CS3431 Phase 1

An Entity-Relationship (ER) diagram titled "CS3431 Phase 1" containing the following entities, attributes, and relationships:

Employees (entity) with attributes: FName, LName, Title, ID, Salary, OfficeNum, Address (Street, Town, Zip).

Employees IsA: Reg, DMan, GMan.
- DMan — Manage
- GMan — Manage
- GMan — CanAccess

Reg IsA: Doctor, ETech.

Doctor (entity) with attributes: Specialty, Gender, MedSchool.
Doctor — Examined (Results) — Visit.

ETech — Repair — EquipType.

Unit (weak entity) with attributes: Year, SN. LastInspection. Unit — Is — EquipType.

EquipType (entity) with attributes: ID, Model, Quantity, Description, Instructions.

Visit (entity) with attributes: FutureDate, TotalPayment, InsuredPay, LTime, LDate, ID, ADate, ATime.

Patient (entity) with attributes: SSN, FName, LName, Address, TelNum.
Patient — Admitted — Visit.

Visit — Stay (SDate, EDate) — Room.

Room (entity) with attributes: ID, Flag, Service.
Room — Has — EquipType.
Room — CanAccess.

2. Assumptions
- All employees are only one type of employee and must be either a regular employee, a district manager, or a general manager
- All regular employees are either only a doctor or equipment technician
- Patients can make multiple visits
- Patients can stay in multiple rooms
- A doctor can only be in one hospital
- A room can only have one patient at a time
- A doctor examination cannot be for multiple visits
- SN for equipment units can repeat across equipment types (doesn't have to be unique)

3. Relational Model
GeneralManager(ID, OfficeNum, FName, LName, Title, Salary, Street, Town, Zip)

DistrictManager(ID, OfficeNum, FName, LName, Title, Salary, Street, Town, Zip, GenManID)

EquipmentTech(ID, OfficeNum, FName, LName, Title, Salary, Street, Town, Zip, DistrictManID)

Doctor(ID, OfficeNum, FName, LName, Title, Salary, Street, Town, Zip, DistrictManID, MedSchool, Specialty, Gender, VisitID)

Examined(DoctorID, Results)

Repair(ETechID, EquipTypeID)

EquipType(ID, Model, Quantity, Description, Instructions)

Unit(TypeID, SN, Year, LastInspection)

Visit(ID, LTime, LDate, ATime, ADate, FutureDate, TotalPayment, InsuredPay)

Patient(SSN, FName, LName, Address, TelNum)

Admitted(PatientSSN, VisitID)

Stay(RoomID, SDate, EDate)

Room(ID, Flag, VisitID)

Service(RoomID, ServiceProvided)

CanAccess(EmployeeID, RoomID)