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Programme	:	**B.Tech - CSE**	Semester	:	**Winter 18 - 19**
Course	:	**Database Management Systems (Embedded Lab)**	Code	:	**CSE2004**
Faculty	:	**Prof. A. Vijayalakshmi** **Prof. M. Premalatha**	Slot	:	**L3 + L4**

Ex. No: 7
25-02-19

SQL – Revision

Virtual Lab

An employee is identified by employee number and has attributes employee name, salary, date of joining, who works at the department identified by department number and has attribute department name. Consider the scenario and create table for each relations and associations with key constraints

SQL> create table emp(empid varchar(10),empname char(20),salary number(10,2),doj date,constraint pk_emp primary key(empid));

Table created.

SQL> create table dept(dept_id varchar(10),dept_name varchar(20),constraint pk_dept primary key(dept_id));

Table created.

SQL> create table emp_dept(dept_id varchar(10),empid varchar(10),constraint fk_emp foreign key(empid) references emp,constraint fk_dept foreign key(dept_id) references dept);

Table created.

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Write SQL queries for the following

1. **Add an attribute designation to employee relation and insert values for the attribute for all the records.**

```
SQL> alter table emp add designation varchar(15);
SQL> insert into emp values('&empid','&empname','&salary','&doj','&designation');
Enter value for empid: 101
Enter value for empname: Rick
Enter value for salary: 150000
Enter value for doj: 12-june-2015
Enter value for designation: Manager
old 1: insert into emp values('&empid','&empname','&salary','&doj','&designation')
new 1: insert into emp values('101','Rick','150000','12-june-2015','Manager')
1 row created.

SQL> /
Enter value for empid: 102
Enter value for empname: Mick
Enter value for salary: 250000
Enter value for doj: 01-may-2012
Enter value for designation: Researcher
old 1: insert into emp values('&empid','&empname','&salary','&doj','&designation')
new 1: insert into emp values('102','Mick','250000','01-may-2012','Researcher')

1 row created.

SQL> /
Enter value for empid: 103
Enter value for empname: Sam
Enter value for salary: 1500000
Enter value for doj: 16-september-2016
Enter value for designation: General Manager
old 1: insert into emp values('&empid','&empname','&salary','&doj','&designation')
new 1: insert into emp values('103','Sam','1500000','16-september-2016','General Manager')
```

```
1 row created.

SQL> /
Enter value for empid: 104
Enter value for empname: Rosa
Enter value for salary: 650000
Enter value for doj: 03-december-2013
Enter value for designation: Associate
old 1: insert into emp values('&empid','&empname','&salary','&doj','&designation')
new 1: insert into emp values('104','Rosa','650000','03-december-2013','Associate')
1 row created.

SQL> /
Enter value for empid: 105
Enter value for empname: Jake
Enter value for salary: 450000
Enter value for doj: 05-March-2014
Enter value for designation: Associate
old 1: insert into emp values('&empid','&empname','&salary','&doj','&designation')
new 1: insert into emp values('105','Jake','450000','05-March-2014','Associate')

1 row created.

SQL> /
Enter value for empid: 106
Enter value for empname: Terry
Enter value for salary: 340000
Enter value for doj: 30-January-2017
Enter value for designation: HOD
old 1: insert into emp values('&empid','&empname','&salary','&doj','&designation')
new 1: insert into emp values('106','Terry','340000','30-January-2017','HOD')

1 row created.

SQL> insert into dept values('&dept_id','&dept_name');
Enter value for dept_id: D01
```

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```
Enter value for dept_name: cse
old   1: insert into dept values('&dept_id','&dept_name')
new   1: insert into dept values('D01','cse')

1 row created.

SQL> /
Enter value for dept_id: D02
Enter value for dept_name: ece
old   1: insert into dept values('&dept_id','&dept_name')
new   1: insert into dept values('D02','ece')

1 row created.

SQL> /
Enter value for dept_id: D03
Enter value for dept_name: eee
old   1: insert into dept values('&dept_id','&dept_name')
new   1: insert into dept values('D03','eee')

1 row created.

SQL> /
Enter value for dept_id: D04
Enter value for dept_name: mech
old   1: insert into dept values('&dept_id','&dept_name')
new   1: insert into dept values('D04','mech')

1 row created.

SQL> /
Enter value for dept_id: D05
Enter value for dept_name: civil
old   1: insert into dept values('&dept_id','&dept_name')
new   1: insert into dept values('D05','civil')

1 row created.

SQL> insert into emp_dept values('&dept_id','&emp_id');
Enter value for dept_id: D01
```

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```
Enter value for emp_id: 102
old   1: insert into emp_dept values('&dept_id','&emp_id')
new   1: insert into emp_dept values('D01','102')

1 row created.

SQL> /
Enter value for dept_id: D02
Enter value for emp_id: 101
old   1: insert into emp_dept values('&dept_id','&emp_id')
new   1: insert into emp_dept values('D02','101')

1 row created.

SQL> /
Enter value for dept_id: D01
Enter value for emp_id: 103
old   1: insert into emp_dept values('&dept_id','&emp_id')
new   1: insert into emp_dept values('D01','103')

1 row created.

SQL> /
Enter value for dept_id: D04
Enter value for emp_id: 104
old   1: insert into emp_dept values('&dept_id','&emp_id')
new   1: insert into emp_dept values('D04','104')

1 row created.

SQL> /
Enter value for dept_id: D05
Enter value for emp_id: 106
old   1: insert into emp_dept values('&dept_id','&emp_id')
new   1: insert into emp_dept values('D05','106')

1 row created.

SQL> /
Enter value for dept_id: D03
```

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```
Enter value for emp_id: 105
old   1: insert into emp_dept values('&dept_id','&emp_id')
new   1: insert into emp_dept values('D03','105')

1 row created.

SQL> select * from emp;

EMPID     EMPNAME              SALARY DOJ      DESIGNATION
---------- -------------------- ---------- --------- ---------------
101       Rick                 150000 12-JUN-15 Manager
102       Mick                  250000 01-MAY-12 Researcher
103       Sam                  1500000 16-SEP-16 General Manager
104       Rosa                  650000 03-DEC-13 Associate
105       Jake                 450000 05-MAR-14 Associate
106       Terry                 340000 30-JAN-17 HOD

6 rows selected.

SQL> select * from dept;

DEPT_ID    DEPT_NAME
---------- --------------------
D01        cse
D02        ece
D03        eee
D04        mech
D05        civil

SQL> select * from emp_dept;

DEPT_ID    EMPID
---------- ----------
D01        102
D02        101
D01        103
D04        104
D05        106
D03        105
6 rows selected.
```

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2. **Add not null constraint for the employee name.**

SQL> alter table emp modify empname not null;

Table altered.

3. **Add a constraint to salary such that it should be always >0.**

SQL> alter table emp add check (salary>0);

Table altered.

4. **Find the First Name, Middle Name and Last name of the employee whose doj is during june 2015.**

SQL> select empname from emp where doj>= '01-june-2015' and doj<='30-june-2015';

EMPNAME

Rick

5. **Find the average salary which is >10000 for each department.**

SQL> select dept_id,avg(salary) from emp natural full outer join emp_dept having avg(salary)>10000 group by dept_id;

DEPT_ID	AVG(SALARY)
D03	450000
D02	150000
D05	340000
D01	875000
D04	650000

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6. **Select the employee number in descending order and their salary in descending order.**

SQL> select * from emp order by empid desc, salary desc;

EMPID	EMPNAME	SALARY	DOJ	DESIGNATION
106	Terry	340000	30-JAN-17	HOD
105	Jake	450000	05-MAR-14	Associate
104	Rosa	650000	03-DEC-13	Associate
103	Sam	1500000	16-SEP-16	General Manager
102	Mick	250000	01-MAY-12	Researcher
101	Rick	150000	12-JUN-15	Manager

6 rows selected.

7. **Find all the departments which has more than 5 employees.**

SQL> select dept_id from emp_dept having count(empid)>5;

8. **Find the name of the employees who do not work in 'mech' department.**

select empname from emp where empid not in (select dept_id from emp_dept where dept_id='D06');

EMPNAME
Rick
Jake
Sam
Rosa
Mick
Terry

6 rows selected.

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9. **List the name of the employees who joined after 2012.**

SQL> select empname from emp where doj>= '01-january-2012';

EMPNAME

Rick
Mick
Sam
Rosa
Jake
Terry

6 rows selected.

10. **Increase the salary by 10000 for the employees who work in cse department with update operation.**

SQL> select emp set salary=salary+10000 where empid in(select dept_name from dept where dept_name='cse');