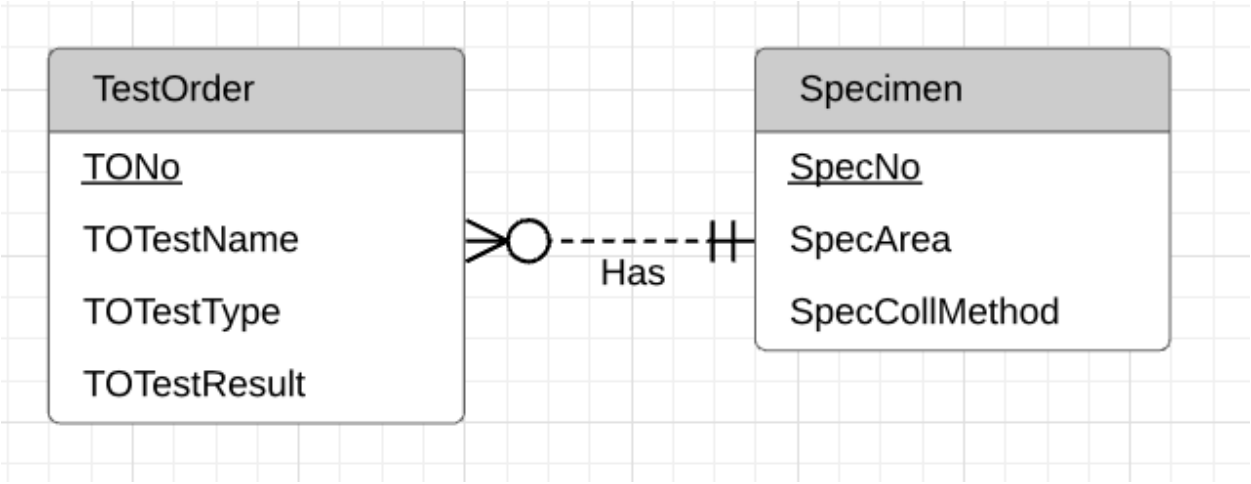
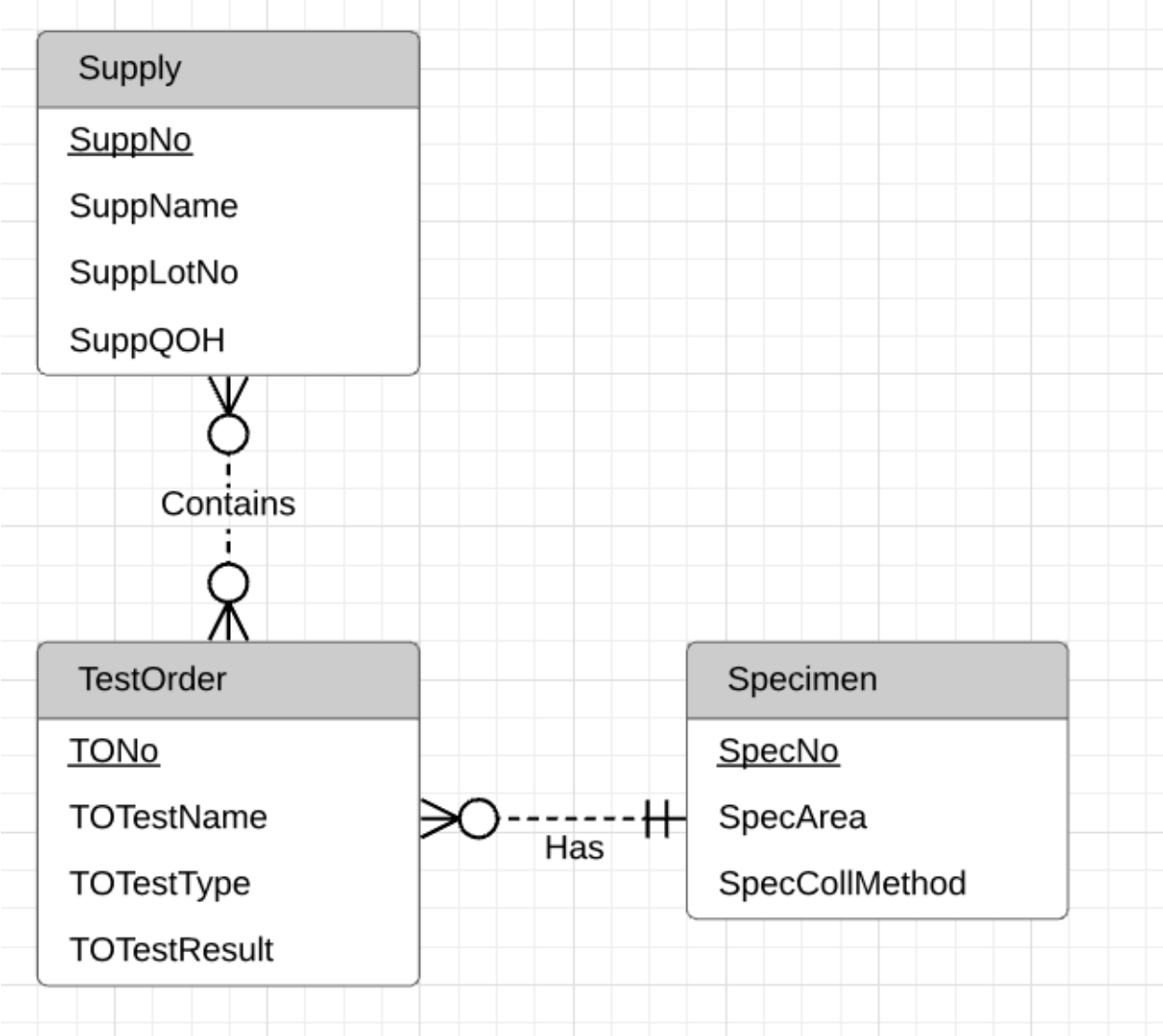
Assignment for Module 7

1. Basic Crow's Foot Notation Requirements

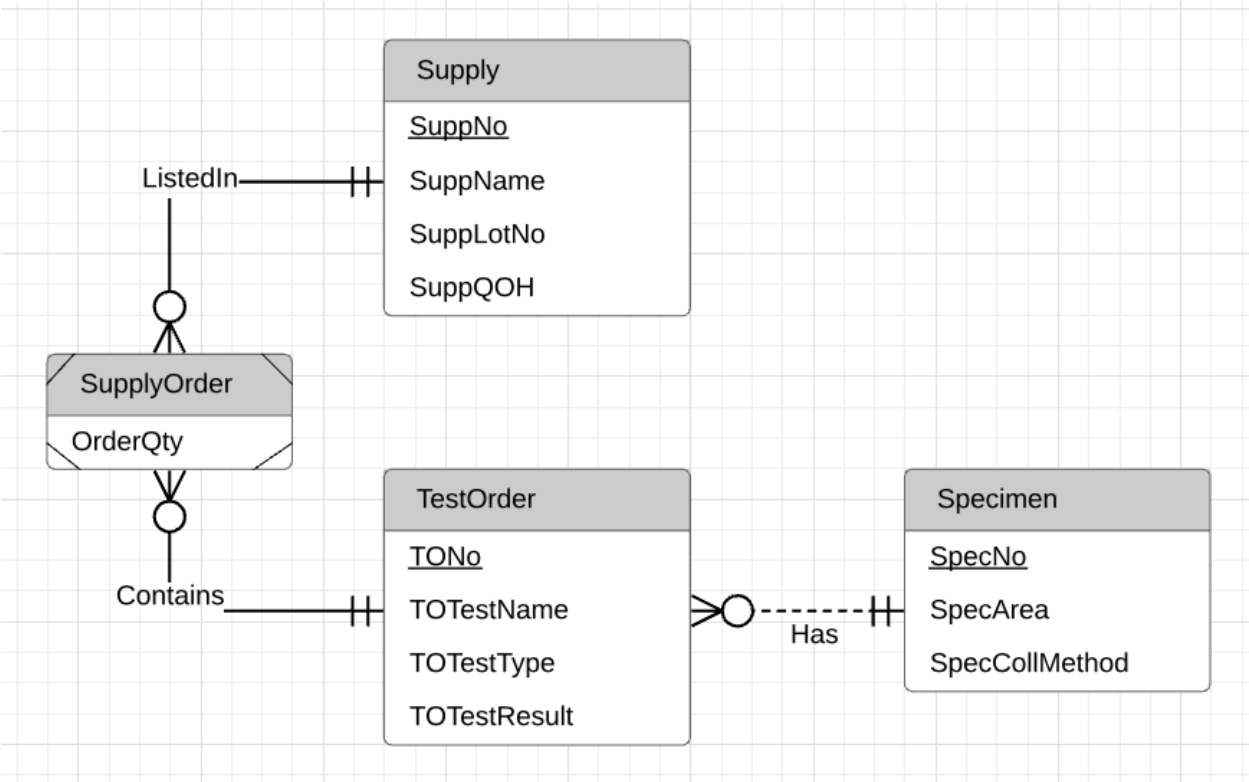
1. Create an ERD containing the *TestOrder* and *Specimen* entity types and a 1-M relationship from *Specimen* to *TestOrder*. For each specimen collected, the database should record a unique *SpecNo*, *SpecArea* (vaginal, cervical, or endocervical), and *SpecCollMethod* (thin prep or sure path). A test 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.



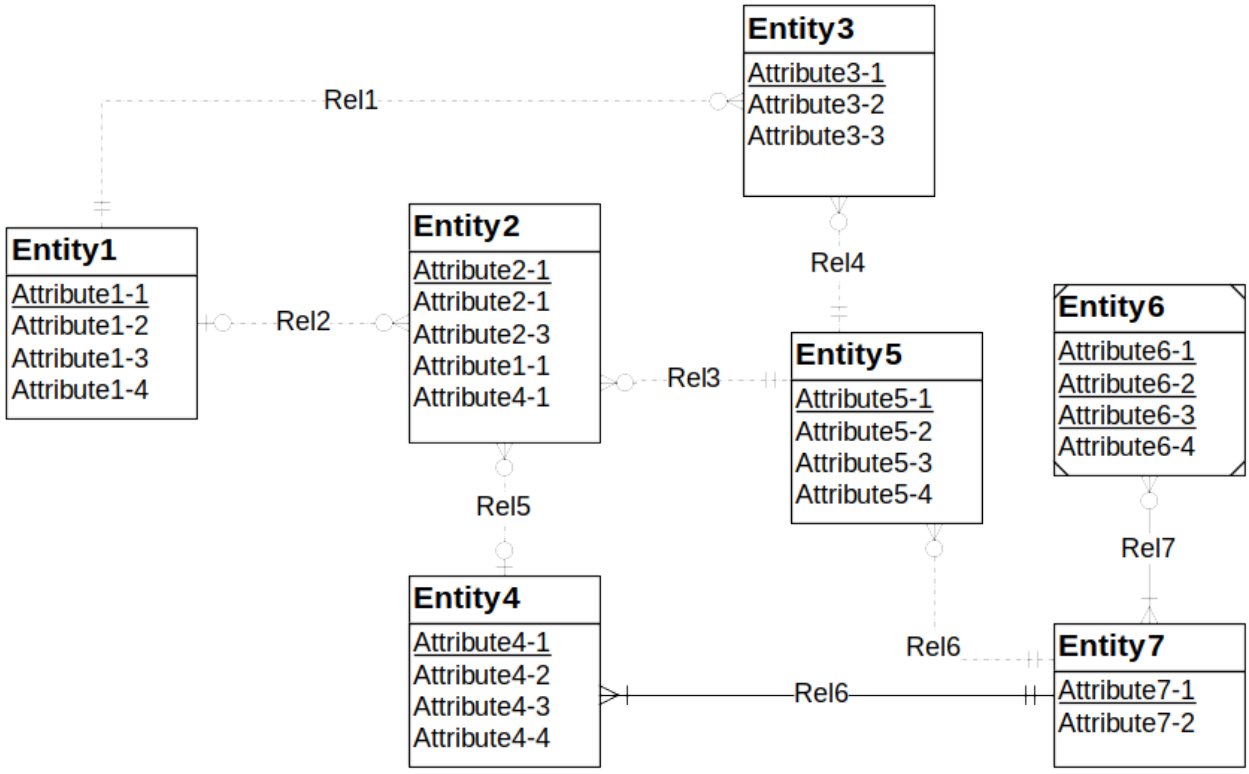
2. Augment your ERD from problem 1 with the *Supply* entity type and an M-N relationship between *TestOrder* and *Supply*. Choose a name for the relationship based on your common knowledge of test orders and supplies. A test order can use a collection of supplies (0 or more) and a supply can be used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



1. Remove Attribute2-1 of Entity2 as it is listed twice. This leads to redundancy.

2. Relationship between Entity4 and Entity7 violating Identifying relationship rule, i.e dotted is missing.

3. Attribute1-1 and Attribute4-1 are redundant foreign keys in Entity2.

4. Relationship between Entity6 and Entity7 violates Id Dependency Cardinality rule, i.e Maximum cardinality from Entity6 and Entity7 should be 1