Hospital Administration

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**Requirements (Actors and Roles)**

**Nurse:** Each Patient is assigned one nurse

**Charge Nurse:** Each ward has a Charge nurse assigned to it

**Supervisor Nurse:** Supervisor Nurse supervises some nurses

**Ward:** Ward has beds and Nurses assigned to it

**Bed:** Bed assigned to a patient based on the availability and doctors’ treatment

**Treatment:** Treatments are administered to the patient on doctors’ recommendation

**Item:** Hospital charges for the items used by patient based on the date and quantity

**Doctor:** Doctor examines the patient and based on that gives treatment to the patient

**Entities**

* Nurse
* Charge Nurse
* Supervisor Nurse
* Ward
* Bed
* Treatment
* Item
* Doctor
* Patient

Nested Attributes

* **Nurse**
* Nurse ID
* Name (First, Last)
* Address (Street, city, state, zip)
* Phone Number
* Alternate Phone Number
* Email
* Medical Specialties
* **Charge Nurse**
* Charge Nurse ID
* Nurse ID
* Ward ID
* Date
* Time
* **Supervisor Nurse**
* Supervisor Nurse ID
* Nurse ID
* Date
* **Ward**
* Ward ID
* Size (small, large, extra-large)
* Type (elevated electrically or manually)
* Patient ID
* **Bed**
* Bed ID
* Ward ID
* Patient ID
* **Treatment**
* Treatment ID
* Name
* Description
* Charge
* Type
* Patient ID
* Nurse ID
* Doctor ID
* Date
* Time
* **Item**
* Item Name
* Charge
* **Doctor**
* Doctor ID
* Name (First, Last)
* Address (Street, city, state, zip)
* Phone Number
* Alternate Phone Number
* Email
* Medical Specialties
* **Patient**
* Name
* Gender
* Date of birth [Age]
* Address (Street, city, state, zip)
* Phone Number
* Alternate Phone Number
* Email
* Time of Discharge
* Treatment ID

**Business Rules**

1. Each ward has at least one nurse assigned to it
2. Some nurses supervise one or more other nurses. No nurse is supervised by more than one nurse, and some nurses are unsupervised.
3. A nurse is assigned to at least one ward and rotates assignments among other wards
4. Each ward also has a charge nurse
5. Ward consists of hospital beds. The beds are inventoried to a specific ward
6. Most of the beds are large and manual (this is the default setting).
7. Beds are assigned to the patient based on the availability
8. A bed may not be assigned to more than one patient
9. Each patient is assigned to a nurse
10. Each nurse-patient care interaction is an event
11. Every patient may or may not have doctors assigned to them
12. Some doctors admit patients while others do not
13. A given patient may receive no treatments or may receive many, and some patients may receive their treatments from more than one doctor
14. All patients incur at least one charge for consumable items used during their stay
15. A patient will typically be seen by more than one nurse during their stay
16. A nurse most likely will interact with the same patient over several events during a single shift

**Workflow**

Diagram

Description automatically generated

**DBDD with Narrative**

Diagram

Description automatically generated

A patient is administered to the hospital. Nurse is assigned to a patient. The patient can have one or more nurses depending on many factors such as treatments, shift. Then the doctor examines the patient and recommends the treatment

Sometimes no treatment may be recommended. The desired treatment is done by the nurse on the patient. Also, depending on the doctor’s advice and patients state a bed may or may not be assigned to the patient. After the bed is assigned, the treatment is carried out. The bed will be inventoried to a ward in the hospital. The patient will incur item charges in the hospital along with the treatment charges.

After the treatment is done, the date of discharge and the discharging doctor is also tracked.

**ERD:**

Diagram

Description automatically generated

**EERD:**

Diagram, schematic

Description automatically generated

**RS:**

