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Lab 1

Short Essay: Data vs Information - Select a database in use today (real or imagined) and identify the elements of “data” stored therein and describe how the database organizes the “data” into “information”. Give contrasting examples of “data” and “information” that illustrate the meaninglessness of “data” without context and organization. Talk about the value the “information” provides once the component data is given context.

Databases have changed the way we live and function in todays modern world. Businesses use Databases in many different beneficial ways. The FootLocker company uses a Database. This is a shoe company that contains a Database of shoes. The elements of data that are collected by this company is taken from a variety of interests based off a multitude of perspectives that range from the consumer to many other shoe brands such as Nike and Jordan. This also includes shoe sizes, types of shoes, color of shoes, and texture of shoes. Anything that involves shoes the company will take in as their data. Data can only go so far without being organized into information.

The information that is formed from the data allows businesses to grow their profit. FootLocker takes their collected data and organizes their findings so that it can be easily found wether it be on the web or in stores. FootLocker organizes their shoes into specific categories that help consumers navigate different types of shoes. For example, on the FootLocker website there are tabs that have different sections that go deeper into those sections. There can be a tab for only women that can have sections for different types of shoes such as shoes for running, basketball, casual, training, walking, or even boots. If FootLocker never uses their data and organizes their data into information, they would never make profit because consumers would never be able to find what shoe they want to buy. Poor information leads to bad consumer reviews for FootLocker meaning a decrease in profit growth, which leads to a lost in consumers. Excellent data and organized information and allow for any business with a database to flourish.

Short Essay: Data Models - Briefly describe the hierarchical and network pre relational data models. Explain their shortcomings in relation to the relational model. Considering this, what do you think of XML as a model for data storage?

The way data is collected determines how it can be used. The hierarchical and network pre relational data models display data in tree like structure. These data models begin with a general term that gets divided and spread out into other terms and those terms create new terms connect under them by a line based on their attribute. This is a great way of categorizing what comes term comes before the other and which term connects to another. However, this is limiting in detailed compared to the relational model. The relational model contains more of a chart structure that contains titles that have sub attributes that can be organized in a more efficient way. There is another data model structure that combines all of the data models to create an excellent form of storage. This data model is called the XML model. It takes the tree like structure and detailed titled attributes to create an organized form of display. I believe it is the optimal choice to go with. The XML model uses its lines to hold character traits that allows for a clear understanding of why that specific information is being connected. Without clear

heading titles this model can become useless. However, with good organization skills this type of diagram becomes simple to complete and understand. In my opinion I would use the XML model for data storage.