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Database Systems CMPT 308
Lab1: PostgreSQL
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Data vs. Information:

One database that may be used today could be a database about theTiffany and Co. Landmark store in New York City. The database would include charts for customers, sales associates, and products. The database would list several points about the customers such as Name, Address, shopping date, and product bought. The sales associates chart would include the date they began working, sales made, and who sales were made to. The products chart would include the name of the product, the price in USD, and the available inventory. Through using these charts the database would draw conclusions about store and sale associate success (aka information).

To set out a tangible example of data vs information, I say that I simply wrote out the numbers “2, 24, 30, 60, 10, 84, 37,” but gave them no context, making them data. If I gave these numbers context and said they were the prices of different T-shirts sold on Amazon, I take them from being data to being information. I can further contextualize these numbers by asking questions about what currency they are in, what brand the T-shirts are from, what the T-shirts are made of, and average time each was kept by buyers. Using this information I can draw conclusions that give purpose to the facts. Another example could be if I simply wrote out the letters “LB, RP, KM DA,DJ” but gave no further explanation of the letters. I know they mean something, but I don't know what, making them data. If I contextualize them and say they are initials of the starting 5 for the 1986 Boston Celtics, I have made these letters information. I can give more value to this information by revealing the names “Larry Bird,Robert Parish, Kevin Mchale, Danny Ainge, and Dennis Johnson,” and listing their average PPG, RPG, and APG. Information is valuable because it gives the data and stats purpose. Information is the basis of why data is collected - to draw conclusions.

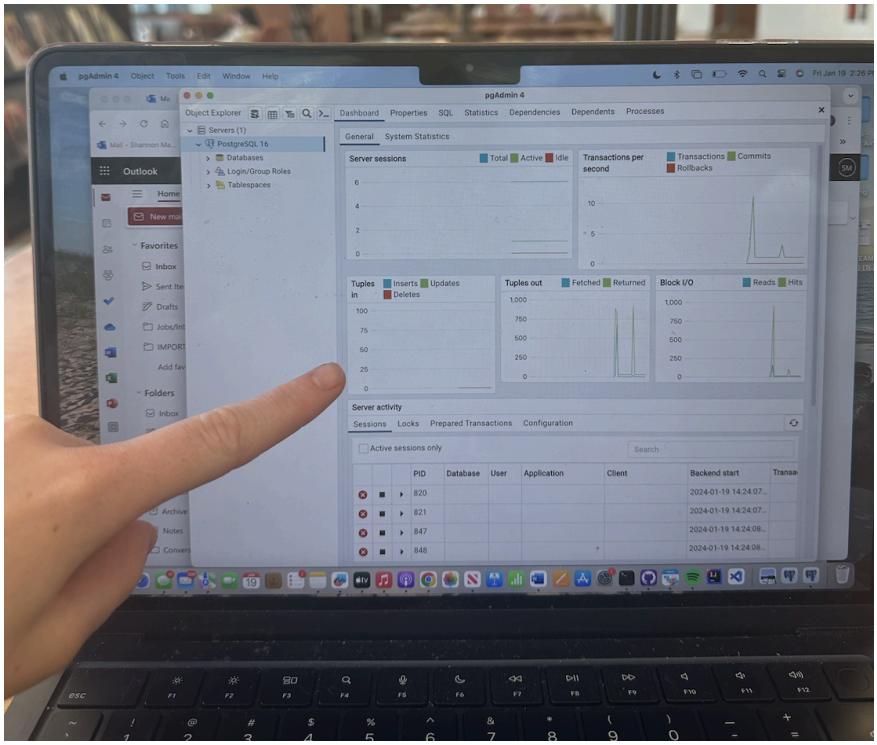
Data Models:

The hierarchical data model organizes data into a tree-like structure where the top of the structure is the root with all other data stemming from it. Each section/node has one parent that it stems from, but each parent can have more than one child. Some issues with this model are the lack of flexibility (one to many structure cannot account for complex relationships), and slow sequential searching.

The Network Data Model is a progression from the original hierarchical model. It was implemented to resolve some issues with the previous model. This model, instead of only allowing each child to have one parent, each child can have multiple parents. An issue with this

model is that it was difficult to query because the relationships created can be difficult to understand. This model is also more flexible than hierarchical, but still inflexible.

XML solves many of the issues related to confusion about how elements are related to each other, which makes analyzing data much simpler.



-------> My hand pointing to pgAdmin tool up and running on my computer.