

Lab #1

1. Data vs. Information

Databases store data which are facts or specific details from which information is derived.

An example of a database would be a grocery store's point of sales database. A cashier scans items at the time of purchase. Each item would be represented as data in the database. The quantity sold with the day of week could be another data point in the database so the company can better understand the quantity of bananas that were sold each day of the week. Information that the grocery store may need to know could be the average number of bananas sold in a week so they stock the shelves appropriately. They might even want to know which day most bananas are sold. The information of how many bananas are sold on the day of the week is important to purchasing the correct amount of bananas. The individual data facts; bananas, quantity sold, day sold alone doesn't provide the grocery store valuable information. However, this data is being stored into the database, and the processing of the data into reports and information is what is important to the company for purchasing, inventory and even trending information.

2. Data Models

Network pre-relational databases is a data model that allows multiple parents as well as multiple child records to form a web-like structure of networked records.

Hierarchical database models have one parent with many children records and therefore, has a one-to-many relationship model. It has a tree-like structure. To add fields to a data record in the network database model would mean to change all the records below it or else the

application would break. The application developer would have to change the application to support the new structure. Using a hierarchical database model, the application developer still needs to understand how the database is organized in order to design and code the application. The relational database model helped with the latter. It helped isolate applications from many changes. Relational databases allows the data to be organized in a way to support multiple ways of using it, and even ways that weren't thought of when the database was created.

I don't think XML could be used for data storage. It is used in combination with HTML. XML carries the data where HTML focuses on displaying the data. XML data is carried from system to system. This is especially good when systems have incompatible data formats.

Works Cited

<https://www.coursera.org/learn/data-manipulation/lecture/o4kbj/pre-relational-databases>

<https://www.techopedia.com/definition/19782/hierarchical-database>

https://www.w3schools.com/xml/xml_what_is.asp

Screen Shots of pgAdmin

