

```
SQL> --
SQL> -- author: <<< Nadiminti Naga Venkata Krishna Nadiminti >>>
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SQL> ---author: <<< Amith Kumar Aellanki >>>
SQL> ---author: <<< Bishal Chamling >>>
SQL> -----
SQL> SET SERVEROUTPUT ON
SQL> SET VERIFY OFF
SQL>
SQL> SET FEEDBACK OFF
SQL> ---Drop Tables-----
SQL> DROP TRIGGER IC_SALARY;
SQL> DROP TRIGGER dIC_TA;
SQL> ---Drop Tables-----
SQL> Drop table PhysicianHistory CASCADE CONSTRAINTS;
SQL> Drop table Schedule CASCADE CONSTRAINTS;
SQL> Drop table Physician CASCADE CONSTRAINTS;
SQL> Drop table Nurse CASCADE CONSTRAINTS;
SQL> Drop table Dept_Hospital CASCADE CONSTRAINTS;
SQL> Drop table Emp_Hospital CASCADE CONSTRAINTS;
SQL> Drop table symptoms CASCADE CONSTRAINTS;
SQL> Drop table Prescription CASCADE CONSTRAINTS;
SQL> Drop table Visit CASCADE CONSTRAINTS;
SQL> Drop table Patient CASCADE CONSTRAINTS;
SQL> Drop table Medicine CASCADE CONSTRAINTS;
SQL>
SQL> ----Creating Tables-----
SQL>
SQL> Create Table Emp_Hospital(
  2 EmpID Integer,
  3 First_name varchar (20),
  4 Mid_Name varchar (20),
  5 Last_Name varchar (20),
  6 Address varchar(30),
  7 DepNO Integer,
  8 constraint pIC1 primary key (EmpID));
SQL>
SQL> Create table Dept_Hospital(
  2 DepID Integer,
  3 DepName varchar(20),
  4 MgrID Integer,
  5 MgrStartdate Date,
  6 constraint dIC1 primary key (DepID));
SQL>
SQL> Create table Physician(
  2 EmpID Integer,
  3 SuperId Integer,
  4 Salary Integer,
  5 constraint phyIC1 primary key (EmpID));
SQL>
SQL> Create Table Nurse(
  2 EmpId Integer,
  3 Degree varchar(20),
  4 Job_assigned varchar(20),
  5 Salary Integer,
  6 SuperID Integer,
  7 constraint nurIC1 primary key (EmpID));
SQL>
SQL> Create table Patient(
  2 PID integer,
  3 disease varchar(20),
  4 address varchar(30),
  5 pinCode integer,
  6 constraint patIC1 primary key (PID));
SQL>
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SQL> Create table Medicine(
  2  DrugId varchar(25),
  3  disease varchar(20),
  4  constraint medIC1 primary key(DrugId));
SQL>
SQL> Create table Schedule (
  2  EmpID integer,
  3  ScheduleId INTEGER,
  4  surgery varchar(20),
  5  startTime TIMESTAMP,
  6  endTime TIMESTAMP,
  7  constraint schIC1 primary key (EmpID,ScheduleId));
SQL>
SQL> Create table Visit(
  2  VisitId integer,
  3  pid integer,
  4  vDate date,
  5  DrugId varchar(25),
  6  EmpId integer,
  7  constraint tIC1 primary key (VisitId,pid,DrugId));
SQL>
SQL> create table symptoms(
  2  PId integer,
  3  patsymp varchar(100),
  4  constraint SympIC1 primary key(PId,patsymp));
SQL>
SQL>
SQL> create table Prescription(
  2  VisitId integer,
  3  DrugId varchar(25),
  4  pid integer,
  5  presdays integer,
  6  pillsperday integer,
  7  constraint PresIC1 primary key(DrugId,VisitId,pid));
SQL>
SQL>
SQL> create table PhysicianHistory(
  2  HDate date,
  3  EmpId integer,
  4  Specialization VARCHAR(50),
  5  Description VARCHAR(50),
  6  School VARCHAR(50),
  7  constraint PHIC1 primary key(HDate,EmpId));
SQL> -----Insert into Tables-----
SQL>
SQL> ----EMP_Hospital-----
SQL>
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(1,'Dave','A','john','642 Dallas Houston TX',1);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(2,'James','V','Wong','821 Stone Houston TX ',2);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(3,'Krishna','M','Narayan','555 Oak Houston TX',3);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(4,'Alex','S','Mond','898 Ferris Houston TX',4);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(5,'Joyce','K','Smith','222 leoarnd Houston TX',3);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(6,'John','P','Arnold','476 Plymoth Houston TX',1);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(7,'Megan','H','Sree','900 Fulton Houston TX',2);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(8,'Alisha','B','Mac','181 Castle Houston TX',1);
SQL> Insert into EMP_HOSPITAL (EMPID,FIRST_NAME,MID_NAME, LAST_NAME, ADDRESS, DEPNO) values
(9,'Jennifer','R','Anniston','242 Cascade Houston TX',2);
SQL>

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SQL> ----Dept_Hospital-----
SQL>
SQL> Insert into DEPT_HOSPITAL (DEPID,DEPNAME,MGRID,MGRSTARTDATE) values
(1,'Orthopedics',1,to_date('21-MAR-92','DD-MON-RR'));
SQL> Insert into DEPT_HOSPITAL (DEPID,DEPNAME,MGRID,MGRSTARTDATE) values
(2,'Cardiologist',2,to_date('03-JAN-87','DD-MON-RR'));
SQL> Insert into DEPT_HOSPITAL (DEPID,DEPNAME,MGRID,MGRSTARTDATE) values
(3,'Neurologist',3,to_date('29-JAN-89','DD-MON-RR'));
SQL> Insert into DEPT_HOSPITAL (DEPID,DEPNAME,MGRID,MGRSTARTDATE) values
(4,'Pathologist',4,to_date('11-JAN-91','DD-MON-RR'));
SQL>
SQL>
SQL> ---Medicine-----
SQL>
SQL> Insert into MEDICINE (DRUGID,DISEASE) values ('5003','Bone tumor');
SQL> Insert into MEDICINE (DRUGID,DISEASE) values ('7098','Inflammatory disease');
SQL> Insert into MEDICINE (DRUGID,DISEASE) values ('4789','Hemophelia');
SQL> Insert into MEDICINE (DRUGID,DISEASE) values ('2984','Alphasia');
SQL>
SQL> ----Nurse-----
SQL>
SQL> Insert into NURSE (EMPID,DEGREE,JOB_ASSIGNED,SALARY,SUPERID) values
(6,'LPN','Forensic',100000,null);
SQL> Insert into NURSE (EMPID,DEGREE,JOB_ASSIGNED,SALARY,SUPERID) values
(7,'BSN','Practitioner',50000,6);
SQL> Insert into NURSE (EMPID,DEGREE,JOB_ASSIGNED,SALARY,SUPERID) values
(8,'AND','Informatics',68000,6);
SQL> Insert into NURSE (EMPID,DEGREE,JOB_ASSIGNED,SALARY,SUPERID) values
(9,'RN','Surgical',82000,6);
SQL>
SQL> ----Patient-----
SQL>
SQL> Insert into PATIENT (PID,DISEASE,ADDRESS,PINCODE) values (1,'Inflammatory disease','678
east state TX',50038);
SQL> Insert into PATIENT (PID,DISEASE,ADDRESS,PINCODE) values (2,'Hypertensive disease','234
calvin street TX',49503);
SQL> Insert into PATIENT (PID,DISEASE,ADDRESS,PINCODE) values (3,'Hemophelia','445 briar lane
TX',49085);
SQL> Insert into PATIENT (PID,DISEASE,ADDRESS,PINCODE) values (4,'Alphasia','67 Devos street
TX',42174);
SQL> Insert into PATIENT (PID,DISEASE,ADDRESS,PINCODE) values (5,'Bone tumor','Fulton 2341
TX',59876);
SQL>
SQL> ---Physician-----
SQL>
SQL> Insert into PHYSICIAN (EMPID,SUPERID,SALARY) values (1,2,200000);
SQL> Insert into PHYSICIAN (EMPID,SUPERID,SALARY) values (2,null,270000);
SQL> Insert into PHYSICIAN (EMPID,SUPERID,SALARY) values (3,2,170000);
SQL> Insert into PHYSICIAN (EMPID,SUPERID,SALARY) values (4,2,168000);
SQL> Insert into PHYSICIAN (EMPID,SUPERID,SALARY) values (5,2,188000);
SQL>
SQL> ---Physician History---
SQL>
SQL> Insert into PHYSICIANHISTORY (HDATE,EMPID,SPECIALIZATION,DESCRIPTION,SCHOOL) values
(to_date('01-FEB-85','DD-MON-RR'),1,'House Surgeon','Abc','Gvsu');
SQL> Insert into PHYSICIANHISTORY (HDATE,EMPID,SPECIALIZATION,DESCRIPTION,SCHOOL) values
(to_date('12-APR-80','DD-MON-RR'),2,'House Surgeon','Abc','Fsu');
SQL> Insert into PHYSICIANHISTORY (HDATE,EMPID,SPECIALIZATION,DESCRIPTION,SCHOOL) values
(to_date('10-DEC-85','DD-MON-RR'),3,'House Surgeon','Abc','Msu');
SQL> Insert into PHYSICIANHISTORY (HDATE,EMPID,SPECIALIZATION,DESCRIPTION,SCHOOL) values
(to_date('30-OCT-70','DD-MON-RR'),4,'House Surgeon','Abc','Mit');
SQL> Insert into PHYSICIANHISTORY (HDATE,EMPID,SPECIALIZATION,DESCRIPTION,SCHOOL) values
(to_date('15-FEB-75','DD-MON-RR'),5,'House Surgeon','Abc','Hpsu');
SQL>
SQL> ---Symptoms-----
SQL>

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SQL> Insert into SYMPTOMS (PID,PATSYMP) values (1,'fatigue-shortness of breath-rapid
heartbeat-chest pain');
SQL> Insert into SYMPTOMS (PID,PATSYMP) values (2,'chest pain-pain in neck and arms-loss of
appetite-foot swelling');
SQL> Insert into SYMPTOMS (PID,PATSYMP) values (3,'pain in joints-blood in stool-blood in
urine-internal bleeding');
SQL> Insert into SYMPTOMS (PID,PATSYMP) values (4,'difficulty speaking-loss of ability to
write');
SQL> Insert into SYMPTOMS (PID,PATSYMP) values (5,'pain in joints-feeling tired');
SQL>
SQL> ---Schedule-----
SQL>
SQL> INSERT INTO SCHEDULE (EMPID, SCHEDULEID, SURGERY, STARTTIME, ENDTIME) VALUES
(1.0,1.0,'Laproscopy',to_timestamp('2015-01-11 10:10:10', 'YYYY-MM-DD
HH24:MI:SS.FF'),to_timestamp('2015-01-11 12:12:12', 'YYYY-MM-DD HH24:MI:SS.FF'));
SQL> INSERT INTO SCHEDULE (EMPID, SCHEDULEID, SURGERY, STARTTIME, ENDTIME) VALUES
(1.0,2.0,'ChemoTherapy',to_timestamp('2015-01-11 15:15:15', 'YYYY-MM-DD
HH24:MI:SS.FF'),to_timestamp('2015-01-11 17:17:17', 'YYYY-MM-DD HH24:MI:SS.FF'));
SQL> INSERT INTO SCHEDULE (EMPID, SCHEDULEID, SURGERY, STARTTIME, ENDTIME) VALUES
(1.0,3.0,'RadioTherapy',to_timestamp('2015-06-26 12:10:10', 'YYYY-MM-DD
HH24:MI:SS.FF'),to_timestamp('2015-06-26 13:12:12', 'YYYY-MM-DD HH24:MI:SS.FF'));
SQL> INSERT INTO SCHEDULE (EMPID, SCHEDULEID, SURGERY, STARTTIME, ENDTIME) VALUES
(2.0,1.0,'NeuroSurgery',to_timestamp('2015-09-15 10:10:10', 'YYYY-MM-DD
HH24:MI:SS.FF'),to_timestamp('2015-09-15 12:12:12', 'YYYY-MM-DD HH24:MI:SS.FF'));
SQL> INSERT INTO SCHEDULE (EMPID, SCHEDULEID, SURGERY, STARTTIME, ENDTIME) VALUES
(3.0,1.0,'Circumcision',to_timestamp('2015-09-15 10:10:10', 'YYYY-MM-DD
HH24:MI:SS.FF'),to_timestamp('2015-09-15 12:12:12', 'YYYY-MM-DD HH24:MI:SS.FF'));
SQL> INSERT INTO SCHEDULE (EMPID, SCHEDULEID, SURGERY, STARTTIME, ENDTIME) VALUES
(4.0,1.0,'Vasectomy',to_timestamp('2015-12-01 00:10:10', 'YYYY-MM-DD
HH24:MI:SS.FF'),to_timestamp('2015-12-01 02:12:12', 'YYYY-MM-DD HH24:MI:SS.FF'));
SQL>
SQL> ---Prescription-----
SQL>
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (1,'5003',1,14,2);
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (2,'7098',1,30,3);
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (3,'2984',2,30,2);
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (4,'5003',3,2,3);
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (5,'4789',4,10,1);
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (6,'4789',4,15,1);
SQL> Insert into PRESCRIPTION (VISITID,DRUGID,PID,PRESDBAYS,PILLSPERDAY) values (7,'7098',5,25,2);
SQL>
SQL> -----Visit-----
SQL>
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(1,1,to_date('01-FEB-15', 'DD-MON-RR'),'5003',1);
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(2,1,to_date('01-MAR-15', 'DD-MON-RR'),'7098',1);
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(3,2,to_date('01-APR-15', 'DD-MON-RR'),'2984',2);
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(4,3,to_date('01-APR-15', 'DD-MON-RR'),'5003',3);
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(5,4,to_date('01-JUL-15', 'DD-MON-RR'),'4789',2);
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(6,4,to_date('01-AUG-15', 'DD-MON-RR'),'4789',3);
SQL> Insert into VISIT (VISITID,PID,VDATE,DRUGID,EMPID) values
(7,5,to_date('01-DEC-15', 'DD-MON-RR'),'7098',5);
SQL>
SQL> -----Altering Tables-----
SQL> -----Emp_Hospital-----
SQL> ALTER TABLE Emp_Hospital
2 ADD FOREIGN KEY (DepNO)
3 REFERENCES Dept_Hospital(DepID)
4 Deferrable initially deferred;
SQL>
SQL>

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```
SQL> ----Physician-----
SQL>
SQL> ALTER TABLE Physician
  2 ADD FOREIGN KEY (EmpID)
  3 REFERENCES Physician(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> ALTER TABLE Physician
  2 ADD FOREIGN KEY (EmpID)
  3 REFERENCES Emp_Hospital(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> ----Nurse-----
SQL>
SQL> ALTER TABLE Nurse
  2 ADD FOREIGN KEY (EmpID)
  3 REFERENCES Nurse(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> ALTER TABLE Nurse
  2 ADD FOREIGN KEY (EmpID)
  3 REFERENCES Emp_Hospital(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL>
SQL> ----Dept_Hospital-----
SQL>
SQL> ALTER TABLE Dept_Hospital
  2 ADD FOREIGN KEY (MgrID)
  3 REFERENCES Emp_Hospital(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> ----Schedule-----
SQL>
SQL> ALTER TABLE Schedule
  2 ADD FOREIGN KEY (EmpID)
  3 REFERENCES Physician(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> ----Visit-----
SQL>
SQL> ALTER TABLE Visit
  2 ADD FOREIGN KEY (EmpID)
  3 REFERENCES Physician(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> ALTER TABLE Visit
  2 ADD FOREIGN KEY (pid)
  3 REFERENCES Patient(PID)
  4 Deferrable initially deferred;
SQL>
SQL> ALTER TABLE Visit
  2 ADD FOREIGN KEY (DrugId)
  3 REFERENCES Medicine(DrugId)
  4 Deferrable initially deferred;
SQL>
SQL>
SQL> -----symptoms-----
SQL>
SQL> ALTER TABLE symptoms
  2 ADD FOREIGN KEY (Pid)
  3 REFERENCES Patient(PID)
  4 Deferrable initially deferred;
SQL>
SQL> -----Prescription----
SQL>
```

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SQL> ALTER TABLE Prescription
  2 ADD FOREIGN KEY (DrugId)
  3 REFERENCES Medicine(DrugId)
  4 Deferrable initially deferred;
SQL>
SQL> ALTER TABLE Prescription
  2 ADD FOREIGN KEY (DrugId,VisitId,pid)
  3 REFERENCES Visit(DrugId,VisitId,pid)
  4 Deferrable initially deferred;
SQL>
SQL> ----PhysicianHistory---
SQL> ALTER TABLE PhysicianHistory
  2 ADD FOREIGN KEY (EmpId)
  3 REFERENCES Physician(EmpID)
  4 Deferrable initially deferred;
SQL>
SQL> -----Check Constraint-----
SQL> -----Check if Patients' Pincode contains 5 digits(1-attribute)-----
SQL> alter table patient
  2 add constraint patIC2
  3 CHECK (length(PINCODE)=5);
SQL>
SQL> -----Check if JobAssigned= 'Forensic' salary should be greater than 100000 for nurse ----
SQL> alter table Nurse
  2 add constraint nurIC2
  3 Check (NOT (Job_Assigned = 'Forensic' AND ( salary <100000)));
SQL>
SQL> ---IC_SALARY--- UPON UPDATING THE SALARY OF A NURSE, VERIFY IF THE SUPERVISEE SALARY IS
LESS THAN SUPERVISOR---
SQL>
SQL> CREATE OR REPLACE TRIGGER IC_SALARY
  2 BEFORE
  3 INSERT OR UPDATE ON NURSE
  4 FOR EACH ROW
  5 DECLARE
  6             PRAGMA AUTONOMOUS_TRANSACTION;
  7             superSalary NURSE.SALARY%TYPE;
  8 BEGIN
  9     IF :NEW.SUPERID IS NOT NULL THEN
10         SELECT salary INTO superSalary
11         FROM NURSE
12         WHERE EMPID = :NEW.SUPERID;
13
14         IF :NEW.salary >= superSalary
15         THEN
16             RAISE_APPLICATION_ERROR (-20001,'+++++ UPDATE OR INSERT REJECTED '|| '
Supervisee salary is not greater than Supervisor Salary');
17             ROLLBACK;
18         END IF;
19     END IF;
20 END;
21 /
SQL>
SQL> -----dIC_TA-Check whether the inserted or updated drug in the visit table is presented
in Medicine Table-----
SQL>
SQL> CREATE OR REPLACE TRIGGER dIC_TA
  2 BEFORE INSERT OR UPDATE OF DRUGID ON visit
  3 FOR EACH ROW
  4 DECLARE
  5     drugNum INTEGER;
  6 BEGIN
  7     SELECT COUNT(*)
  8     INTO drugNum
  9     FROM MEDICINE M WHERE M.DRUGID = :NEW.DRUGID;
10

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11  IF drugNum < 1
12  THEN
13  RAISE_APPLICATION_ERROR(-20001, '+++++INSERT or UPDATE rejected. '||
14  'The Specified Drug '||:NEW.DRUGID|| ' is not present in the Medicine Repository');
15  END IF;
16  END;
17  /

```

SQL> -----

SQL> commit;

SQL> SET FEEDBACK ON

SQL>

SQL> ----Printing the Tables----

SQL> select * from EMP_HOSPITAL;

EMPID	FIRST_NAME	MID_NAME	LAST_NAME
1	Dave	A	john
642	Dallas Houston TX	1	
2	James	V	Wong
821	Stone Houston TX	2	
3	Krishna	M	Narayan
555	Oak Houston TX	3	

EMPID	FIRST_NAME	MID_NAME	LAST_NAME
4	Alex	S	Mond
898	Ferris Houston TX	4	
5	Joyce	K	Smith
222	leoarnd Houston TX	3	
6	John	P	Arnold
476	Plymoth Houston TX	1	

EMPID	FIRST_NAME	MID_NAME	LAST_NAME
7	Megan	H	Sree
900	Fulton Houston TX	2	
8	Alisha	B	Mac
181	Castle Houston TX	1	
9	Jennifer	R	Anniston
242	Cascade Houston TX	2	

9 rows selected.

SQL> select * from DEPT_HOSPITAL;

DEPID	DEPNAME	MGRID	MGRSTARTD
1	Orthopedics	1	21-MAR-92
2	Cardiologist	2	03-JAN-87
3	Neurologist	3	29-JAN-89
4	Pathologist	4	11-JAN-91

4 rows selected.

SQL> select * from PHYSICIAN;

EMPID	SUPERID	SALARY
1	2	200000
2		270000
3	2	170000
4	2	168000
5	2	188000

5 rows selected.

SQL> select * from NURSE;

EMPID	DEGREE	JOB_ASSIGNED	SALARY	SUPERID
6	LPN	Forensic	100000	
7	BSN	Practitioner	50000	6
8	AND	Informatics	68000	6
9	RN	Surgical	82000	6

4 rows selected.

SQL> select * from PATIENT;

PID	DISEASE	ADDRESS	PINCODE
1	Inflammatory disease	678 east state TX	50038
2	Hypertensive disease	234 calvin street TX	49503
3	Hemophelia	445 briar lane TX	49085
4	Alphasia	67 Devos street TX	42174
5	Bone tumor	Fulton 2341 TX	59876

5 rows selected.

SQL> select * from MEDICINE;

DRUGID	DISEASE
5003	Bone tumor
7098	Inflammatory disease
4789	Hemophelia
2984	Alphasia

4 rows selected.

SQL> select * from SCHEDULE;

EMPID	SCHEDULEID	SURGERY
1	1	Laproscopy
11-JAN-15	10.10.10.000000	AM
11-JAN-15	12.12.12.000000	PM
1	2	ChemoTherapy
11-JAN-15	03.15.15.000000	PM
11-JAN-15	05.17.17.000000	PM

EMPID SCHEDULEID SURGERY

 STARTTIME

 ENDTIME

1 3 RadioTherapy
 26-JUN-15 12.10.10.000000 PM
 26-JUN-15 01.12.12.000000 PM

2 1 NeuroSurgery
 15-SEP-15 10.10.10.000000 AM

EMPID SCHEDULEID SURGERY

STARTTIME

 ENDTIME

15-SEP-15 12.12.12.000000 PM

3 1 Circumcision
 15-SEP-15 10.10.10.000000 AM
 15-SEP-15 12.12.12.000000 PM

4 1 Vasectomy

EMPID SCHEDULEID SURGERY

STARTTIME

 ENDTIME

01-DEC-15 12.10.10.000000 AM
 01-DEC-15 02.12.12.000000 AM

6 rows selected.

SQL> select * from VISIT;

VISITID	PID	VDATE	DRUGID	EMPID
1	1	01-FEB-15	5003	1
2	1	01-MAR-15	7098	1
3	2	01-APR-15	2984	2
4	3	01-APR-15	5003	3
5	4	01-JUL-15	4789	2
6	4	01-AUG-15	4789	3
7	5	01-DEC-15	7098	5

7 rows selected.

SQL> select * from SYMPTOMS;

PID

PATSYMP

1
 fatigue-shortness of breath-rapid heartbeat-chest pain

2
 chest pain-pain in neck and arms-loss of appetite-foot swelling

3

pain in joints-blood in stool-blood in urine-internal bleeding

PID

PATSYMP

4

difficulty speaking-loss of ability to write

5

pain in joints-feeling tired

5 rows selected.

SQL> select * from PRESCRIPTION;

VISITID	DRUGID	PID	PRESHOURS	PILLSPERDAY
1	5003	1	14	2
2	7098	1	30	3
3	2984	2	30	2
4	5003	3	2	3
5	4789	4	10	1
6	4789	4	15	1
7	7098	5	25	2

7 rows selected.

SQL> select * from PHYSICIANHISTORY;

HDATE EMPID SPECIALIZATION

DESCRIPTION

SCHOOL

01-FEB-85 1 House Surgeon
 Abc
 Gvsu

12-APR-80 2 House Surgeon
 Abc
 Fsu

HDATE EMPID SPECIALIZATION

DESCRIPTION

SCHOOL

10-DEC-85 3 House Surgeon
 Abc
 Msu

30-OCT-70 4 House Surgeon
 Abc

HDATE EMPID SPECIALIZATION

DESCRIPTION

SCHOOL

Mit

15-FEB-75 5 House Surgeon
 Abc
 Hpsu

5 rows selected.

SQL>

SQL> ----<Sql Queries>-----

SQL>

SQL> ---Q1 (Joining Four Tables)-----

SQL> ----Find the employee id, full name who are physician and have given prescription for the
 disease 'Hemophelia'.-----

SQL>

SQL> Select h.empid, h.First_name, h.Mid_name, h.Last_name from
 2 emp_hospital h, physician p, visit v, medicine m
 3 where h.empid= p.empid and
 4 p.empid = v.empid and
 5 v.drugid = m.drugid and
 6 m.disease ='Hemophelia';

EMPID	FIRST_NAME	MID_NAME	LAST_NAME
2	James	V	Wong
3	Krishna	M	Narayan

2 rows selected.

SQL>

SQL> ---Q2 (Self Join)----

SQL>

SQL> ----Find pairs of Employee Ids where first physician (in the pairs) has salary greater than
 SQL> ----170000 and his salary must be greater than second physician in the pairs(Self Join).

SQL>

SQL> SELECT P1.SALARY, P2.SALARY
 2 FROM PHYSICIAN P1, PHYSICIAN P2
 3 WHERE P1.SALARY >170000 AND
 4 P1.SALARY > P2.SALARY;

SALARY	SALARY
200000	170000
200000	168000
200000	188000
270000	200000
270000	170000
270000	168000
270000	188000
188000	170000
188000	168000

9 rows selected.

SQL>

SQL> ---Q3 SUM,AVG OR MAX----

SQL> ----Find the Average, sum and maximum salary of the physician(SUM,AVG And MAX Query)-----
 SQL>

SQL> Select MAX(salary) as MAXsalary, AVG(salary) as AVGSalary, SUM(SALARY) as SUMSalary
 2 from Physician;

MAXSALARY	AVGSALARY	SUMSALARY
270000	199200	996000

1 row selected.

SQL>

SQL> -- Q4 Group by, having and Order BY---

SQL>

SQL> ---Select the Patients id and the number of visits that has visited more than one times and sort by

SQL> --patient id.

SQL>

SQL> Select P.Pid, count(*) from

2 Patient P, Visit V

3 where P.Pid= V.Pid

4 group by P.Pid

5 having count(*) > 1

6 order by P.Pid;

PID	COUNT(*)
1	2
4	2

2 rows selected.

SQL>

SQL> --Q5 Correlated subquery---

SQL> ---Select the Employee id, their first name, middle name and last name from hospital employee who are

SQL> ---physician and does not have schedule.

SQL> Select E.EmpId, E.First_name , E.Mid_Name, E.Last_Name from

2 Emp_Hospital E, Physician P

3 where E.EmpId = P.EmpID and

4 not exists (Select * from Schedule S where E.EmpId =S.EmpId);

EMPID	FIRST_NAME	MID_NAME	LAST_NAME
5	Joyce	K	Smith

1 row selected.

SQL>

SQL> --Q6 Non Correlated subquery----

SQL>

SQL> --Select the Employee id, their first name, middle name and last name from hospital employee who are

SQL> --physician and has not been visited by patient.

SQL> Select E.EmpId, E.First_name , E.Mid_Name, E.Last_Name from

2 Emp_Hospital E, Physician P

3 where E.EmpId = P.EmpID and

4 E.EmpId not in (Select V.EmpId from visit V);

EMPID	FIRST_NAME	MID_NAME	LAST_NAME
4	Alex	S	Mond

1 row selected.

SQL>

SQL> ---Q7 Outer Join---

SQL> ---To find all the medicine details with its prescription.

SQL>

SQL>

SQL> ---Q8 INTERSECT -----

SQL> select * from Medicine M FULL OUTER JOIN prescription P ON M DrugID = P DrugID;

DRUGID	DISEASE	VISITID
-----	-----	-----

DRUGID	PID	PRESHAYS	PILLSPERDAY
5003	Bone tumor		1
5003	1	14	2
7098	Inflammatory disease		2
7098	1	30	3
2984	Alphasia		3
2984	2	30	2

DRUGID	DISEASE	VISITID
5003	Bone tumor	4
5003	3	2
4789	Hemophelia	5
4789	4	10
4789	Hemophelia	6
4789	4	15

DRUGID	DISEASE	VISITID
7098	Inflammatory disease	7
7098	5	25

7 rows selected.

```
SQL>
SQL> ----To find all the drugs which have a dosage 3 pills per day.
SQL>
SQL> SELECT drugid
2 FROM medicine
3 INTERSECT
4 SELECT drugid
5 FROM prescription
6 where pillsperday = '3';
```

DRUGID
5003
7098

2 rows selected.

```
SQL>
SQL> -- Q9 Top -N Query ----
SQL> ----Find the top three list of salaries with their employee ID.-----
SQL>
SQL> SELECT EMPID, SALARY
2 FROM (SELECT * FROM PHYSICIAN ORDER BY SALARY DESC)
3 WHERE ROWNUM <3;
```

EMPID	SALARY
2	270000
1	200000

2 rows selected.

```
SQL>
SQL> ---Q10 Rank Query-----
SQL> ----Find the Rank of the salary 188000 from the database.-----
SQL>
SQL> SELECT RANK (188000) WITHIN GROUP
      2 (ORDER BY SALARY) "RANK OF SALARY 188000"
      3 FROM PHYSICIAN;
```

```
RANK OF SALARY 188000
-----
                        3
```

1 row selected.

```
SQL>
SQL> ---Q11 Hierarchical Query---
SQL> ---Find pairs of IDs such that the first ID in the pair is that of an Nurse while the
second ID in the pair is that of his /her supervisor.
SQL>
SQL> SELECT EmpID,SuperID
      2 FROM Nurse
      3 START WITH EmpID = 9
      4 CONNECT BY PRIOR SuperID = EmpID;
```

```
      EMPID      SUPERID
-----
          9          6
          6
```

2 rows selected.

```
SQL>
SQL> ---Q12 Division Query---
SQL> -- To find the every employee id of the physician who has suggested the patient for
dosage of more than 1 Pills per day.
SQL> -- Seems like scenarios for the division query has not been fitting the designed
relational schema..
SQL>
SQL> SELECT P.EMPID
      2 FROM PHYSICIAN P
      3 WHERE NOT EXISTS (
      4 (SELECT D.DRUGID
      5 FROM PRESCRIPTION D
      6 WHERE D.PILLSPERDAY >1)
      7 MINUS
      8 (SELECT V.DRUGID
      9 FROM VISIT V
     10 WHERE V.PID = P.EMPID))
     11 order by P.EMPID ;
```

no rows selected

```
SQL>
SQL> --- Queries to Test constraints---
SQL> ---Primary Key-----
SQL>
SQL> update Emp_Hospital set EmpID = null where DepNO=1;
update Emp_Hospital set EmpID = null where DepNO=1
      *
```

```
ERROR at line 1:
ORA-01407: cannot update ("SYSTEM"."EMP_HOSPITAL"."EMPID") to NULL
```

SQL>

```
SQL> ---Foreign KEY----
```

```
SQL>
```

```
SQL> delete from Dept_Hospital where depid=1;
```

```
1 row deleted.
```

```
SQL>
```

```
SQL> ---Update Query to check Constraint patIC2 {1 attribute Check}
```

```
SQL> update PATIENT set PINCODE=110000 where PID=1;
```

```
update PATIENT set PINCODE=110000 where PID=1
```

```
*
```

```
ERROR at line 1:
```

```
ORA-02290: check constraint (SYSTEM.PATIC2) violated
```

```
SQL> commit;
```

```
commit
```

```
*
```

```
ERROR at line 1:
```

```
ORA-02091: transaction rolled back
```

```
ORA-02292: integrity constraint (SYSTEM.SYS_C0011357) violated - child record  
found
```

```
SQL> ---Update Query to check Constraint nurIC2 {2 attribute 1 Row}
```

```
SQL> update nurse set SALARY=10000 where EMPID=6;
```

```
update nurse set SALARY=10000 where EMPID=6
```

```
*
```

```
ERROR at line 1:
```

```
ORA-02290: check constraint (SYSTEM.NURIC2) violated
```

```
SQL> commit;
```

```
Commit complete.
```

```
SQL> --Update Query to check trigger IC_SALARY{2 row 1 table IC}---
```

```
SQL>
```

```
SQL> update nurse set salary=120000 where empid=9;
```

```
update nurse set salary=120000 where empid=9
```

```
*
```

```
ERROR at line 1:
```

```
ORA-20001: +++++ UPDATE OR INSERT REJECTED  Supervisee salary is not greater  
than Supervisor Salary
```

```
ORA-06512: at "SYSTEM.IC_SALARY", line 12
```

```
ORA-04088: error during execution of trigger 'SYSTEM.IC_SALARY'
```

```
SQL> commit;
```

```
Commit complete.
```

```
SQL> --Update Query to check trigger dIC_TA{2 row 1 table IC}---
```

```
SQL>
```

```
SQL> update visit set drugid=4799 where visitid=6;
```

```
update visit set drugid=4799 where visitid=6
```

```
*
```

```
ERROR at line 1:
```

```
ORA-20001: +++++INSERT or UPDATE rejected. The Specified Drug 4799 is not  
present in the Medicine Repository
```

```
ORA-06512: at "SYSTEM.DIC_TA", line 10
```

```
ORA-04088: error during execution of trigger 'SYSTEM.DIC_TA'
```

```
SQL> commit;
```

Commit complete.

SQL>

SQL> set echo off