IST722: Class Exercise 4

**This is an individual assignment.**

**Before you begin, please make sure you’ve read and understand 1) our class honor code, 2) course policies on late work and 3) participation policies as posted on the syllabus. “I didn’t know” is not an excuse.**

**You should cite your sources in a standard format like MPA or APA and include a list of works cited.**

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# Instructions (Refer Units 4 & 5)

Answer each of the following questions as concisely as possible. More is not necessarily better. Please justify your answer by citing your sources from the assigned readings from our textbooks, our class lectures, or online if directed to do so. Be sure to cite in text and include a list of works cited. Place your answer below each question. When you’re finished, print out this document and bring it to class as part of your participation grade.

# Questions

[1] Summarize (SCD) Slowly Changing Dimensions and (RCD) Rapidly Changing Dimensions. Give examples.

**SCD is where dimensional data changes infrequently but it does not need a strategy for addressing changes. Examples are: customers change their phone numbers or delivering addresses. RCD is where dimensions are changing very quickly and this may cause any kind of maintenance and performance. Examples are: making phone calls every day.**

[2] Explain a) conformed dimensions b) role-play dimensions c) degenerate dimensions d) factless facts. Give examples.

**Factless fact tables are used to establish relationships between elements of different dimensions such as the amount of value/measure to record the sold amount.**

**Degenerate dimensions are where change very frequently and has too many for their own dimensions. Not a dimension key or fact, but in the fact table. Such as online order number or ticket number.**

**Role-play dimensions are where same dimension play more than one logical role. Such as data and time.**

**Conformed dimensions are dimension that has the same meaning to every fact which it relates to such as day, week, month or year.**

[3] What is the best choice for PK in a Dimension table? What is the best choice for PK in a Fact table?

**The best choice for PK in a fact table is usually a composite key that is made up of all of its foreign keys.**

**The best choice for PK in a dimension table should be the column that has unique and distinct values in it.**

[4] What are Database Schemas? How are they useful? Give examples.

**Database Schemas are namespaces which facilitate the separation, management and ownership of database objects. And the objects are securable by the schema. It can give developers a clear point of reference about what tables and fields a project contains. Example: the blueprint of database.**

[5] What are Conceptual, Logical and Physical Models in the data warehouse context? Give examples of each.

**Conceptual Design: by using High level dimensional modeling worksheet to identify Functional Requirements. Examples:  Bus Matrix. Logical Design: Dimensional modeling with detailed level dimensional modeling worksheet. Dimensional models as deliverables.** **Physical Design: Creating actual database objects such as database tables, keys, constraints and views. Examples: tables, columns, primary and foreign keys.**

WORKS CITED:

**Lecture Slides and Professor Fudge’s slides**