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## **Data Models**

In a Hierarchical Data Model, data is organized in a tree structure with a single parent-child relationship. Each parent could have multiple children, but each child can only have one parent. This model is great for demonstrating hierarchical relationships of data, but doesn't work well with complex relationships with multiple paths.

In a Network Data Model, data is organized in a tree structure like the Hierarchical Data Model, except for the fact that data can have multiple parents. This model expands on the Hierarchical Data Model and addresses some of the limitations presented with it.

Both the Hierarchical and Network Data Models faced challenges compared to the relational model. These challenges included navigating the intricate paths of data, maintaining data integrity, as well as scalability issues.

Using XML as a model for data storage would not work great. Although XML is flexible and can let users define their own types of data, this results in data consistency issues. XML files also take up much more file space so you would need increased storage capacity. Overall, XML may work fine for smaller data storage, but once you begin to scale it will become a nightmare.