Data vs. Information

Jasmine's Pizzeria utilizes a database to organize and keep track of orders, inventory, employees, customers, customer addresses, and so on and so forth. The Pizzeria will create a table for each of the listed categories. For example, the orders table could have the following columns: order id, customer id, order details, and order date. Without this organized structure, those at Jasmine's Pizzeria would have no idea what's what. Is Jasmine Castillo a customer or is she an employee? Is this an order id or a customer id? Did this person pay in cash or with membership points? It's important to give context to data or we won't understand it.

Data Models

The hierarchal and network models are very similar. They both branch down from one element and continue to split off into various data. The only difference between the two models is that in the hierarchal model two parents could not share the same child because it would become a network model. A parent not being able to share a child with another parent isn't a great set up. Even though parents could share the same children in the network model, children couldn't exist without belonging to a parent. For example, if a teacher had some crayons and all of them were taken by students save the white crayon, there would be no way to depict that on the network and hierarchal models without error.

The relational model makes up for these shortcomings. Through the creation of tables and relationships among these tables, you can create a database where each piece of data can exist on its own, without having to be connected to another piece of data.