Database Systems Labsheet-3

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1. To creating tables with Foreign key

SQL>create table Faculty (fid number primary key, fname varchar(10), fsal number);

SQL>create table Book (bid number primary key, btitle varchar(10), fac number, foreign key(fac) references Faculty(fid));

Try the following

// Now try inserting some tuples,
Faculty table : <101, 'Raj', 60000> <103,'Gopal',87000>
Book: <10,'OS',107> // see what is the result-it is violation of FK constraint
<10,'OS' null> // see the effect-it is ok
//try to violate FK constraint,
//try to insert a tuple into book with null for fac.
// try to delete/update tuple for faculty 101, change fid to 109
After trying all the above, we drop both the tables
// now if you want to drop Faculty table, it is not allowed.
// First drop Book then drop Faculty.

2. Creating tables that have Foreign keys after creating tables

SQL>create table Faculty (fid number primary key, fname varchar(10), fsal number);

SQL>create table Book (bid number primary key, btitle varchar(10), fac number);

SQL> alter table book add constraint BOOK_FK foreign key(fac) references Faculty(fid);
Adding constraints later with names is a good practice.

This FK constraint on BOOK with name BOOK_FK is stored in the data dictionary.

Now, to drop that constraint BOOK_FK:
SQL>alter table book drop constraint book_fk;

3. To create tables that have circular

4. To create tables that have self-reference

5. Exercise:

A.Now students will Create the following Tables:
DEPT: dnum int(pk), dname vc(20),dloc vc(10)
EMP: eno int (pk), ename vc(15), job vc(10), mgr int(fk), hiredate date, sal int, comm int, deptno int(FK)
// mgr is FK indicating the manager managing the emp, and refer to eno of same table

B.Insert following Data into Dept table:

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INSERT INTO dept VALUES (10,'ACCOUNTING','NEW YORK');
INSERT INTO dept VALUES (20,'RESEARCH','DALLAS');
INSERT INTO dept VALUES (30,'SALES','CHICAGO');
INSERT INTO dept VALUES (40,'OPERATIONS','BOSTON');
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C.Insert following Data into Emp table:

```
INSERT INTO emp VALUES (7369,'SMITH','CLERK',7902,'17-DEC-80',800,NULL,20);
INSERT INTO emp VALUES (7499,'ALLEN','SALESMAN',7698,'20-FEB-81',1600,300,30);
INSERT INTO emp VALUES (7521,'WARD','SALESMAN',7698,'22-FEB-81',1250,500,30);
INSERT INTO emp VALUES (7566,'JONES','MANAGER',7839,'02-APR-81',2975,NULL,20);
INSERT INTO emp VALUES (7654,'MARTIN','SALESMAN',7698,'28-SEP-81',1250,1400,30);
INSERT INTO emp VALUES (7698,'BLAKE','MANAGER',7839,'01-MAY-81',2850,NULL,30);
INSERT INTO emp VALUES (7782,'CLARK','MANAGER',7839,'09-JUN-81',2450,NULL,10);
INSERT INTO emp VALUES (7788,'SCOTT','ANALYST',7566,'19-APR-87',3000,NULL,20);
INSERT INTO emp VALUES (7839,'KING','PRESIDENT',NULL,'17-NOV-81',5000,NULL,10);
INSERT INTO emp VALUES (7844,'TURNER','SALESMAN',7698,'08-SEP-81',1500,0,30);
INSERT INTO emp VALUES (7876,'ADAMS','CLERK',7788,'23-MAY-87',1100,NULL,20);
INSERT INTO emp VALUES (7900,'JAMES','CLERK',7698,'03-DEC-81',950,NULL,30);
INSERT INTO emp VALUES (7902,'FORD','ANALYST',7566,'03-DEC-81',3000,NULL,20);
INSERT INTO emp VALUES (7934,'MILLER','CLERK',7782,'23-JAN-82',1300,NULL,10);
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D. We write SQL queries for some data retrieval needs on the above tables.

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