

Hospital ERD and EERD

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Purpose:

The purpose of this Database is to track nurse assignments to their wards and nurse interactions with their patients, patient admissions by their doctors and treatments administered by doctors to their patients, bed assignments for each patient and items charged to patients during their stay.

Narrative Summary:

The hospital administrator wants to create a database to track nurse assignments to their wards and nurse interactions with their patients, patient admissions by their doctors and treatments administered by doctors to their patients, bed assignments for each patient and items charged to patients during their stay.

The administrator will keep track of the nurses by a nurse ID, name, address, phone/alternate number, email, and medical specialities. The nurses who work at the hospital can be in charge of other nurses and supervise a ward. All of the wards are in the hospital and have hospital beds that have different functions. One of them being the size of the bed which consists of the following sizes: small, medium, large, extra-large. The other function is the type of bed which can be elevated either electronically or manually.

The patient's information is also recorded just like the nurses' information. This information includes patient ID, name, gender, dob (date of birth), address, phone/alternate number, email, date of admission, date of discharge, and discharging doctor. The hospital will also track the treatments administered to the patient, the doctor treating the patient, date & time of administered treatment as well as the results.

Finally, the hospital tracks the charges of items based on the date and quantity along with the name of the item and the amount of the charge. Also, the hospital will track the nurse patient care which goes over several types of events including: wellness checks, medications, food services, assistance, treatment and "other"

Identify Actors/Roles:

- Patients:
 - Receiving treatment
 - Sleeping on 1 bed
 - Get items that they are charged for
- Doctors:
 - Admits patients
 - Some doctors treat patients
- Nurses:
 - Supervise other nurses.
 - Supervise a ward
 - Charge Nurse is the custodian of the medical records for the ward
 - Provides patient care events
- Wards:
 - Hold patients
 - Rooms to store beds
 - Rooms for doctors to treat patients
- Beds:
 - Furniture for one patient
- Items:
 - Stay with the patients
 - Will get charged by hospital for the patient

List of Entities:

- Patient
- Doctor
- Nurse
- Ward
- Bed
- Item
- Treatment

List of Entities with Attributes Nested:

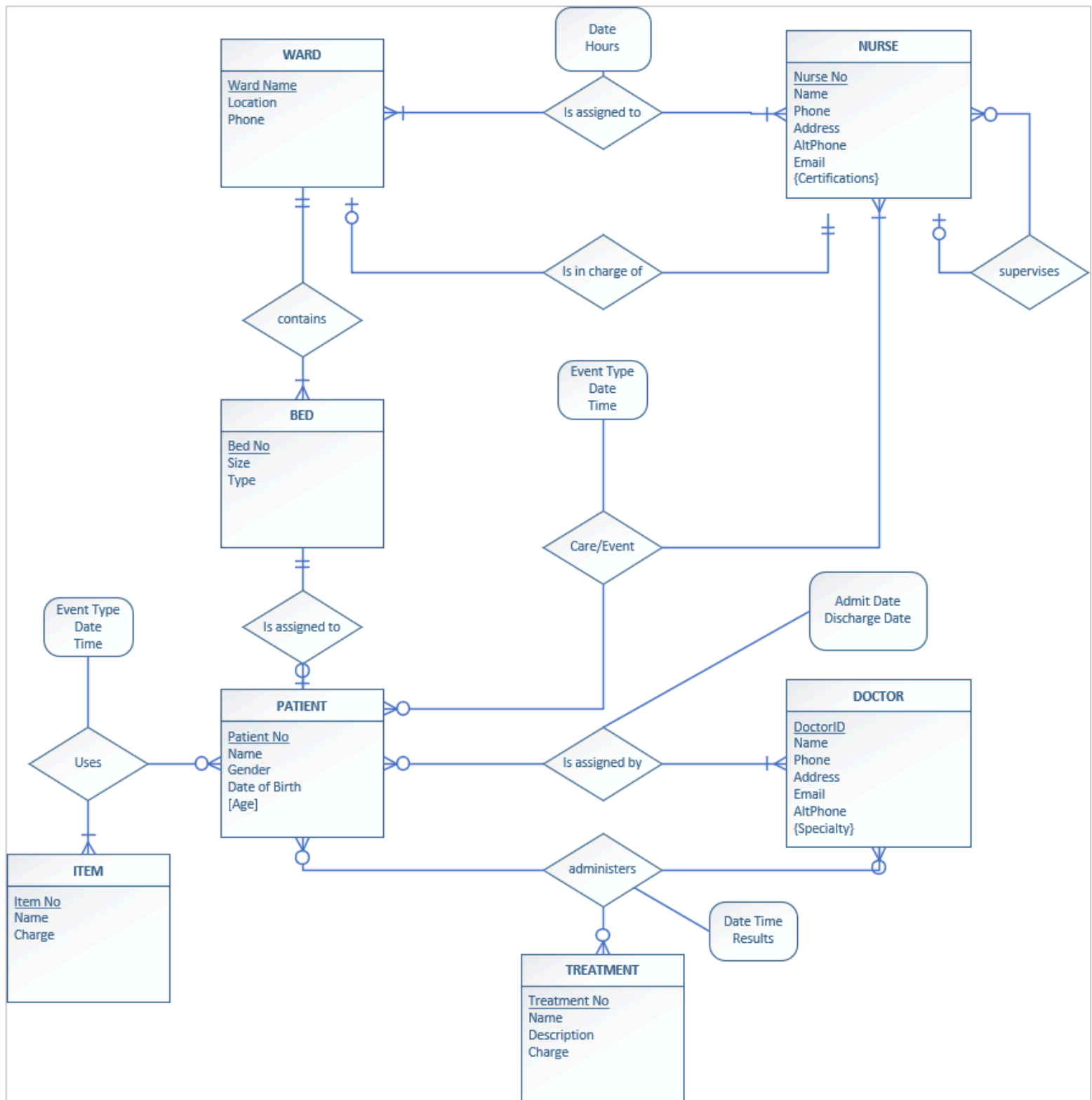
- Patient
 - Patient ID
 - Name
 - Gender
 - Date of Birth
 - Address
 - Age
- Doctor
 - Doctor ID
 - Name
 - Phone Number
 - Address
 - Email
 - Alternate Phone Number
 - Specialty
- Nurse
 - Nurse ID
 - Name
 - Address
 - Phone Number

- Alternate Phone Number
 - Email
 - Medical Specialties
- Ward
 - Ward ID
 - Name
 - Location
 - Phone Number
- Bed
 - Bed ID
 - Size
 - Type
 - Availability
- Item
 - Item ID
 - Name
 - Charge
- Treatment
 - Treatment ID
 - Name
 - Description
 - Charge

Business Rules (optionality, cardinality):

- Patients
 - One patient is assigned to none or one bed.
 - Receive none or many treatments
 - One or more patients incur one or more consumable item charge
 - One patient will be seen by one or more nurses
- Doctors
 - None or more than one doctor can admit none or many patients

- None or more than one doctor can treat none or many patients
- Nurses
 - One or more nurses can supervise none (leaving them unsupervised) or one nurse.
 - A nurse is assigned to one or more wards.
 - One charge nurse is assigned only one ward.
 - One or more nurses will stay with one patient
- Wards
 - Each ward has one or more nurses assigned.
 - Only has one charge nurse
- Beds
 - One or more beds are inventoried to a one or more ward.
 - None or one beds are used for one patient
- Items
 - None or more than one item charge can be charged to one or more patients

ERD:

EERD: