IST722: Class Exercise 3

**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 Unit 3)

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] How does dimensional modeling reflect business processes? What are dimensions in dimensional modeling? Provide examples.

**The purpose of dimensional modeling is to enable BI reporting, analysis and query. Dimensional Data Modeling comprises of one or more-dimension tables and fact tables. Some examples of dimensions are location, product, time, promotion, organization.**

[2] Explain the difference between a functional and non-functional requirement? Provide examples.

**Functional Requirement includes business rules, historical reports, external interfaces, administrative functions and transactions adjustments. It usually focuses on addressing needs of users. Non-functional requirements usually constrain the system architecture. They outline rules includes performance, capacity, scalability and so on.**

[3] What are the three business process types? Provide an example of each.

**Events or transactions: based on a business event with one row per line. It corresponds to a point in space and time. Once it’s inserted it is not revised or updated with rows inserted into the fact table when transactions or event occurs. Good example is: online sales and returns.**

**Accumulating Snapshot: based on status and is used to capture a business process workflow. Fact rows are initially inserted and updated as milestone occur. Fact tables have dates that denote milestones and record change is status. Good example is: online order delivering tracking.**

**Periodic Snapshot Fact: Snapshots of consecutive measurements are taken and staked in the fact table which are taken monthly or weekly. They complement detailed transactions but do not represent them and are only required when source system does not store any transactions. Good example is class schedule system.**

[4] What are the three types of facts? Provide an example of each.

**Additive: They can be summed across all the dimensions and they are the most useful fact. Such as online sales.**

**Semi-additive: They cannot be summed across all the dimensions and they are not belonging to the fact table but sometimes from the time table. Such as time card system.**

**Non-additive: They cannot be summed across all the dimensions and they are not belonging to the fact table but belonging to dimensional table. Such as weight of a person.**

[5] Come up with your own functional requirement for any business/department – state that as a single question. Then, identify the business process, business process type, dimensions and fact(s) based on that statement.

**How many pairs of sneakers does sneaker shop sell last week?**

**How many pairs of sneakers = fact or measure**

**Sneakers = Type of product**

**Sales = Business Process – Fact table**

**Week = attribute of the date dimension**

**Business Process Type = transactions**

WORKS CITED:

**Lecture slides & Professor Fudge’s slides.**