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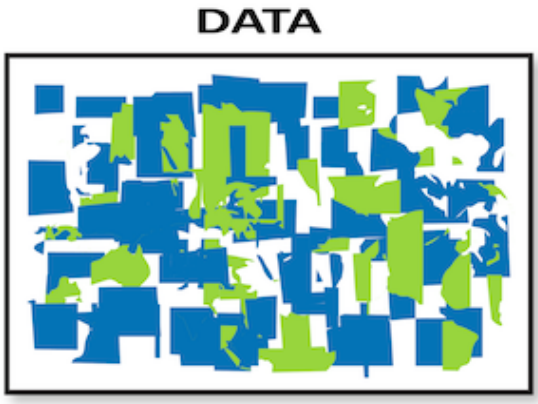
Database Management

Short Essays

Data vs. Information

Aren't they the same? No, actually they are really different and I will explain to you why and how. Data is simply just a figure that has a value with nothing attached to it. It is very unorganized facts that needs processing and structure. When data starts to become more developed or organized (making it more meaningful and useful) that is called information. Information is data that has content to help assist in making a decision. Information is one of the most important things, in today's society we see more and more of it.



When most people think information, the first thing that comes to their mind (or computer screen) is Google. A database company that most people today know and love, that has the upper hand in the process of organizing data into information. Google looks at information integration, and methodologies for making databases share their data seamlessly. Google is capable of letting its user access a lot of information in a very short amount of time. When you type a keyword into Google this acts as data and the websites the company's search engine spits back out at you is the information.

A very interesting thing with the search engine is that what you type in may not come up, or may not directly bring you to the website. I had a very interesting project for my summer internship at Barnum Financial Group, where I was incorporating long tail keyword searches to help drive traffic to the company's website. Long story short, I wanted "BFG" (Barnum Financial Group) to be a keyword that linked back to the company. However, over the summer "BFG" (Big Friendly Giant) came out on the big screen and it was nearly impossible to redirect traffic from the Big Friendly Giant, a family oriented event that you go to, to a financial planning and wealth management company. Needless to say, it is important to have both data and information but sometimes you may need to make the data a bit more like information to get what you want out of the database.

Data Models

A data model is a notation for describing data or information. There are many different models to structure data, and it is an important piece to databases because it is the groundwork of what these database systems run on.

Hierarchical

The hierarchical database is a form of semi-structured data which is represented in a tree like shape, with layers representing information. The model is not as popular as it once was today, because of the integration it had with coding. The data represented things of a more natural state so it was hard to create coding with it hence the reasoning for all the other great models out there to use.

For instance, there is another data model called the relational data model that has been around quite some time and has adapted to fit the modern society, unlike the hierarchical model. The relational model gives a single way to represent data as a two-dimension table called a relation. The importance of this model is the rows and columns used. As most know, Microsoft excel is loaded with these things to help people run a database. It was not always integrated into computers, but it has been the foundation to the spike in technology.

Extensive markup language defines a set of rules for encoding documents in a format that is both readable and machine readable. XML as a model would create things to be much more general and simple because the usability of the internet and textual data format for different languages is a game changer. However, I do like the relational model because since databases are so large, efficiency of access to data and efficiency of modifications to that data are of great importance. I feel as though the only way this can be achieved is through the relational model. Another big aspect that I am not a huge fan of is that the relational model has ease of use, and I have never used XML before so I cannot judge. Despite this, ease of use would also be a very key factor when analyzing which data model works best for the information I am trying to create.