

# IT252

## Database Management System

### Assignment V

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# Hospital Schema

- i. Write a query in SQL to obtain the name of the physician and the departments they are affiliated with.

```
> SELECT P.Name "Physician", D.Name "Department" FROM PhysicianE P,
Department D, Affiliated_With A WHERE P.EmployeeID = A.Physician AND
D.DepartmentID = A.Department;
```

```
mysql> select P.Name "Physician", D.Name "Department" from PhysicianE P, Department D, Affiliated_With A where P.EmployeeID = A.Physician and D.DepartmentID
= A.Department;
+-----+-----+
| Physician | Department |
+-----+-----+
| John Dorian | General Medicine |
| Elliot Reid | General Medicine |
| Christopher Turk | General Medicine |
| Percival Cox | General Medicine |
| Bob Kelso | General Medicine |
| John Wen | General Medicine |
| Keith Dudemeister | General Medicine |
| Christopher Turk | Surgery |
| Todd Quinlan | Surgery |
| John Wen | Surgery |
| Molly Clock | Psychiatry |
+-----+-----+
11 rows in set (0.00 sec)
```

- ii. Write a query in SQL to find the name of patients and their physicians who does not require any assistance of a nurse.

```
> SELECT P.Name "Patient", Ph.Name "Physician" FROM Patient P,
PhysicianE Ph, Appointment A WHERE P.SSN = A.Patient AND Ph.EmployeeID
= A.Physician AND A.PrepareNurse IS NULL;
```

```
mysql> select P.Name "Patient", Ph.Name "Physician" from Patient P, PhysicianE Ph, Appointment A where P.SSN = A.Patient and Ph.EmployeeID = A.Physician and
A.PrepareNurse is null;
+-----+-----+
| Patient | Physician |
+-----+-----+
| Dennis Doe | Percival Cox |
| John Smith | Christopher Turk |
+-----+-----+
2 rows in set (0.00 sec)
```

- iii. Write a query in SQL to find the name of the patients, their treating physicians and medication.

```
> SELECT P.Name "Patient", Ph.Name "Physician", M.Name "Medicine" FROM
Patient P, PhysicianE Ph, Medication M, Prescribes Pr WHERE Pr.Patient
= P.SSN AND Pr.Physician = Ph.EmployeeID AND Pr.Medication = M.Code;
```

```
mysql> select P.Name "Patient", Ph.Name "Physician", M.Name "Medicine" from Patient P, PhysicianE Ph, Medication M, Prescribes Pr where Pr.Patient = P.SSN a
nd Pr.Physician = Ph.EmployeeID and Pr.Medication = M.Code;
+-----+-----+-----+
| Patient | Physician | Medicine |
+-----+-----+-----+
| John Smith | John Dorian | Procrastin-X |
| Dennis Doe | Molly Clock | Thesisin |
| Dennis Doe | Molly Clock | Thesisin |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

- iv. Write a query in SQL to find the name of the patients who taken an advanced appointment, and also display their physicians and medication.

```
> SELECT P.Name "Patient", Ph.Name "Physician", M.Name "Medicine" FROM Patient P, PhysicianE Ph, Medication M, Prescribes Pr WHERE Pr.Patient = P.SSN AND Pr.Physician = Ph.EmployeeID AND Pr.Medication = M.Code AND Pr.Appointment IS NOT NULL;
```

```
mysql> select P.Name "Patient", Ph.Name "Physician", M.Name "Medicine" from Patient P, PhysicianE Ph, Medication M, Prescribes Pr where Pr.Patient = P.SSN and Pr.Physician = Ph.EmployeeID and Pr.Medication = M.Code and Pr.Appointment is not null;
```

Patient	Physician	Medicine
John Smith	John Dorian	Procrastin-X
Dennis Doe	Molly Clock	Thesisin

```
2 rows in set (0.01 sec)
```

- v. Write a query in SQL to obtain the name of the patients, their block, floor, and room number where they are admitted.

```
> SELECT P.Name "Patient", R.BlockCode "Block", R.BlockFloor "Floor", S.Room "Room Number" FROM Patient P, Stay S, Room R WHERE S.Patient = P.SSN AND S.Room = R.RoomNumber;
```

```
mysql> select P.Name "Patient", R.BlockCode "Block", R.BlockFloor "Floor", S.Room "Room Number" from Patient P, Stay S, Room R where S.Patient = P.SSN and S.Room = R.RoomNumber;
```

Patient	Block	Floor	Room Number
John Smith	2	1	111
Random J. Patient	3	1	123
Dennis Doe	2	1	112

```
3 rows in set (0.00 sec)
```

- vi. Write a query in SQL to make a report which will show - a) name of the patient, b) name of the physician who is treating him or her, c) name of the nurse who is attending him or her, d) which treatment is going on to the patient, e) the date of release, f) in which room the patient has admitted and which floor and block the room belongs to respectively.

```
> SELECT P.Name "Patient", Ph.Name "Physician", N.Name "Nurse", Pr.Name "Treatment", S.StayEnd "Date of Release", S.Room "Room", R.BlockFloor "Floor", R.BlockCode "Block" FROM Undergoes U JOIN Patient P ON U.Patient = P.SSN JOIN PhysicianE Ph ON U.Physician = Ph.EmployeeID LEFT JOIN Nurse N ON U.AssistingNurse = N.EmployeeID JOIN Procedures Pr ON U.Procedures = Pr.Code JOIN Stay S ON U.Stay = S.StayID JOIN Room R ON S.Room = R.RoomNumber;
```

```
mysql> select P.Name "Patient", Ph.Name "Physician", N.Name "Nurse", Pr.Name "Treatment", S.StayEnd "Date of Release", S.Room "Room", R.BlockFloor "Floor", R.BlockCode "Block" from Undergoes U join Patient P on U.Patient = P.SSN join PhysicianE Ph on U.Physician = Ph.EmployeeID left join Nurse N on U.AssistingNurse = N.EmployeeID join Procedures Pr on U.Procedures = Pr.Code join Stay S on U.Stay = S.StayID join Room R on S.Room = R.RoomNumber;
```

Patient	Physician	Nurse	Treatment	Date of Release	Room	Floor	Block
John Smith	John Wen	Carla Espinosa	Obtuse Pyloric Recombobulation	2008-05-04 00:00:00	111	1	2
John Smith	Christopher Turk	Carla Espinosa	Reversible Pancreomyoplasty	2008-05-04 00:00:00	111	1	2
John Smith	John Wen	Carla Espinosa	Follicular Demectomy	2008-05-03 00:00:00	112	1	2
Dennis Doe	Christopher Turk	Laverne Roberts	Reverse Rhinopodoplasty	2008-05-03 00:00:00	112	1	2
Dennis Doe	Christopher Turk	Paul Flowers	Complete Walleectomy	2008-05-03 00:00:00	112	1	2
Dennis Doe	Todd Quinlan	NULL	Obfuscated Dermogastrotomy	2008-05-03 00:00:00	112	1	2

```
6 rows in set (0.00 sec)
```

- vii. Write a query in SQL to obtain the name and position of all physicians who completed a medical procedure with certification after the date of expiration of their certificate.

```
> SELECT Name, Position FROM PhysicianE WHERE EmployeeID IN (SELECT Physician FROM Undergoes U WHERE DateUndergoes > (SELECT CertificationExpires FROM Trained_In T WHERE U.Physician = T.Physician AND U.Procedures = T.Treatment));
```

```
mysql> select Name, Position from PhysicianE where EmployeeID in (select Physician from Undergoes U where DateUndergoes > (select CertificationExpires from Trained_In T where U.Physician = T.Physician and U.Procedures = T.Treatment));
```

Name	Position
Todd Quinlan	Surgical Attending Physician

```
1 row in set (0.00 sec)
```

- viii. Write a query in SQL to Obtain the names of all patients who had at least two appointment where the nurse who prepped the appointment was a registered nurse and the physician who has carried out primary care.

```
> SELECT P.Name FROM Appointment A JOIN Patient P ON A.Patient = P.SSN JOIN Nurse N ON A.PrepareNurse = N.EmployeeID JOIN PhysicianE Ph ON A.PCP = Ph.EmployeeID WHERE A.Patient IN (SELECT a.Patient FROM Appointment a GROUP BY a.Patient HAVING COUNT(*) >= 2) AND N.Registered = 1;
```

```
mysql> select P.Name from Appointment A join Patient P on A.Patient = P.SSN join Nurse N on A.PrepareNurse = N.EmployeeID join PhysicianE Ph on A.PCP = Ph.EmployeeID where A.Patient in (select a.Patient from Appointment a group by a.Patient having count(*) >= 2) and N.Registered = 1;
```

Name
John Smith
Grace Ritchie
Grace Ritchie
John Smith
Dennis Doe

```
5 rows in set (0.00 sec)
```

- ix. Write a query in SQL to obtain the names of all patients who has been undergone a procedure costing more than \$5000 and the name of that physician who has carried out primary care.

```
> SELECT P.Name "Patient", Ph.Name "Physician" FROM Patient P,
PhysicianE Ph, Undergoes U, Procedures Pr WHERE P.PCP = Ph.EmployeeID
AND P.SSN = U.Patient AND U.Procedures = Pr.Code AND Pr.Cost > 5000;
```

```
mysql> select P.Name "Patient", Ph.Name "Physician" from Patient P, PhysicianE Ph, Undergoes U, Procedures Pr where P.PCP = Ph.EmployeeID and P.SSN = U.Patient and U.Procedures = Pr.Code and Pr.Cost > 5000;
+-----+-----+
| Patient | Physician |
+-----+-----+
| Dennis Doe | Christopher Turk |
| John Smith | John Dorian |
+-----+-----+
2 rows in set (0.00 sec)
```

- x. Write a query in SQL to Obtain the names of all patients who has been prescribed some medication by his/her physician who has carried out primary care and the name of that physician.

```
> SELECT P.Name "Patient", Ph.Name "Physician" FROM Patient P,
PhysicianE Ph, Prescribes Pr WHERE P.PCP = Ph.EmployeeID AND P.SSN =
Pr.Patient AND P.PCP = Pr.Physician;
```

```
mysql> select P.Name "Patient", Ph.Name "Physician" from Patient P, PhysicianE Ph, Prescribes Pr where P.PCP = Ph.EmployeeID and P.SSN = Pr.Patient and P.PCP = Pr.Physician;
+-----+-----+
| Patient | Physician |
+-----+-----+
| John Smith | John Dorian |
+-----+-----+
1 row in set (0.00 sec)
```