**Step 3.1: Entities and their associated attributes**

1. Ward

* Ward Number (Primary Key)
* Ward Name
* Ward Location
* Total Number of Beds
* Telephone Extension Numbers

2. Patient

* Patient Number (Primary Key)
* Patient Name
* Age
* Address
* Contact Number

3. Medication

* Medication Number (Primary Key)
* Medication Name
* Dosage
* Method of Administration
* Start Date
* Finish Date

4. Supply Item

* Item Number (Primary Key)
* Item Name
* Item Description
* Quantity in Stock
* Reorder Level
* Cost per Unit

5. Pharmaceutical Supply

* Drug Number (Primary Key)
* Drug Name
* Description
* Dosage
* Stock Levels

6. Requisition

* Requisition Number (Primary Key)
* Staff Details (e.g., Staff Number, Staff Name)
* Ward Information (e.g., Ward Number, Ward Name)
* Item/Drug Details (e.g., Item Number, Drug Number, Item Name, Drug Name)
* Cost
* Quantity Required
* Date of Order

7. Staff

* Staff Number (Primary Key)
* Staff Name
* Qualifications
* Previous Work Experience

8. Supplier

* Supplier Number (Primary Key)
* Supplier Name
* Address
* Email Contacts
* Telephone Number
* Fax Number

**Step 3.2: Relationships and descriptive attributes**

1. Ward-Patient (1:N)

* Admission Date (Descriptive attribute)

2. Ward-Medication (M:N)

* Prescription Date (Descriptive attribute)

3. Ward-Supply Item (M:N)

* Stock Update Date (Descriptive attribute)

4. Ward-Pharmaceutical Supply (M:N)

* Stock Update Date (Descriptive attribute)

5. Ward-Requisition (1:N)

* Delivery Date (Descriptive attribute)
* Charge Nurse's Signature (Descriptive attribute)

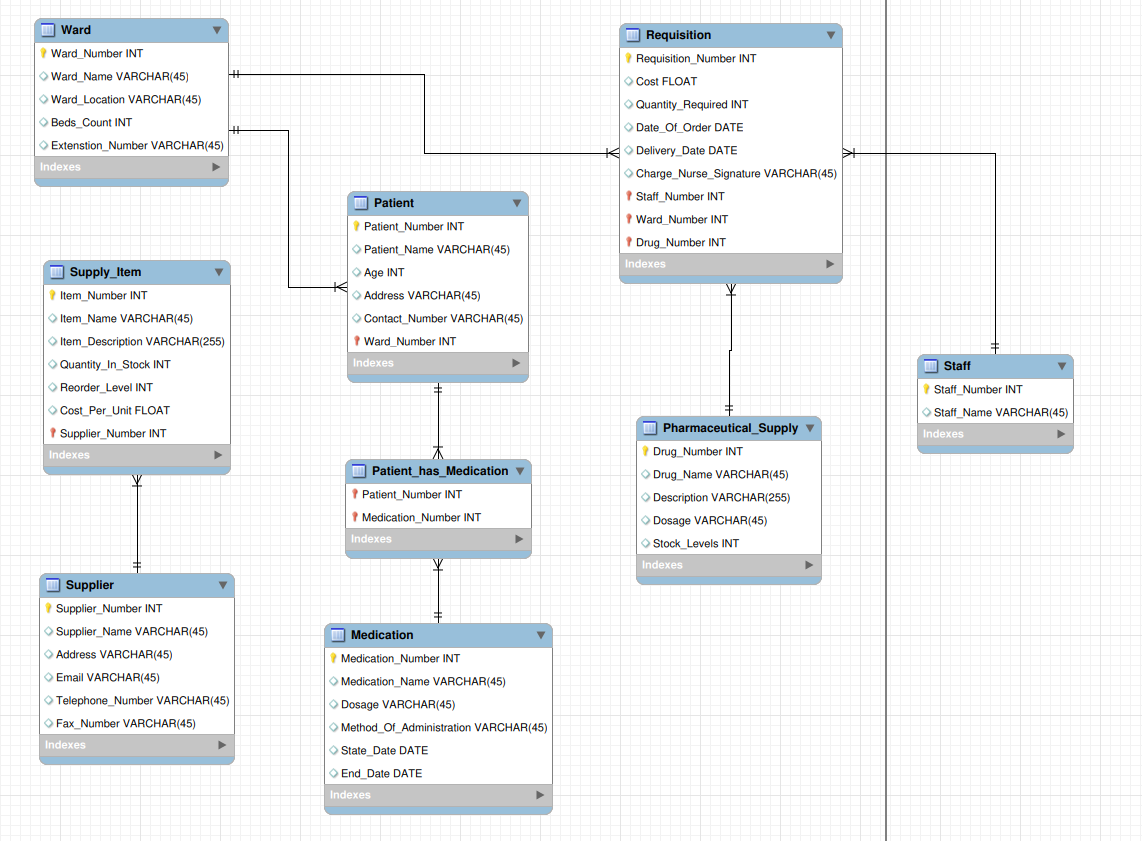
6. Staff-Ward (M:N)

* Role in the Ward (Descriptive attribute)

7. Supplier-Supply Item (M:N)

* Contract Start Date (Descriptive attribute)
* Contract End Date (Descriptive attribute)

**Step 3.3: E-R diagram representation**



**Step 3.4: Data Dictionary and Assumptions**

* Assumption 1: Each patient is assigned to only one ward at a time.
* Assumption 2: Each medication is prescribed to multiple patients, and each patient can have multiple medications prescribed.
* Assumption 3: Each supply item and pharmaceutical supply can be used in multiple wards, and each ward can use multiple supply items and pharmaceutical supplies.
* Assumption 4: Each staff member can work in multiple wards, and each ward can have multiple staff members.
* Assumption 5: Each supplier can provide multiple supply items, and each supply item can be provided by multiple suppliers.

**Step 3.5: Database Schema**

* Ward (ward\_number (PK), ward\_name, ward\_location, beds\_count, ext\_numbers)
* Patient (patient\_number (PK), patient\_name, age, address, contact\_number)
* Medication (medication\_number (PK), medication\_name, dosage, method\_of\_admin, start\_date, finish\_date)
* Supply\_Item (item\_number (PK), item\_name, item\_description, quantity\_in\_stock, reorder\_level, cost\_per\_unit)
* Pharmaceutical\_Supply (drug\_number (PK), drug\_name, description, dosage, stock\_levels)
* Requisition (requisition\_number (PK), staff\_details, ward\_information, item\_drug\_details, cost, quantity\_required, date\_of\_order, delivery\_date, charge\_nurse\_signature)
* Staff (staff\_number (PK), staff\_name, qualifications, prev\_work\_experience)
* Supplier (supplier\_number (PK), supplier\_name, address, email\_contacts, telephone\_number, fax\_number)