

Database for Hospital

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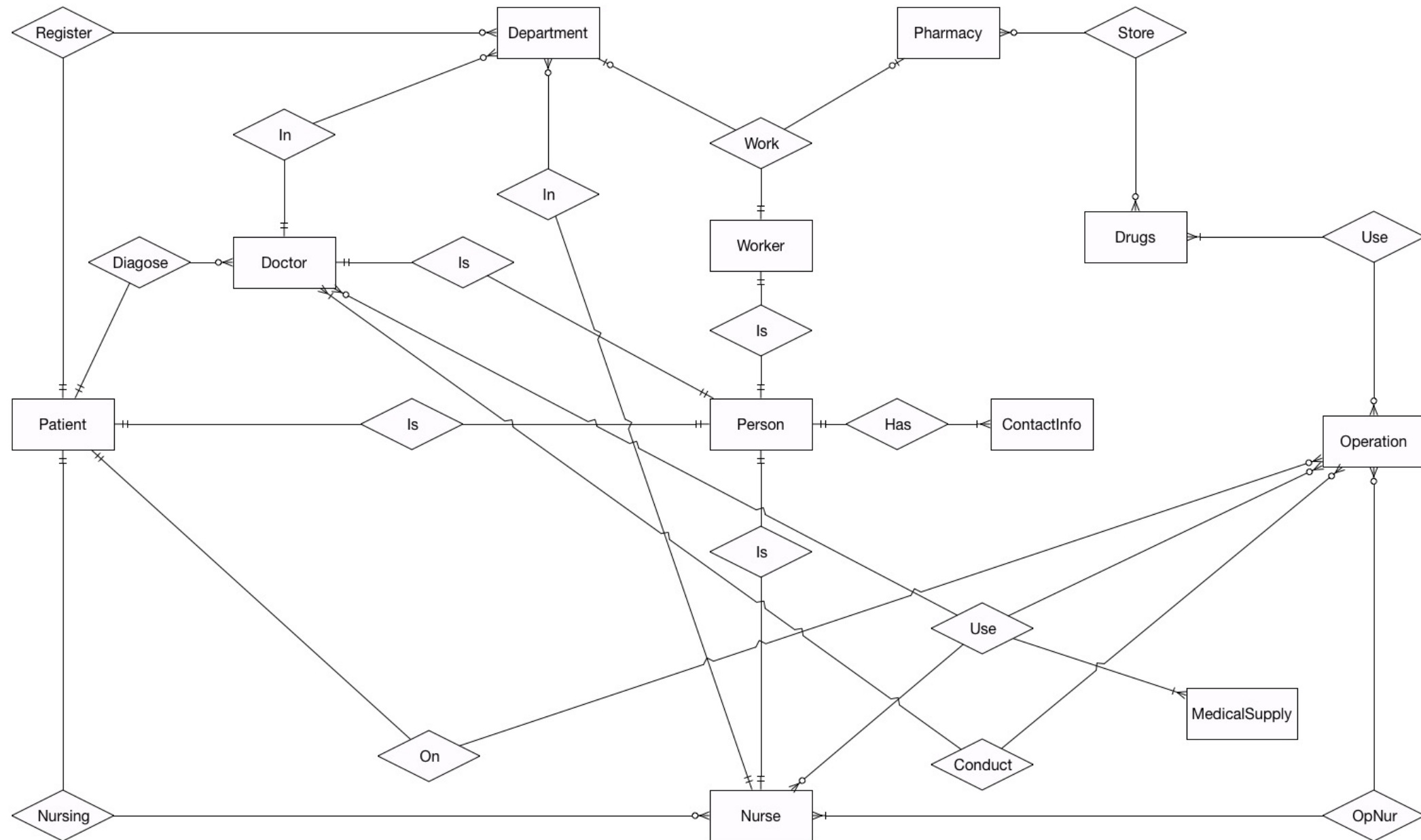
Description

- In this project, I developed a relational database system for hospital, users could use it to store records of patients, doctors, nurses, workers and departments, pharmacy, drugs and operations as entity with detailed information, together with tables to define their relationships. The database has been normalized to meet 3NF. Besides, I have defined triggers and procedures for a better use.

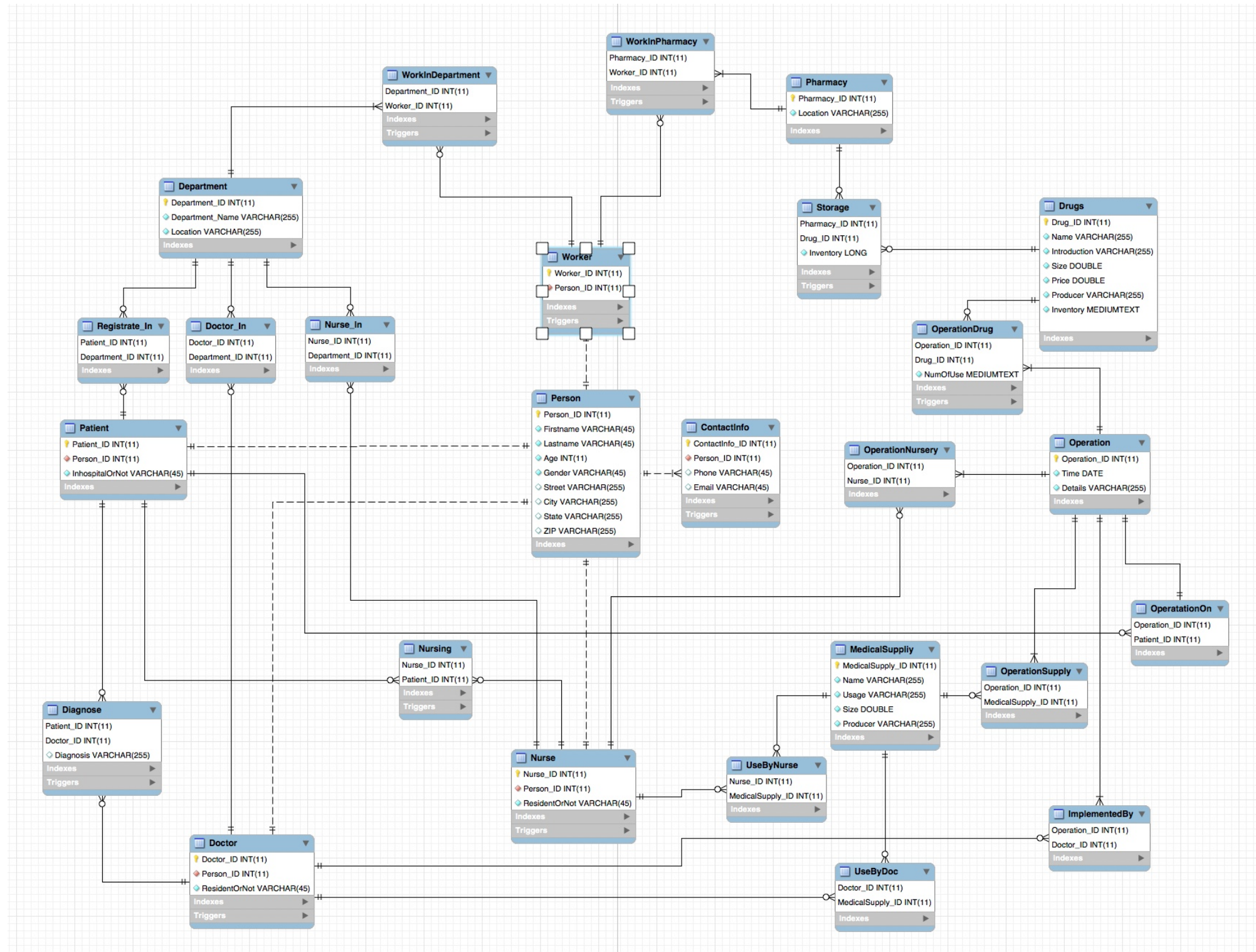
Normalization Steps

- Define the major entities (tables) in 1NF
- Define the tables represent relationships between entities
- Normalize entities and relation tables into 2NF
- Normalize tables to satisfy 3NF, change all transaction dependency

Entity Relationship Diagram



Enhanced Entity Relationship Diagram



Triggers

- Before insert/update on WorkInDepartment: check if the inserted/updated worker can work in the department
- Before insert/update on WorkInPharmacy: check if the inserted/updated worker can work in the pharmacy
- Before insert/update on ContactInfo: check if the new email address satisfies the correct form
- Before insert/update on Diagnose: check if the doctor and the patient are in the same inpatient status
- Before insert/update Nursing: check if the nurse and the patient are in the same inpatient status

Triggers

- Before insert/update on Storage: After insert/update, check if the new drug storage information applies to current inventory, and update inventory after change
- Before insert/update on OperationDrug: After insert/update, check if the new drug used in operation information applies to current inventory, and update inventory after change
- Before insert/update on Doctor: check if the doctor satisfy his own person status, that is he can only be a doctor
- Before insert/update on Nurse: check if the doctor satisfy his own person status, that is he can only be a doctor
- Before insert/update on Worker: check if the doctor satisfy his own person status, that is he can only be a doctor

Stored Procedures

- GetPharmacyInventorywithLocation(varchar): get a table of a pharmacy's inventory with given location
- GetPersonDetailswithName(varchar, varchar): get a person's information with his full name
- GetPatientHistorywithID(int): get a patient's history with his patient_ID
- GetOperationDrugswithPatientID(int): get drug usage detail in an operation with the patient_ID
- GetNurseDetailswithName(varchar, varchar): get a nurse's detailed information with his full name
- GetDoctorDetailswithName(varchar, varchar): get a doctor;s detailed information with his full name

Q & A

Thank You!