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### Lab 1

1. One database in use today is one for Amazon.com to store their extensive information. Amazon would have to have different subsets in that database to store and organize different things. For example, they would have a table for the different sellers on Amazon, for the products each seller is selling, for the registered users on the site, etc. By having different subsets, the data is turned into useful information that can then be used for Amazon's purposes. For example, if all the registered Amazon users and all the registered sellers were combined in the same table, it would be harder to differentiate between the two and to give different permissions to each. Once the component data is given context, then it becomes easier to use it in a way that makes sense. For example, separating the products on sale and the products that have been ordered and shipped helps Amazon keep track of what is in the inventory and what has to be sent out to the customers. Having all this information without context makes it meaningless because then it is just users, sellers, purchased products, and inventory all mixed together without a way to call certain things without calling others.
2. The hierarchical data model uses relationships that are one to many. That is to say, there is one parent segment with however many children segments. It could be a single child segment of data or many children segments of data. The network data model uses relationships that are many to many. It does this by having sets with owner types and member types. With these types, members can belong to other sets as either a member or an owner, and an owner can belong to other sets as either a member or an owner. In the relational data model, tables are used for organization and structure. These tables use columns and rows where the rows are unique and each column has a name that is unique. It is better to use the relational model because the hierarchical model can have information that repeats, and the network model lacks structure and can get very complex. This then raises the issue mentioned in the question above about having useful information as opposed to meaningless data. Now, using this information, XML as a model for data storage should be used because it works well with the relational database model, so it is easier to use.

