



### Short Essays:

The Amazon.com database today can very easily track how users are using its site. Though collecting data such as a customer's name, address, birthday, and even their friend's similar information as well. Alone, these pieces of information do not hold much meaning to them. Once a pattern is recognized through these pieces of information, however, is when it become information. For instance, a computer does not recognize a correlation between a customer's birthdate and the receiving of packages from others. Amazon database developers are able to take the information given about a customer's birthdate and have gift ideas recommended to those listed on other friends' lists. Other examples of the differences between data and information can be seen through the collection of graduation rates. At first, the numbers do not show much outside of the time that they were collected. It is just a collection of percentages corresponding to years. Over a span of time, however, information could be drawn from the data to show that an increase in teachers' salaries caused a boost in following classes graduating percentages. Without knowing the context of the increase in teachers' salaries, the several years of data would not be of much help.

A hierarchical data model displays its data in a tree-like form. Each bit of data is connected to one other bit of data through links, limiting the amount of connections between similar bits of data. A network data model is similar to a hierarchical data model. A network data model is not restricted to the limitations of a hierarchy, however, it is able to represent data in a more graphical form. In relation to the relational data model, the hierarchical and network data models fall a bit short. Both the hierarchical and the network data models were found to be difficult to code due to its operation only existing at the physical level. A relational data model is able to hold and display data in a much more organized design in comparison to the hierarchical and network data models. In response to XML being used as a model for data storage, it would be a contender. The XML data model allows for a simple method of holding data for multiple related bits of data. The way that it is designed allows for easy coding to allow for bits of data to be grouped together in order to save time and energy to locate similar bits of data.