Data Management Tools

- Gary Miller
- CS 380 Lab 1

Defining Data Managment Tools

A data management tool can simply be defined as a an instrument for accessing or modifying an individual datum or data within a particular set of information. While this is a rather broad definition most data management tools ultimately are based on the process or accessing or modifying data. Accessing data is a process of retrieving data from its storage point in order to be used to obtain the information and in some cases it may even be used as an input for some other problem. Modifying data is a process of given data either an initial value or changing the existing value to something else. In the event of of data modification a data management tool will also need to save the new value of the data in its appropriate location, or in the event of entering an entirely new data point, the tool must give the data a storage point.

Features of Data Management Tools

There are many features that a data management tool could have, with accessing and modifying data certainly being the most fundamanetal and important features to have. Another important feature for a data management tool to have is gaurenteeing that the data will be protected and secure. Meaning that the data will not be lost by means of backing up data so it can be retrieved in the event of an unexpected error. Also, this means that it only allows those who are supposed to have access to the data to be able to access it. For example, a large company should not allow anyone to be able to access their customer's credit card information.

Aside from the essential and fundamental features that a data management tool should have there is an infinite amount of additional features that individual tools can benefit from having. These features that are useful and convient to have tend to automate tasks that otherwise would take several steps or action to complete. For example a useful feature is one that deletes all existing duplicate entries from a database. This would parse through all entries in a database and create a key for each new instance of a data point found, each time this data point is found within the database the key will pair with a value that counts how many instance of each data point have occurred and delete each instance after the value is equal to one, meaning this dat apoint has already be identified. By automating the process in this fashion, the computer can carry out this task almost instantly but is a user had to manually identify all duplicate values it took take days or even longer if the database is eceptionally large.