IST722: Class Exercise 2

**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.**

|  |  |
| --- | --- |
| Your Name: | Yunhan Zhang |
| Your Email: | Yzhan297@syr.edu |

# Instructions (Refer Unit 2)

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] What is DW Technical Architecture? Give examples.

**It is a method of defining and organizing data communication processing concerned with data and data flows. And it includes the complete set of functions and services provided within its components, procedures and rules required to perform the functions and provide the services.**

[2] What is DW System Architecture? Give examples.

**Anything that is not related to technical architecture is system architecture such as severs, networks, data storage and cloud. Symmetric multi-processing, massively parallel processing and map-reduce are some of the examples of DW technical architecture.**

[3] What are the 4 types of data stores found in technical architectures?

**NDS; Staging; DDS; ODS.**

[4] Describe the 5 technical architectures discussed throughout the coursework. Be brief.

**Independent data mart architecture; The least complex architecture with source system and one or more DDS system which is a separate entity.**

**Centralized; basically, as same as the independent data mart architecture but whereas all data marts are consolidated in a single data store.**

**Enterprise Bus Architecture; All dimensions from DDS store are reused across the data marts so that there’s a single dimension for the master data.**

**Hub & Spoke; Lies in the NDS which is single version of the truth which is sent to DDS as and when needed.**

**Federated with ETL; A more complex architecture which is used when there’re several data warehouses which are used for.**

[5] Discuss the comparative success of the 5 technical architectures. Be brief.

**The bus, hub and spoke, and centralized architectures earned scores on the success metrics. This helps to see why these competing architectures have survived over time – they are all successful for their intended purposes. In terms of information and system quality and individual and organizational impacts, no single architecture is dominant at this point.**

WORKS CITED:

Slide & video for Unit 2.