

Theoretical Hospital Database

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Goals



- ❖ Normalize entities and their relations in order to avoid update, deletion, and insertion anomalies from occurring within the database as well as ensure that lossless join will occur.
- ❖ Establish business rules which make sense within the Hospital setting in order to operate correctly.
- ❖ Visualize the entity-relationships of the database and its several views for organizational purposes.

Entities



- ❖ Ward: name, wardNo, Loc, tellNo, numBeds, chargeNurseID
- ❖ Drug supplies: drugNum, name, description, dosage, quantity, reOrderTime, cost
- ❖ Surgical supplies: itemNo, name, description, quantity, reOrderTime, unitCost, wardNo
- ❖ Suppliers: supplierID, name, tellNo, address, faxNum, telephoneNum, email

Entities



- ❖ Staff: staffID, fName, lName, address, tellNo, DOB, gender, salary, position, wardNo
- ❖ Patients: patientID, fName, lName, address, telNo, nokNo, appNo, dateRegistered, duration, expectedLeaveDate, bedNo, medicine, drugNo, unitsPerDay, allergies
- ❖ PurchaseReqs: reqID, chargeNurseID, name, wardID, itemID, quant, dateOrdered, dateRecieved
- ❖ Cinic: clinicNo, date, time, availRoomsNo

Entities



- ❖ Next Of Kin: name, relationship, address, telNo, nokNo, gender
- ❖ Appointments: appID, staffNo, name, room, dateTIme

Normalization



- ❖ Organized the database in 3NF by removing all transitive and partial dependencies within entity-relations to ensure that lossless join will occur..

Business Rules



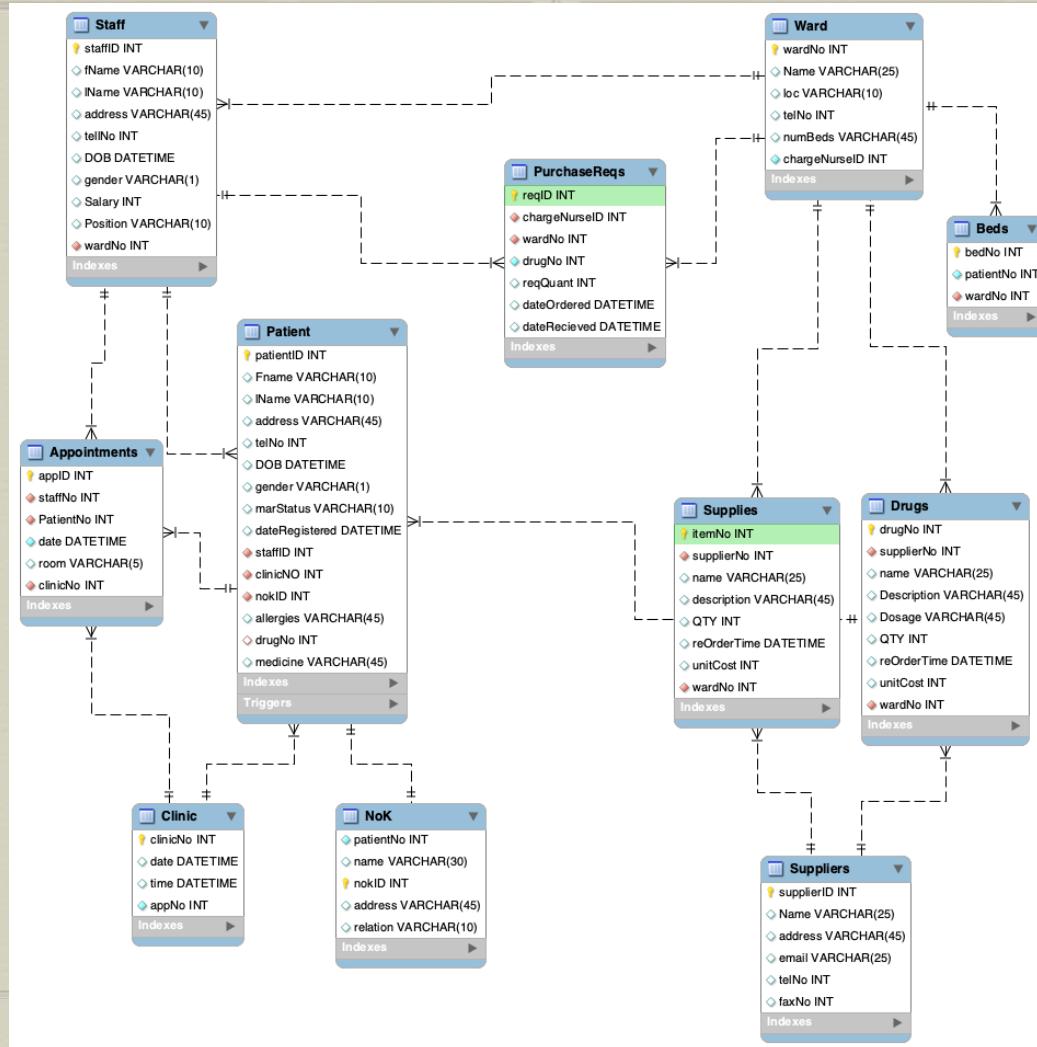
- ❖ The Medical Director has access to all medical data.
- ❖ The Charge Nurse has access to exclusively one ward's data
- ❖ Each patient has one set of information.(i.e., doctor references, appointment dates, in-patient/outpatient status, prescribed medication, allergies, prior medical history and bed number)
- ❖ A trigger used to test the compatibility of medication with each other or patient allergies. Activation of trigger results in error and the medication would not be inserted.

Business Rules

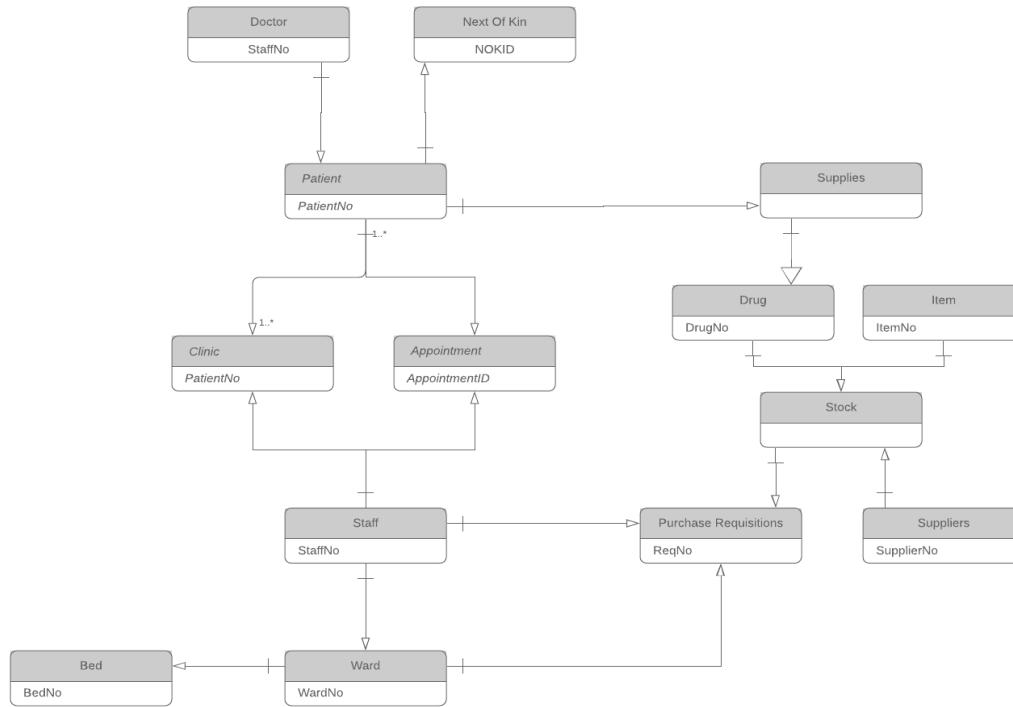


- ❖ Each ward has its own supply of medicine and non-medical supplies.
- ❖ Each patient could be prescribed many medicines while each medicine can be given to many patients.

Overall logical ER Diagram



Charge Nurse Views



Code



- ❖ The SQL code along with detailed metadata can be found at : <https://github.com/ZK1dd>

Questions?

