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Lab 1

Data vs. Information

Supermarkets today issue loyalty cards to customers which benefits both the customer and the store. The loyalty card enables stores to track customer's purchases. The items purchased becomes part of their "data." Typically, they organize the data by location and customer. Data becomes information when they link the customer and location to that data. Data, i.e. the items purchased, have no value or meaning until they are put into some type of context. Relating who purchased that item, male / female, young /old etc… enables the stores to transform that data into information. They can then use this information to tailor sales, coupons and even how they stock their stores for a given location.

Data Models

Hierarchical models organize data into a tree structure. The downside to hierarchical models is that you need to know the structure in order to navigate it. Network models also have a tree structure but it allows for many to many relationships unlike hierarchical models. Network models solves the physical data independence that hierarchical models lack. Network models can have cycles. Relational models are tables based on data and their relationships. Relationships can be 1:1, 1: many, many: 1 and many: many. I think XML is a good model for data storage, especially given its use on the internet and business. Many times data is transformed into XML and vice versa. Storing data in XML would be more efficient.