• Views

1. Employees-Hired: This view returns the First Name, Last Name, and Date Hired of all Hospital Employees.

```
CREATE VIEW employeesHiredView AS
SELECT firstName,lastName,hireDate
FROM Employee
INNER JOIN Person
ON Employee.personID = Person.personID;
```

2. NursesInCharge: This view returns the name of the Nurse in Charge for each Care Center along with the phone number of the Nurse.

```
CREATE VIEW nursesInChargeView AS
SELECT distinct firstName,lastName,phone
FROM CareCenter
INNER JOIN RegNurse
ON RegNurse.personID = CareCenter.headpersonID
INNER JOIN Person
ON  RegNurse.personID = Person.personID;
```

3. GoodTechnician: This view returns all the Technicians how have at least one skill.

```
CREATE VIEW goodTechnicianView AS
SELECT * FROM Technician
WHERE SKILL IS NOT NULL;
```

4. CareCenter-Beds: This view returns the name for each Care Center along with the number of beds that are assigned to patients (occupied beds), the number of beds not assigned to patients (free beds), and the total number of beds.

CREATE VIEW careCenterTotalBed AS
SELECT CareCenter.careCenterName, COUNT(bedNumber) As "TotalBeds"
FROM CareCenter INNER JOIN Bed
ON CareCenter.careCenterName = Bed.CareCenterName
GROUP BY CareCenterName;

CREATE VIEW careCenterTakenBed AS
SELECT CareCenter.careCenterName, COUNT(bedNumber) As "TakenBeds"
FROM CareCenter INNER JOIN Bed
ON CareCenter.careCenterName = Bed.careCenterName
WHERE Bed.personID IS NOT NULL
GROUP BY careCenterName;

CREATE VIEW careCenterBedsView AS
SELECT careCenterTotalBed.careCenterName, careCenterTakenBed.TakenBeds,
       careCenterTotalBed.TotalBeds-careCenterTakenBed.TakenBeds AS "FreeBeds"
FROM careCenterTotalBed
LEFT OUTER JOIN careCenterTakenBed
ON careCenterTotalBed.careCenterName = careCenterTakenBed.careCenterName;

5. OutPatientsNotVisited: This view returns all OutPatients who have not been visited by a Physician yet.

CREATE VIEW OutPatientsNotVisitedView AS
SELECT firstName, lastName
FROM Person
INNER JOIN Outpatient
ON Person.personID = Outpatient.personID
INNER JOIN Visit
ON Outpatient.personID = Visit.personID
WHERE Visit.visitDate is NULL;

• Queries

1. For each Job Class list all the staff members belonging to this class.

select firstName, lastName, 'Volunteer' as jobs
from Person inner join Volunteer
on Person.personID = Volunteer.personID
union
select firstName, lastName, 'Physician' as jobs
from Person inner join Physician
on Person.personID = Physician.personID
union
select firstName, lastName, 'Nurses' as jobs
from Person inner join Nurse
on Person.personID = Nurse.personID
union
select firstName, lastName, 'Technician' as jobs
from Person inner join Technician
on Person.personID = Technician.personID
union
select firstName, lastName, 'Staff' as jobs
from Person inner join Staff
on Person.personID = Staff.personID;

2. Find all Volunteers who do not have any skills.

select firstName, lastName
from Person inner join Volunteer
on Person.personID = Volunteer.personID
where Volunteer.skill is NULL;

3. List all Patients who are also Volunteers at the Hospital.

select firstName, lastName
from Person inner join Patient
on Person.PersonID = Patient.PersonID
inner join Volunteer
on Patient.PersonID = Volunteer.PersonID;

4. Find each Outpatient who has been visited exactly once.

```
select firstName,lastName
from Person inner join Patient
on Person.PersonID = Patient.PersonID
inner join Outpatient
on Patient.PersonID = Outpatient.PersonID
inner join Visit
on Outpatient.PersonID = Visit.personID
GROUP BY firstName,lastName
having count(Visit.personID) = 1;
```

5. For each Skill list the total number of volunteers and technicians that achieve this skill.

```
select Volunteer.skill, count(*) AS "Number of People With skill"
from Volunteer
group by Volunteer.skill
UNION
select Technician.skill, count(*) AS "Number of People With skill"
from Technician
WHERE Technician.skill IS NOT NULL
group by Technician.skill;
```

6. Find all Care Centers where every bed is assigned to a Patient (i.e. no beds are available).

```
Select CareCenter.careCenterName AS "Full Centers"
FROM CareCenter
INNER JOIN careCenterBedsView
ON careCenterBedsView.careCenterName = CareCenter.careCenterName
WHERE careCenterBedsView.FreeBeds = 0;
```

7. List all Nurses who have an RN certificate but are not in charge of a Care Center.

```
SELECT Person.firstName, Person.lastName, Person.phone
FROM Person
INNER JOIN RegNurse
ON Person.personID = RegNurse.PersonID
WHERE RegNurse.PersonID NOT IN (SELECT CareCenter.PersonID FROM CareCenter);
```

8. List all Nurses that are in charge of a Care Center to which they are also assigned.

```
SELECT firstName, lastName, phone
FROM Nurse
INNER JOIN CareCenter ON Nurse.personID = CareCenter.personID
INNER JOIN Person ON Nurse.personID = Person.personID
WHERE Nurse.personID = CareCenter.headpersonID;
```

9. List all Laboratories, where all assigned technicians to that laboratory achieve at least one skill.

```
select distinct Laboratory.labName
from Laboratory inner join TechnicianLab
on Laboratory.labName = TechnicianLab.labName
inner join Technician
on TechnicianLab.PersonID = Technician.PersonID
Where Technician.skill is not null;
```

10. List all Resident patients that were admitted after the most current employee hire date.

```
SELECT firstName, lastName
FROM Resident
INNER JOIN Person
ON Resident.personID = Person.personID
WHERE admittedDate > (SELECT MAX(hireDate) FROM Employee);
```

11. Find all Patients who have been admitted within one week of their Contact Date.

```
Select firstName,lastName,contactDate,admittedDate
FROM Patient
INNER JOIN Resident ON Patient.personID = Resident.personID
INNER JOIN Person ON Patient.personID = Person.personID
WHERE  TIMESTAMPDIFF(DAY,contactDate,admittedDate) <= 7
ORDER BY firstName, lastName;
```

12. Find all Outpatients who have not been visited by a Physician within one week of their Contact Date.

Select firstName, lastName
FROM Person
inner join Patient
on Person.personID = Patient.personID
INNER JOIN Outpatient
ON Patient.personID = Outpatient.personID
INNER JOIN Visit
ON Outpatient.personID = Visit.patientID
Where (Visit.visitDate - Patient.contactdate) > 7;

13. List all Physicians who have made more than 3 visits on a single day.

Select firstName,lastName,visitDate
from Physician
INNER JOIN Visit ON Physician.personID = Visit.physicianID
INNER JOIN Person ON Physician.personID = Person.personID
GROUP BY Physician.personID , visitDate
HAVING COUNT(Visit.physicianID) > 3;

14. List all Physicians that are responsible for more Outpatients than Resident Patients.

SELECT Person.firstName, Person.lastName, Person.personID FROM
Person NATURAL JOIN
Physician NATURAL JOIN
(SELECT Physician.personID, coalesce(pO.OutPatientCount,0) -
coalesce(pR.ResidentCount,0) as "patientDiff" FROM
Physician LEFT OUTER JOIN
(SELECT Patient.personID, COUNT(Patient.personID) AS "OutPatientCount" FROM
Person INNER JOIN Patient ON Person.personID = Patient.personID
INNER JOIN Outpatient ON Outpatient.personID = Patient.personID
GROUP BY Patient.personID) pO
ON Physician.personID = pO.personID
LEFT OUTER JOIN
(SELECT Patient.personID, COUNT(Patient.personID) AS "ResidentCount" FROM
Person INNER JOIN Patient ON Person.personID = Patient.personID
INNER JOIN Resident ON Resident.personID = Patient.personID
GROUP BY Patient.personID) pR
ON Physician.personID = pR.personID) pD
WHERE pD.patientDiff > 0;

15. Find each Physician who visited an Outpatient for whom he or she was not responsible for.

SELECT Person.firstName, Person.lastName, Person.personID
FROM Person INNER JOIN Visit ON Person.personID = Visit.patientID
INNER JOIN Outpatient ON Visit.patientID = Outpatient.personID
INNER JOIN Patient ON Patient.personID = Outpatient.personID
WHERE Visit.physicianID != Patient.treatingpersonID;

16. Three more queries that involve the business rules that you added. Feel free to create more views for this.

   A. /*display all the technician with their certificate number and type */
       SELECT firstName,lastName,Biotech.certificate_num,Biotech.bt_type
       FROM Biotech
       INNER JOIN Technician ON Technician.biotech_id = Biotech.biotech_id
       INNER JOIN Person ON Technician.personID = Person.personID;

   B. /*should display that all the resident have Mimi Issurance */
       SELECT firstName,lastName As 'Resident Patient',Resident.admittedDate,
       misInsurance.insurance_id
       FROM mimisInsurance

```
    INNER JOIN Resident ON Resident.personID = mimisInsurance.personID
    INNER JOIN Person ON Resident.personID = Person.personID;
```

C. /*technician and volunteer with same skill*/
```
    SELECT firstName, lastName,
    From Person
    INNER JOIN Volunteer
    ON Person.personId = Volunteer.personId
    Where Volunteer.Skill = "Blood Tests"
    Union
    Select firstName, lastName,
    From Person
    INNER JOIN Technician
    ON Person.personID = Technician.personID
    Where Technician.Skill = "Blood Tests";
```