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Database Management

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Question 1: A database that exists today and that is in use is one used for a company to track their customer data which would include stuff like their name, customer ID, order ID, and phone number. The database would transform this data into information by organizing it with similar pieces of data and giving it context perhaps by labeling its data category. Without context and organization, data would be really hard to get any meaning out of because it would just be a tiny bit of information without any context giving away what it actually means. It would be like having a string of numbers for data without any other information, this string of numbers could be anything from a phone number to a customer ID and you would have no idea of knowing. However, once the data is organized and given context in a database it becomes useful information that can be readily accessed and easily interpreted. Let's say that string of numbers from earlier is grouped with other strings of numbers in the same format and they are all labeled "customer ID" in some part of the database, now you can easily understand what it's used for and the information can be readily accessed and used by whoever the database belongs to.

Question 2: The hierarchical model used a tree structure with nodes to store data, its structure made it easy to understand but compared to the relational model it was inflexible and hard to

achieve complicated data structures with. The network model used links and pointers to access and organize data which allowed for more complexity in comparison to the tree structure, however this also made it harder to pull data from the model in comparison to the tree structure. The relational model on the other hand used tables to organize data which makes it possible to have both complicated data structures and ease of access to data with queries. I think a XML database should work well from what I've read, having it be readable for humans and computers as well as having the data organized into the uniform XML structure seems like it should allow it to store data efficiently.

Github Link: [Not-Patrick1/DatabaseLab1](#)

