

## LAB ASSIGNMENT 5

### (Constraints in SQL)

**QUES1: Create table dept which has the following attributes (department table) (deptno, dept\_name) where deptno is primary key, dept\_name in (Acc, comp, elect)**

**ANS:** create table dept(  
deptno number(4) primary key,  
deptname char(10) check(deptname in('acc','comp','elect')) );

**QUES2: Create table emp which has the following attributes (employee table) (empno, emp\_name, job, sal, deptno, mgr\_no) where empno is primary key, emp\_name is unique, job in (Prof, AP, and Lect), sal is NOT NULL, deptno is foreign key, mgr\_no is a self-referential foreign key.**

**ANS:** create table emp(  
empno number(3) primary key,  
empname varchar(10) unique,  
job varchar(7) check(job in('prof','ap','lect')),  
salary number(5) not null,  
deptno number(4),  
mgrno number(4),  
foreign key (deptno) references dept(deptno),  
foreign key (mgrno) references emp(empno) );

**QUES3: Create table S which has the following attributes (Salesperson table) (sno, sname, city) where sno is primary key**

**ANS:** create table S(  
sno number(4) primary key,  
sname varchar(10),  
city varchar(10) );

**QUES4: Create table P which has the following attributes (Part table) (pno, pname, color) where pno is primary key**

**ANS:** create table P(  
pno number(4) primary key,  
pname varchar(10),  
color varchar(10) );

**QUES5: Create table J which has the following attributes (ProJect table) (jno, jname, city) where jno is primary key**

**ANS:** create table J(

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jno number(4) primary key,  
jname varchar(10),  
city varchar(10));
```

**QUES6: Create table SPJ which has the following attributes (sno, pno, jno, qty) where combination of (sno, pno, jno) is a composite primary key. Also, sno, pno, jno are foreign keys.**

**ANS:** CREATE TABLE SJP (

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sno NUMBER(4),  
pno NUMBER(4),  
jno NUMBER(4),  
qty NUMBER(4),  
CONSTRAINT pk_SJP PRIMARY KEY (sno, pno, jno),  
CONSTRAINT fk_sno FOREIGN KEY (sno) REFERENCES S(sno),  
CONSTRAINT fk_pno FOREIGN KEY (pno) REFERENCES P(pno),  
CONSTRAINT fk_jno FOREIGN KEY (jno) REFERENCES J(jno) );
```

**QUES7: Insert at least 5 appropriate records in the above tables.**

**ANS:** insert into dept values (3,'elect');

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insert into dept values (1,'acc');
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insert into dept values (2,'comp');
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insert into dept values (4,'acc');
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```
insert into dept values (5,'comp');
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```
select * from dept;
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insert into emp values (11,'A','prof',9000,1,11);
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insert into emp values (12,'B','ap',8000,2,12);
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```
insert into emp values (13,'C','lect',7000,3,13);
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```
insert into emp values (14,'D','lect',6000,4,14);
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```
insert into emp values (15,'E','ap',5000,5,15);
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```
select * from emp;
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insert into S values (21,'q','patiala');
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insert into S values (22,'w','amritsar');
insert into S values (23,'e','chandigarh');
insert into S values (24,'r','mohali');
insert into S values (25,'t','lucknow');
select * from S;
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insert into J values (31,'m','jk');
insert into J values (32,'n','hr');
insert into J values (33,'l','pb');
insert into J values (34,'k','up');
insert into J values (35,'j','mp');
select * from J;
```

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insert into P values (41,'z','green');
insert into P values (42,'x','blue');
insert into P values (43,'c','red');
insert into P values (44,'v','black');
insert into P values (45,'b','white');
select * from P;
```

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insert into SJP values (21,31,41,51);
insert into SJP values (22,32,42,52);
insert into SJP values (23,33,43,53);
insert into SJP values (24,34,44,54);
insert into SJP values (25,35,45,55);
select * from SJP;
```

**QUES8: Drop the NOT NULL constraints from EMP table.**

**ANS:** ALTER TABLE emp MODIFY (salary NULL);

**QUES9: Check all the constraints name and their type of EMP table.**

**ANS:** SELECT constraint\_name AS constraint\_name, constraint\_type AS constraint\_type  
FROM user\_constraints WHERE table\_name = 'EMP';

**QUES10: Drop the unique constraint on EMP\_NAME of EMP table.**

**ANS:** alter table emp modify empname varchar(10);

**QUES11: Drop the Foreign Key constraint on DEPTNO**

**ANS:** ALTER TABLE EMP DROP CONSTRAINT DEPTNO\_FRN\_KEY

**QUES12: Add Foreign Key constraint on DEPTNO as a table label constraint.**

**ANS:** ALTER TABLE emp ADD CONSTRAINT fk\_deptno FOREIGN KEY (deptno)  
REFERENCES dept(deptno);

**QUES13: Drop the Check constraint from DEPT table.**

**ANS:** ALTER TABLE dept DROP CONSTRAINT chk\_dept\_name;

**QUES14: Add COMM column in EMP table (default value 0).**

**ANS:** ALTER TABLE EMP  
ADD COMM NUMBER DEFAULT 0;

**QUES15: Drop Default constraint from EMP.**

**ANS:** ALTER TABLE EMP  
MODIFY COMM DEFAULT NULL;

**QUES16: Create duplicate copy of EMP table**

**ANS:** CREATE TABLE EMP\_COPY AS  
SELECT \* FROM EMP;

**QUES17: Copy the structure of DEPT table to a new table with different column names.**

**ANS:** CREATE TABLE dept\_new (  
dept\_number INT PRIMARY KEY,  
dept\_label VARCHAR(20));

**QUES18: Copy the structure of DEPT table to a new table with different columns names without any records copied from DEPT.**

**ANS:** CREATE TABLE dept\_empty (LIKE dept);

**QUES19: Change the name and job of the employee whose EMPNO =100.**

**ANS:** UPDATE emp SET empname = 'Jack', job = 'prof' WHERE empno = 11;

**QUES20: Delete the record of employee who belong to computer department.**

**ANS:** DELETE FROM emp WHERE deptno = 5;

**QUES21: Delete deptno 101 from Dept table and set NULL to the corresponding deptno in EMP table.**

**ANS:** UPDATE EMP

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SET DEPTNO = NULL  
WHERE DEPTNO = 101;
```

**QUES22: Delete deptno 102 from Dept table and its corresponding record from EMP table.**

**ANS:** DELETE FROM DEPT

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WHERE DEPTNO = 101;  
  
DELETE FROM EMP  
WHERE DEPTNO = 102;
```

**QUES23: Delete the empno 111 who is the manager of the employee whose empno is 114.**

**ANS:** DELETE FROM emp WHERE empno = 111 AND EXISTS (SELECT 1 FROM emp e WHERE e.mgr\_no = 111);

**QUES24: Delete the record of 'Ravi' whose empno is 112 and set the mgr\_no to NULL for all the employees for whom Ravi is the manager.**

**ANS:** DELETE FROM emp WHERE empno = 112;

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UPDATE emp SET mgrno = NULL WHERE mgrno = 112;
```

**QUES25: Drop the duplicate table of EMP.**

**ANS:** DROP TABLE emp\_copy;