CS327E Lecture 4 - Wednesday 2/3/2016

Reading Quiz
Q1: Ans = D
Q2: Ans = D
Q3: Ans = A
Q3: Ans = C
Q4: Ans = C
Q5: Ans = D

Concept Questions
1. Suppose we have a database of favorite cooking recipes. We want to find all recipes that are main courses and have notes. Assume that the field RecipeClassDescription indicates the course type (e.g. 'main', 'dessert', etc.)
   a. This works because recipeClassID is the same for both tables, allowing the using keyword. This also covers the case where the notes are null and also pulls the recipes that are main courses.
   b. Using the where keyword, we are doing an implicit join, and everything else is the same.
   c. Order doesn't matter in joins so this works also.
   d. This is the correct answer

2. Suppose we have a student enrollment database and we want to report on students and all the classes in which they are currently enrolled. How can we express the FROM-JOIN-WHERE clauses of this query?
   a. This works because the implicit join using the WHERE statement works because student is linked to enrollment and enrollment is linked to classes.
   b. When using the USING keyword, this is fine in this case, we only have two tables that have the student_id and two tables which have the classid. Note that there would be an ambiguous column error if there were three tables which had the same id.
   c. This works because it is similar to a, except without using the implicit join and specifying WHERE.
   d. This would also work.
   e. This is the correct answer

3. Are the two queries **equivalent**?
   a. This is the correct answer, always start from the rightmost subquery and work your way up.
   b. The two queries are equivalent.
   c. This is not the correct answer.

4. Suppose we work at an employment agency and we want to find job candidates who are skilled in both 'Linux' and 'Python'. What query can we use to compute this answer?

  a. We're saying that the predicate has to equal 'Linux' and 'Python', but we only have one of these values per record, returning an empty result set.

  b. We would get back candidates who only have one of the desired skills.

  c. We need a self join so that we can take the intersection of both sets.

  d. It's equivalent to B and essentially not what we want.

  e. This is not correct.

5. Here is a view of the bank schema from our book. From this diagram, what can you tell about the relationship between a customer, an individual, and a business? (We'll go over this in the next lecture)