	Harold	dog	f	1989-05-13	NULL
Fang	Benny	dog	m	1990-08-27	NULL
Bowser	Diane	dog	m	1979-08-31	1995-07-29
Chirpy	Gwen	bird	f	1998-09-11	NULL
Whistler	Gwen	bird	m	1997-12-09	NULL
Slim	Benny	snake	m	1996-04-29	NULL
Puffball	Diane	hamster	f	1999-03-30	NULL

Query 10: Remove all dogs from table pet.

DELETE FROM pet WHERE species = 'dog';

name	owner	species	sex	birth	death
Fluffy	Harold	cat	f	1993-02-04	NULL
Claws	Gwen	cat	m	1994-03-17	NULL
Chirpy	Gwen	bird	f	1998-09-11	NULL
Whistler	Gwen	bird	m	1997-12-09	NULL
Slim	Benny	snake	m	1996-04-29	NULL
Puffball	Diane	hamster	f	1999-03-30	NULL