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Database Management

Short Essays

Data and Information

The difference between data and information lies in interpretation. While both may seem to be synonyms for intelligence, they are wholly opposite yet relative to each other. Data tends to refer to strict numbers and characters; while databases do contain data, that is not the purpose of said database. This data is typically some unintelligible grouping of nonsensical words, phrases, numbers or even symbols. They do not appear to correlate to anything relevant nor anything that would contribute to a business's need for file structure, but this is where information comes in. Just as those hired to gather reports and statistics concerning a database's information, the technology they utilize will not function properly without it's data.

While data can be understood as "raw", information would be considered the polished form of data. Information holds the relative terms and labels needed to give data it's purpose or interpretation. For example, a database may hold *data* concerning profit margins of a local café's previous financial period, however unless it holds *information* supporting the data, the café will not understand what needs to be done in order to maintain or improve its service. However, data is imperative to form the information so heavily needed by today's industries. In conclusion, it would be impossible and financially irresponsible to require or possess one without the other.

Data Models

A data model can be described as "fundamental entities to introduce abstraction in a data base management system"[1]; in short, they help to understand the structure and reasoning behind data in a database. A hierarchical, much like the general idea of a hierarchy, is a database structured in a "falling down" or tree like format. Data begins at one point and branches out, relating to many other points of data until it completely fans out. This structure proves quite useful in terms of efficiency for higher-level data, it also requires a high amount of skill to navigate, create, and maintain.

In comparison, relational database models rely on tables and charts rather than confusing branches and sub-relations. The relational data model stores it's records in a table which contains tuples, keys, schemas, and instances. Developers and administrators tend to favor this model due to its simplicity and easy readability, though it has been known to lag due to large tables or records as well as consume massive amounts of storage. Although both databases have their advantages and disadvantages, it seems to be more likely that businesses will tend to use relational databases more so than XML or hierarchical structures. As XML is

[1] http://www.tutorialspoint.com/dbms/dbms_data_models.html

slowly rising in popularity, popular opinion denotes a strong discouragement in its use, however only time will tell if the structure will become more widely used.

Installation Proof

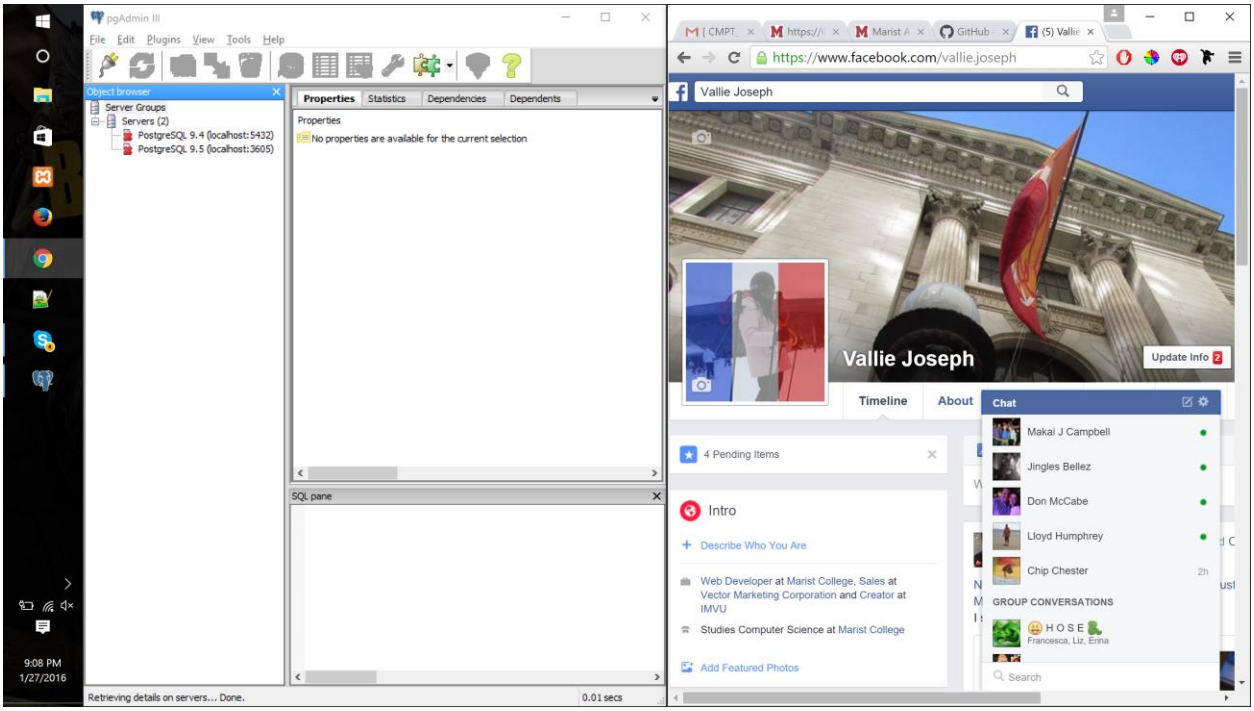

Figure 1Taken Jan 27th 9:08 pm