**Assignment 1**

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Part 2

**Part II Conceptual Data Modeling**

**Q4.** Read the “**Mountain View Community Hospital**” case study provided.

**Solution:**

|  |  |
| --- | --- |
| **Entity type** | **Description** |
| **Patient** | Individuals admitted to the hospital or registered as outpatients, identified by a medical record number (MRN). |
| **Physician** | Hospital medical staff members who admit patients and administer treatments, identified by a physician ID. |
| Bed | Hospital beds assigned to admitted patients, identified by a bed number and room number. |
| **Nurse** | Healthcare professionals responsible for patient care, identified by an employee number. |
| **Diagnosis** | Medical conditions diagnosed by physicians, identified by a diagnosis ID/code. |
| **Treatment** | Medical tests or procedures ordered and performed for patients, identified by a treatment ID/code. |
| **Order** | Instructions issued by physicians for treatments, tests, or medications, identified by an order ID. |

**(2)** Per each entity types, list all possible attribute types. For attribute characteristics, indicate only composite, complex, multi-valued, derived, and required. If any, indicate the key attribute type(s) of the entity type. Also if available, give other specifications (e.g., domain, constraint) of the attribute type.

Solution:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity type | Attribute type | Attribute characteristic  (composite, complex, multi-valued, derived, required) | Key (Simple/Composite) | Other Specification |
| Patient | MRN (Medical Record Number): | Simple, Composite (if composed of multiple parts) | Composite |  |
| Name | Simple, Required | Simple |  |
| Physician | Physician ID |  |  |  |
|  | Name |  |  |  |
| Bed | Bed Number |  |  |  |
|  | Room Number |  |  |  |
| Nurse | Employee Number |  |  |  |
|  | Name |  |  |  |
| Diagnosis | Diagnosis ID/Code |  |  |  |
|  | Diagnosis Name |  |  |  |
| Treatment | Treatment ID/Code |  |  |  |
|  | Treatment Name |  |  |  |
| Order | Order ID |  |  |  |
|  | Order Date |  |  |  |
|  | Order Time |  |  |  |
|  |  |  |  |  |