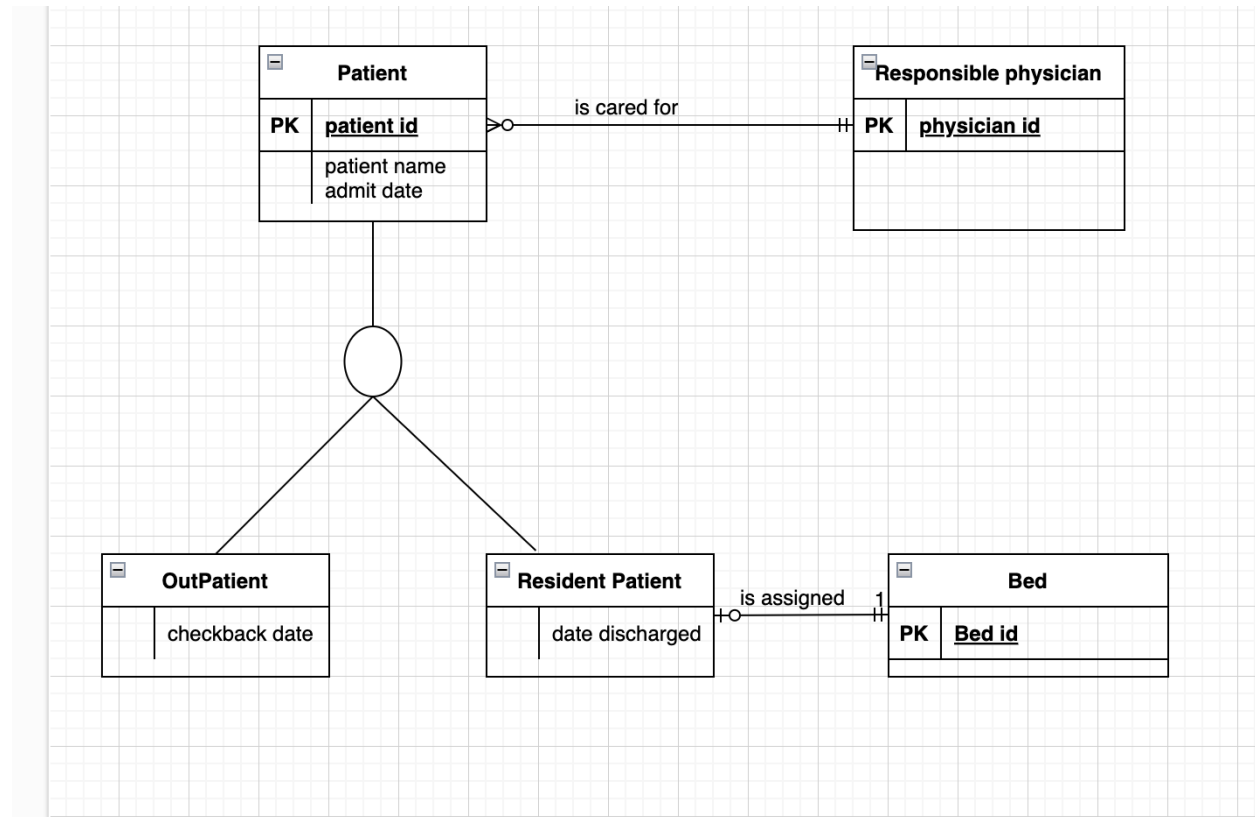


Homework Assignment 4

3-22.



Entities:

1. **Patient:** who has been admitted to a hospital for a medical treatment or procedure.
2. **Responsible Physician:** Physician assigned to each, and every patient admitted to the hospital.
3. **Outpatient:** it is a subtype of patient admitted to the hospital for treatment.
4. **Resident Patient:** it is also a subtype of patients admitted to hospital for treatment. These kinds of patients have to stay in the hospital for treatment.
5. **Bed:** For each patient staying in the hospital has been assigned with a bed.

Attributes:

1. **Patient ID:** It is a unique identifier of patients admitted to the hospital.
2. **Patient name:** name of each patient admitted to the hospital.
3. **Admit date:** An attribute of patients admitted to the hospital giving information about the when the patient is admitted to the hospital for treatment.

4. **Physician ID:** It is a unique identifier for Responsible physician entity.
5. **Checkback date:** an attribute unique to patient with subtype Outpatients. It signifies the date of follow up visit to the hospital.
6. **Date Discharged:** it is an attribute for subtypes of patients "Residential patient". It signifies the date on which patient is discharged from the hospital.
7. **Bed ID:** Each residential patient is assigned with the bed ID which is a unique identifier of the bed assigned to them.

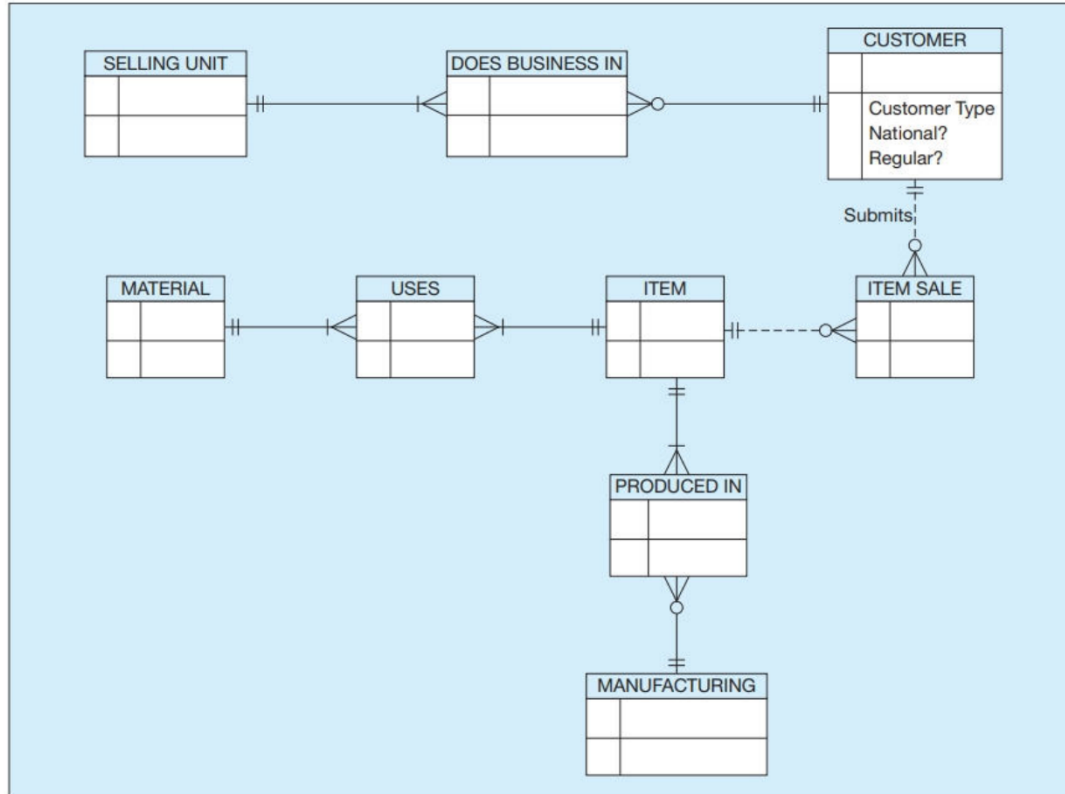
Relationships:

1. **Is cared for:** It is relationship between each patient admitted to the hospital and the physician assigned to them. Each patient will compulsorily have a physician assigned. A physician may or may not see multiple patients.
2. **Is Assigned:** Each Residential patient staying in the hospital has been assigned with a bed. It is a one-to-one relationship. However, it is possible that a bed might not be assigned to any patient.

3-23.

FIGURE 3-13 (continued)

(b) EER diagram for entity clusters (using Microsoft Visio)



- a. Since customer entity has 2 types of customer regular customer and national customer and only regular customers, not national ones, conduct business within a sales territory, not every instance of the customer entity cluster is involved in transactions within a selling unit. Hence, the cardinality at do Business in is optional many. In the same way, as each sales territory engages with at least one regular customer, it can be deduced that every sales territory is linked to at least one instance of the customer entity cluster, resulting in cardinality to be mandatory one or many.
- b. The entity Item includes attributes of both product line and the product which can include product line id, product line name, product line season, gender, end date, online date, description, Product id, product name, product price etc.
- c. The attribute of material will be the combination of attributes of **vendor**, **supplier**, **supplies**, and **raw material**. The attribute includes vendor id, vendor name, location of vendor, supplier id, supplier name, contract number, supply unit price, supply id, material id, material name, material cost, etc.

3-24. Virtual Campus:

[ERD](#)

