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Lab 1
Database Systems CMPT 308
Short Essays (Part 2-3)

Data vs. Information

One popular database that is still in use today would be the social security system implemented within the United States. The elements of data involved within this database consists of nine-digit numbers which are issued to U.S. citizens.

These numbers or "data" are organized into information that is used to be able to track any U.S. citizen and also give entitlements to worker's benefits. Basically, these unique numbers are organized into a form of identification for U.S. citizens.

Without this database system that the government has developed, these sets of nine-digit numbers would be meaningless. A similar example could be a phone number as well. It is basically a string of numbers that would be meaningless without your cellular service provider's database.

The value provided by the "information" given by these databases is greatly beneficial to its users. In terms of the social security number, citizens can receive their benefits and can also prove they are U.S. citizen. Cell phone numbers can be used to contact people across the world in a convenient way.

Data Models

The hierarchical model is unlike the network pre-relational data models. Data is stored in a hierarchy that is pre-defined. This model was designed to implement a one-to-one relationship.

The network model was designed to help users create networks that would show the relationships among data. This model was designed to implement a one-to-many relationship, which was considered better than the hierarchical model.

The relational model is considered to be the most efficient way to map out the relationships between data and information. This model is also a one-to-many relationship model, which automatically makes it better than the hierarchical data model. In comparison to the network data model, the relational model is much more efficient and easier to implement.

I think XML would be an efficient model for data storage. Although it was designed for a different purpose, similar to that of HTML, it still structures data into an organized fashion to retrieve valuable information from. In some circumstances XML might be more efficient than using other data models.

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