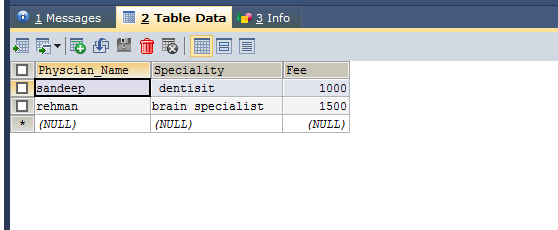
**Objectives**

* Create Database for the following case studies:
* The study team identified a preliminary set of 11 entity types that describe the data required by the hospital in support of the various business functions: FACILITY, PHYSICIAN, PATIENT, DIAGNOSTIC UNIT, WARD, STAFF, ORDER, SERVICE/ DRUG, MEDICAL/SURGICAL ITEM, SUPPLY ITEM, and VENDOR. From discussions with hospital staff, reviewing hospital documents, and studying existing information systems, the study team developed a list of business rules describing the policies of the hospital and nature of the hospital’s operation that govern the relationships among these entities. Some of these rules follow:
* A FACILITY maintains one or more DIAGNOSTIC UNITs (radiology, clinical laboratory, cardiac diagnostic unit, etc.).
* A FACILITY contains a number of WARDs (obstetrics, oncology, geriatrics, etc.).
* Each WARD is assigned a certain number of STAFF members (nurses, secretaries, etc.); a STAFF member may be assigned to multiple WARDs.
* A FACILITY staffs its medical team with a number of PHYSICIANs. A PHYSICIAN may be on the staff of more than one FACILITY.
* A PHYSICIAN treats PATIENTs, and a PATIENT is treated by any number of PHYSICIANs.
* A PHYSICIAN diagnoses PATIENTs, and a PATIENT is diagnosed by any number of PHYSICIANs.
* A PATIENT may be assigned to a WARD (outpatients are not assigned to a WARD). The hospital cares only about the current WARD a patient is assigned to (if assigned at all).
* A PATIENT uses MEDICAL/SURGICAL ITEMs, which are supplied by VENDORs. A VENDOR also provides SUPPLY ITEMs that are used for housekeeping and maintenance purposes.
* A PHYSICIAN writes one or more ORDERs for a PATIENT. Each ORDER is for a given PATIENT, and a PATIENT may have many ORDERs.
* An ORDER can be for a SERVICE such as diagnostic test (lab tests such as lipid profile, CBC, liver function tests; diagnostic imaging such as MRIs and X-rays) or a DRUG.
* For each of the descriptions below, perform the following tasks:

Create a database

* A book is identified by its ISBN number, and it has a title, a price, and a date of publication. It is published by a publisher, which has its own ID numberand a name. Each book has exactly one publisher, but one publisher typically publishes multiple books over time.
* A piano manufacturer wants to keep track of all the pianos it makes individually. Each piano has an identifying serial number and a manufacturing completion date. Each instrument represents exactly one piano model, all of which have an identification number and a name. In addition, the company wants to maintain information about the designer of the model. Over time, the company often manufactures thousands of pianos of a certain model, and the model design is specified before any single piano exists.
* A piano manufacturer (see above) employs piano technicians who are
* customers. Each piano is inspected by at least two technicians (identified by their employee number). For each separate inspection, the company needs to record its date and a quality evaluation grade
* A college course may have one or more scheduled sections or may not have a scheduled section. Attributes of COURSE include Course ID, Course Name, and Units. Attributes of SECTION include Section Number and Semester ID. Semester ID is composed of two parts: Semester and Year. Section Number is an integer (such as 1 or 2) that distinguishes one section from another for the same course but does not uniquely identify a section. How did you model SECTION? Why did you choose this way versus alternative ways to model SECTION?

**Snapshots of Results.**

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