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Database Technologies Lab Exam

#Q.1

select department\_name, concat(first\_name, ' ', last\_name) name, hire\_date, salary

from departments d join employees e

on (d.manager\_id = e.employee\_id)

where (sysdate()-hire\_date)/365 > 15;

#Q.2

select manager\_id, min(salary) salary

from employees

where manager\_id is not null

and salary > 6000

group by manager\_id

order by min(salary) desc;

#Q.3

#1.

select e.employee\_id, concat(e.first\_name, ' ', e.last\_name) name, salary

from employees e

where department\_id in (select department\_id from departments

where location\_id in (select location\_id from locations where city = 'London'));

#2.

select last\_name from employees where first\_name like 's%';

#3.

select \* from employees where date\_format(hire\_date, 'month')='October'

and date\_format(hire\_date,'day')='Monday';

#4.

select upper(concat(first\_name, ' ', last\_name)) name, upper(l.city) city from employees e

join departments d

on d.department\_id = e.department\_id

join locations l

on d.location\_id = l.location\_id;

#5.

select d.department\_name, e.salary from departments d

join (select department\_id, max(salary) salary from employees group by department\_id) e

on e.department\_id = d.department\_id;

#Q.4

create table emp\_intermediate like employees;

insert into emp\_intermediate

select \* from employees

group by employee\_id;

drop table employees;

alter table emp\_intermediate rename to employees;

#Q.5

create index month\_values on employees(hire\_date);

#Q.6

create view view\_employees as

select employee\_id, first\_name, last\_name, salary

from employees;

select \* from view\_employees;

update employees set salary = 2000 where employee\_id = 105;

delete from employees where employee\_id = 106;

update employees set department\_id = 100 where employee\_id = 108;

#Q7

select j.job\_title, d.department\_name, concat(e.first\_name, ' ', e.last\_name) full\_name, jh.start\_date

from employees e

inner join job\_history jh

on e.employee\_id = jh.employee\_id

and jh.start\_date between '1993-01-01' and '1997-08-31'

inner join jobs j

on jh.job\_id = j.job\_id

inner join departments d

on jh.department\_id = d.department\_id;

#Q.8

select concat(e.first\_name, ' ', e.last\_name) full\_name,

j.job\_title, jh.\*

from employees e

inner join (select max(start\_date) starting\_date,

max(end\_date) ending\_date, employee\_id from job\_history group by employee\_id) jh

on e.employee\_id = jh.employee\_id

inner join jobs j

on e.job\_id = j.job\_id

where e.commission\_pct = 0;

#Q.9

select e1.first\_name as "emp\_name", e2.first\_name as "mgr\_name"

from employees e1

left join employees e2

on e1.manager\_id = e2.employee\_id;

#Q.10

select e.first\_name, e.last\_name, d.department\_name, l.city, l.state\_province

from employees e

inner join departments d

on e.department\_id = d.department\_id

inner join locations l

on d.location\_id = l.location\_id

where e.first\_name like '%z%';

#Q.11

select concat(e.first\_name, ' ', e.last\_name) full\_name, d.department\_id, d.department\_name

from departments d

left join employees e

on d.department\_id = e.department\_id;

#Q.12

select e1.first\_name, e1.last\_name, e1.salary

from employees e1

inner join employees e2

on e1.salary < e2.salary

and e2.employee\_id = 182;

#Q.13

select e1.first\_name as "emp\_name", e2.first\_name as "mgr\_name"

from employees e1

inner join employees e2

on e1.manager\_id = e2.employee\_id;

**MongoDB Questions**

1. db.employees.find().sort({age: 1});
2. db.employees.find({gender: "Male"});
3. db.employees.find({age: {$eq:57}});
4. db.employees.find({ $or: [{commission\_pct: {$eq: 0}},{salary: {$gt: 12000}}] }).sort({department\_id: 1, salary: -1});
5. db.employees.updateOne({first\_name: "Steve", last\_name: "Rogers"}, {$set: {employee\_id: 210}}, {upsert: true});