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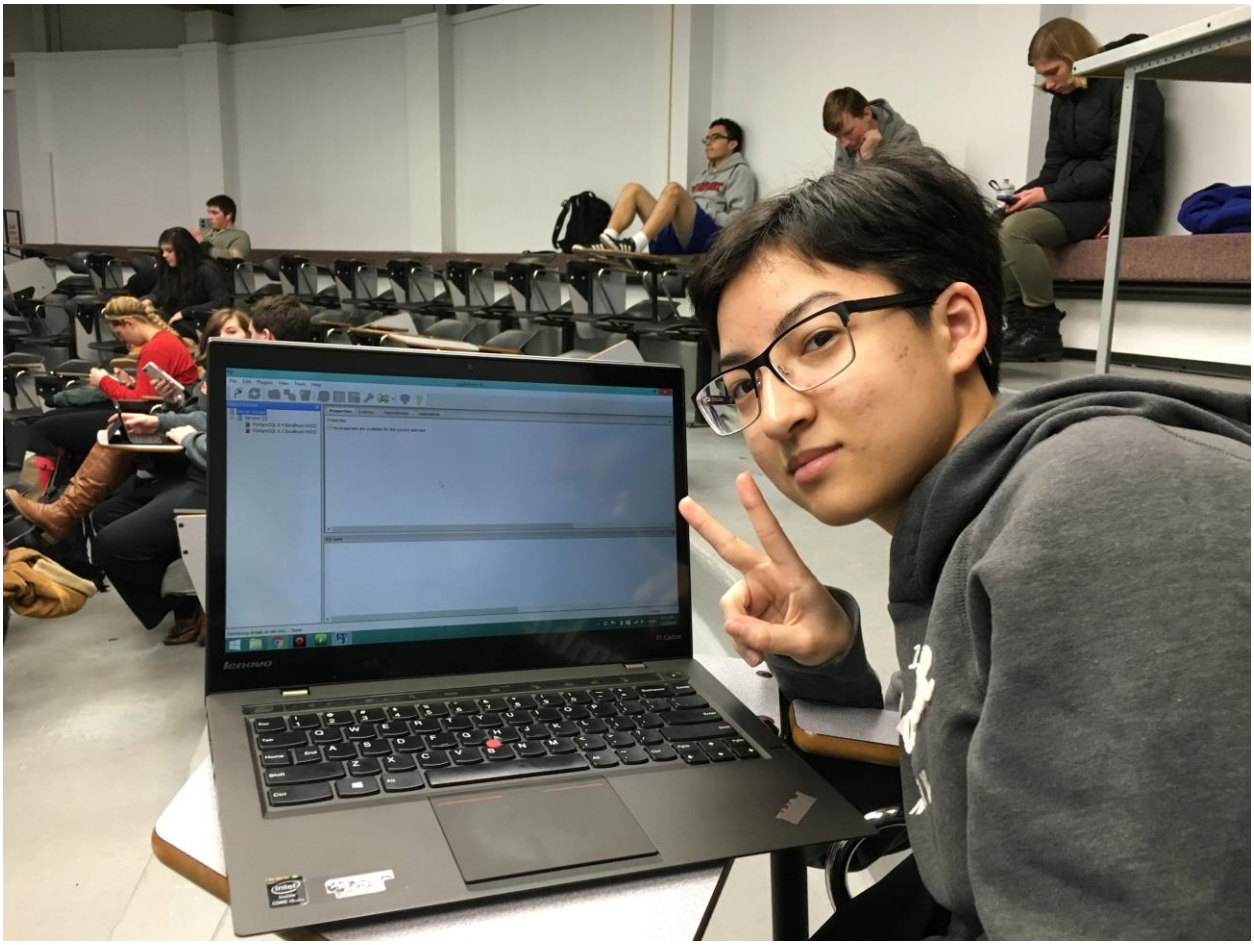
Data Vs Information

Google has one of the largest databases today, having petabytes of data. The elements of data that Google has encompasses Google web indexing, Google Earth, and Google Drive, as well as other products and services. They use the data they collect and put it into an organized structure in their huge database. Each section of Google has a different collection of data. One of the most used Google services is Gmail. This email provider has data pertaining to senders and receivers of emails, the emails themselves, and other contact information for each user. This data gets put into an organized manner such as a table, and presented to users as information. For instance, a user's information on a contact card is presented in a listed format of their name, email address, and a picture. If there is no structure to the data of a user's information, other users will not be able to contact them. Simple data without structure cannot be given to a user as it would not have any meaning to them. Once the data is given structure and formatted into information that is presentable to a Gmail user, that user can use this information to send and receive emails, as well as add and edit contacts.

Data Models

In the hierarchical model, data is formatted in a tree structure. Each data record is connected by links, starting with the main root parent data record and splitting off into other records. This format of data makes sure that each record only has one parent and each parent can have multiple children. In the network model, data is formatted similarly in a tree structure but is more like a graph. This structure is considered a flexible way compared to the hierarchical model as it allows more links amongst children and parent data records. While the hierarchical model has each child record have one parent, the network model allows a child record to have multiple parents. The most used model today is the relational model. The hierarchical and network models are considered older structures and because the relational model was created to solve some problems in these models, they are not implemented as often anymore. Problems that these models had are difficulties in expansion in each structure and a prejudice that lead to having certain parts of the structures run faster than other parts of the structure. XML is good for a model for data storage mostly because it is easy to use.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