

5:

a)

```
select dept_name from departments;
```

dept_name
Customer Service
Development
Finance
Human Resources
Marketing
Production
Quality Management
Research
Sales

b)

```
select distinct title from titles;
```

title
Senior Engineer
Staff
Engineer
Senior Staff
Assistant Engineer
Technique Leader
Manager

c)

```
select max(salary) from salaries;
```

max(salary)
158220

```
select min(salary) from salaries;
```

min(salary)
38623

d)

```
select avg(salary) from salaries;
```

avg(salary)
63810.7448

e)

```
select * from employees where last_name='Facello';
```

f)

```
select count(emp_no) from employees where birth_date >='1950-01-01' and  
birth_date <='1959-12-31';
```

```
+-----+
| count(emp_no) |
+-----+
|      182886 |
+-----+
```

g)  
select gender, count(\*) from employees group by gender;

```
+-----+-----+
| gender | count(*) |
+-----+-----+
| M      | 179973   |
| F      | 120051   |
+-----+-----+
```

6:

```
create table owner (first_name varchar(255),last_name varchar(255), address
varchar(255), ownerID int primary key auto_increment);
alter table pet add column petID int primary key auto_increment;
alter table pet add column ownerID int;
alter table pet add constraint foreign key(ownerID) references owner(ownerID);
insert into owner values('Harold','Lloyd','Someaddress 1',NULL);
insert into owner values('Gwen','Stefani','Someaddress 2',NULL);
insert into owner values('Benny','Hill','Someaddress 3',NULL);
insert into owner values('Diane','Keaton','Someaddress 4',NULL);
insert into pet values('Slim','snake','m','1996-04-29',NULL,NULL,NULL);
update pet set ownerID=1 where name='Fluffy' or name='Buffy';
update pet set ownerID=2 where name='Claws' or name='Chirpy' or name='Whistler';
update pet set ownerID=3 where name='Fang' or name='Slim';
update pet set ownerID=4 where name='Bowser';
alter table pet drop column owner;
desc pet;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(20)   | YES  |     | NULL    |                |
| species | varchar(20)   | YES  |     | NULL    |                |
| sex    | char(1)       | YES  |     | NULL    |                |
| birth  | date          | YES  |     | NULL    |                |
| death  | date          | YES  |     | NULL    |                |
| petID  | int           | NO   | PRI | NULL    | auto_increment |
| ownerID | int           | YES  | MUL | NULL    |                |
+-----+-----+-----+-----+-----+-----+
```

desc owner;

```
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| first_name | varchar(255) | YES  |     | NULL    |                |
| last_name  | varchar(255) | YES  |     | NULL    |                |
| address    | varchar(255) | YES  |     | NULL    |                |
| ownerID    | int           | NO   | PRI | NULL    | auto_increment |
+-----+-----+-----+-----+-----+-----+
```

7:

a)

```
select first_name,last_name from employees order by last_name limit 10;
```

b)

```
select first_name,last_name from employees order by last_name, first_name limit 10;
```

c)

```
select * from employees order by hire_date desc limit 5;
```

d)

```
select first_name, last_name, salary from salaries join employees on salaries.emp_no=employees.emp_no order by salary desc limit 1;
```

```
+-----+-----+-----+
| first_name | last_name | salary |
+-----+-----+-----+
| Tokuyasu   | Pesch     | 158220 |
+-----+-----+-----+
```

e)

```
select first_name, last_name, salary from salaries join employees on salaries.emp_no=employees.emp_no order by salary limit 1;
```

```
+-----+-----+-----+
| first_name | last_name | salary |
+-----+-----+-----+
| Olivera    | Baek      | 38623  |
+-----+-----+-----+
```

f)

```
select first_name, last_name, salary from salaries join employees on salaries.emp_no=employees.emp_no where salary>150000 and to_date='9999-01-01';
```

g)

```
select count(*) from employees join dept_emp on employees.emp_no=dept_emp.emp_no join departments on dept_emp.dept_no=departments.dept_no where dept_name='Sales';
```

```
+-----+
| count(*) |
+-----+
|    52245 |
+-----+
```

```
select count(*) from employees join dept_emp on employees.emp_no=dept_emp.emp_no join departments on dept_emp.dept_no=departments.dept_no where dept_name='Marketing';
```

```
+-----+
| count(*) |
+-----+
|    20211 |
+-----+
```

h)

```
select first_name, last_name, dept_name from employees join dept_manager on employees.emp_no=dept_manager.emp_no join departments on departments.dept_no=dept_manager.dept_no where to_date='9999-01-01';
```

i)

```
select avg(salary) from salaries join current_dept_emp on salaries.emp_no=current_dept_emp.emp_no join departments on current_dept_emp.dept_no=departments.dept_no where dept_name='Sales';
```

```
+-----+
| avg(salary) |
```

```
+-----+
| 80660.5488 |
+-----+
```

```
select avg(salary) from salaries join current_dept_emp on
salaries.emp_no=current_dept_emp.emp_no join departments on
current_dept_emp.dept_no=departments.dept_no where dept_name='Marketing';
```

```
+-----+
| avg(salary) |
+-----+
| 71951.9561 |
+-----+
```

8:

a)

```
select * from language order by name;
```

b)

```
select title from film join film_actor on film.film_id=film_actor.film_id join
actor on film_actor.actor_id=actor.actor_id where last_name='Temple';
```

c)

```
select first_name,last_name from film join film_actor on
film.film_id=film_actor.film_id join actor on film_actor.actor_id=actor.actor_id
where title='Ghost Groundhog';
```

d)

```
select count(title) from film join film_category on
film.film_id=film_category.film_id join category on
film_category.category_id=category.category_id where name='Horror';
```

```
+-----+
| count(title) |
+-----+
|          56 |
+-----+
```

e)

```
select title from film join film_category on film.film_id=film_category.film_id
join category on film_category.category_id=category.category_id where
name='Horror';
```