Assignment for Module 7

The assignment for Module 7 provides practice using the Crow's Foot notation. I encourage you to use the ER Assistant or Visual Paradigm to complete the problems in module 7. Module 7 contains software demonstrations for both the ER Assistant and Visual Paradigm.

1. Basic Crow's Foot Notation Requirements

1. Create an ERD containing the *TestOrder* and *Specimen* entity types and a 1-M relationship from *Specimen* to *TestOrder*. For each specimen collected, the database should record a unique *SpecNo*, *SpecArea* (vaginal, cervical, or endocervical), and *SpecCollMethod* (thin prep or sure path). A test order contains a *TONo* (primary key), *TOTestName*, *TOTestType* (HPV, CT/GC, CT, or GC), and *TOTestResult* (positive, negative, equivocal, or failure). A specimen does not have a test order until a delay, from hours to days. If a test order produces a failure, the specimen is given a new test order and tested again until a non-failure result is obtained. A test order is created for exactly one specimen.

2. Augment your ERD from problem 1 with the *Supply* entity type and an M-N relationship between *TestOrder* and *Supply*. Choose a name for the relationship based on your common knowledge of test orders and supplies. A test order can use a collection of supplies (0 or more) and a supply can be used on a collection of test orders (0 or more). The *Supply* entity type contains *SuppNo* (primary key), *SuppName*, *SuppLotNo*, and *SuppQOH*.

3. Use the M-N equivalence rule to transform the M-N relationship in Problem 2. You should choose appropriate names for the new relationships and entity type.

4. For each consistency error in Figure 1, you should identify the consistency rule violated and suggest possible resolutions of the error. The ERD has generic names to help will concentrate on finding diagram errors rather than focusing on the meaning of the diagram
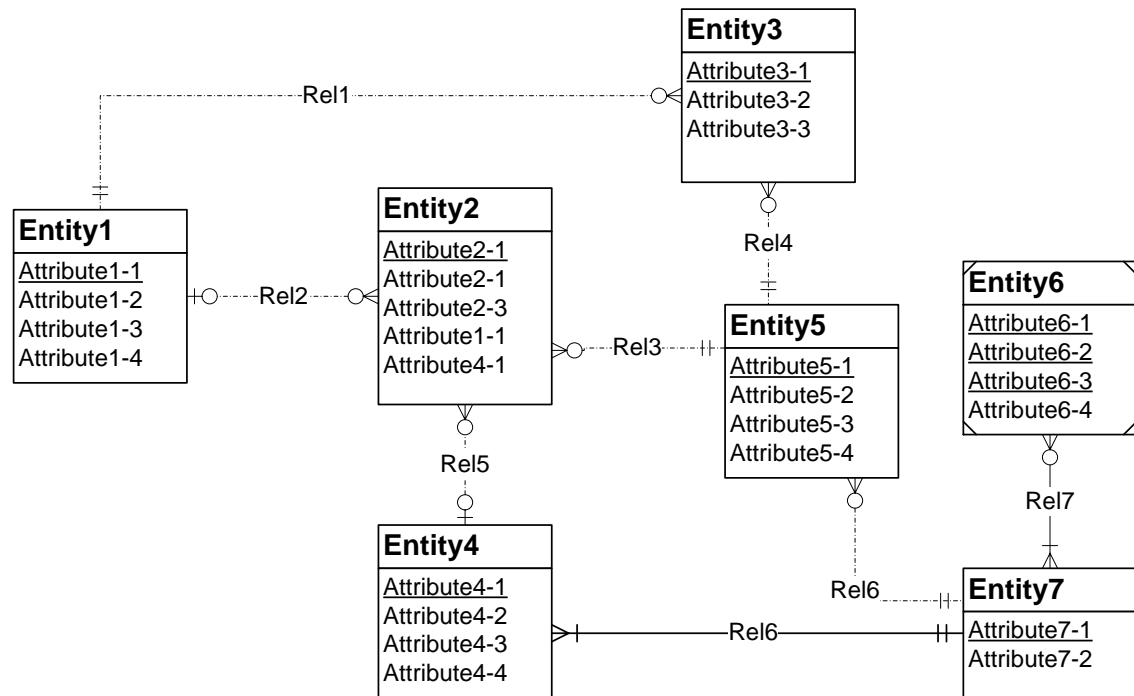
Figure 1: ERD for Problem 4

1. Entity 6 with PK rule violation. Weak entity does not have any primary key.

2. Entity 2 with redundant FK violation. The problem can be resolved by removing Attribute1-1 and Attribute4-1, both primary key in other entities.

3. Rel6 should not be identifying relationship, as both entity4 and entity7 are regular entities.

4. Resolution of identification dependency cardinality rule. The problem can be resolved by changing the weak entity's cardinality in Rel7 to (1,1)

2. Submission

The submission requirements involve evidence that you draw the ERD for each problem and provide an answer to the 4th problem. You will submit 4 documents with each document containing an ERD drawing. You should use the same table and column names as specified in the assignment. For problem 4, you should indicate the consistency errors in the diagram and

type your suggested resolution. You should not put any identifying details about yourself in your

submitted document.