

## **Assignment: ER Modeling**

Create an ER model for the following scenario. Make sure that you read the description carefully. Your diagram should reflect all entities, attributes, and relationships mentioned in the text. You may need to add a primary key (a unique identifier) if one hasn't already been specified in the instructions.

You must create your diagrams electronically, and they cannot be hand-drawn. You can use PowerPoint to create the diagrams, with each diagram on its own page. You may copy and paste from the class slides for the symbols to use, or create your own.

### **Guidelines**

- The notation in your diagrams must be consistent with the "crows-feet" ER models we covered in class.
- You must include your name at the top of the document.

### **Evaluation**

Your diagrams will be graded using several factors:

- The correct identification of entities and attributes.
- The correct identification of relationships between your entities.
- The identification of cardinality between entities.

### **Scenario : Hospital Staff and Patients**

First Philadelphia Hospital wants to create a database to track the assignments of doctors and nurses. Doctors and nurses are considered staff - the database should contain their name, address, social security number, and their role (doctor or nurse). Patient information to be stored in the database includes their name, address, and their insurance company. Details about the insurance company that should be included in the database are its name, address, and the provider number.

Patients are assigned to only one room, and each room can house two patients. Nurses are assigned to rooms (not patients), and each nurse can be assigned to more than one room. Each room has only one nurse assigned. Doctors are assigned to patients, and can be assigned to more than one patient. Patients can be assigned to more than one doctor. This means two patients in the same room may have different doctors, but will always have the same nurse.

Procedures should also be recorded. A doctor performs a procedure on a patient. Information about a procedure includes the name of the procedure, whether it is in-patient or out-patient, and the type (general medicine, surgery, etc.). A patient can undergo multiple procedures by the same (or different) doctors, and a doctor can perform the same procedure on multiple patients.

The date of the procedure and a brief description of the outcome should also be recorded for each procedure a doctor performs on a patient.