Assignment 4 CIS 409

Using the same subject area as you did for Assignment #3 (unless directed by your instructor to choose another subject area), you will create a star schema model with both types of factless fact tables, as discussed in the course lecture:

Case 1: business activity (something happened”), but nothing to measure

Case 2: “conditions, coverage, or eligibility” – a “state of being” – but nothing to measure

If you had any points deducted for your dimension tables in Assignment #3 for things such as primary keys not being surrogate keys, or missing NOT NULL clauses, or anything else, you will need to "fix" any issues for Assignment #4.

**You will remove your transaction-grained fact tables from your model and replace them with factless fact tables, as described above.**

**SOME TIPS:**

1) You **must**have a date/time dimension for your "Case 2/conditions, coverage, eligibility" factless fact table. If you didn't have a date/time dimension in your assignment #3, then you should delete one of your dimensions and replace it with a date/time one.

2) Further, you almost always will need two relationships between that Case 2 factless fact table back to that date/time dimension. See the example in the lecture video and also the textbook. Think of it this way: your "eligibility" or "coverage" starts on a date (or time), and ends on another date (or time). Your date/time dimension is a master list of all possible dates and/or times. So you would have 2 "links" back to that "master list" - one for the start, and the other for the end.

3) **WARNING: FACTLESS FACT TABLES CAN BE TRICKY IF YOU RUSH THROUGH THEM.**The best approach is to work on your "business event/nothing to record" one first. Then, once you get that one done, do the coverage/eligibility one.

**GRADING RUBRIC:**

25 points total: 9 points for dimension tables, 8 points for each of your faceless fact tables

* Dimension tables: 3 points for each one, "all or nothing" correctness:
  + surrogate key as primary key with correct data type and NOT NULL clause
  + correct PRIMARY KEY clause
  + no FOREIGN KEY clause or other syntax violations
* Fact tables: 8 points for each, based on:
  + SQL syntax: 4 points, "all or nothing" including PRIMARY and FOREIGN KEY clauses/constraints; correct primary key designation; no facts/measurements, only keys; other syntax
  + Correct fact table usage: 4 points
    - For both fact tables: your dimensions are correctly and fully related to the business subject area that you selected - (example: if you were to do "insurance coverage" then you must have one or more appropriate dimensions related to insurance; if you were to do "patient admissions" then you must have dimensions for patient and facility; etc.)
    - "Business event with nothing to measure" must be correct and related to your Assignment #3 subject area.
    - "Coverage/eligiblity/'state of being'" must be correct and also related to your Assignment #3 subject area - make sure that your relation(s) to your date/time dimensions are syntactically and semantically correct (see the "hints" section above).