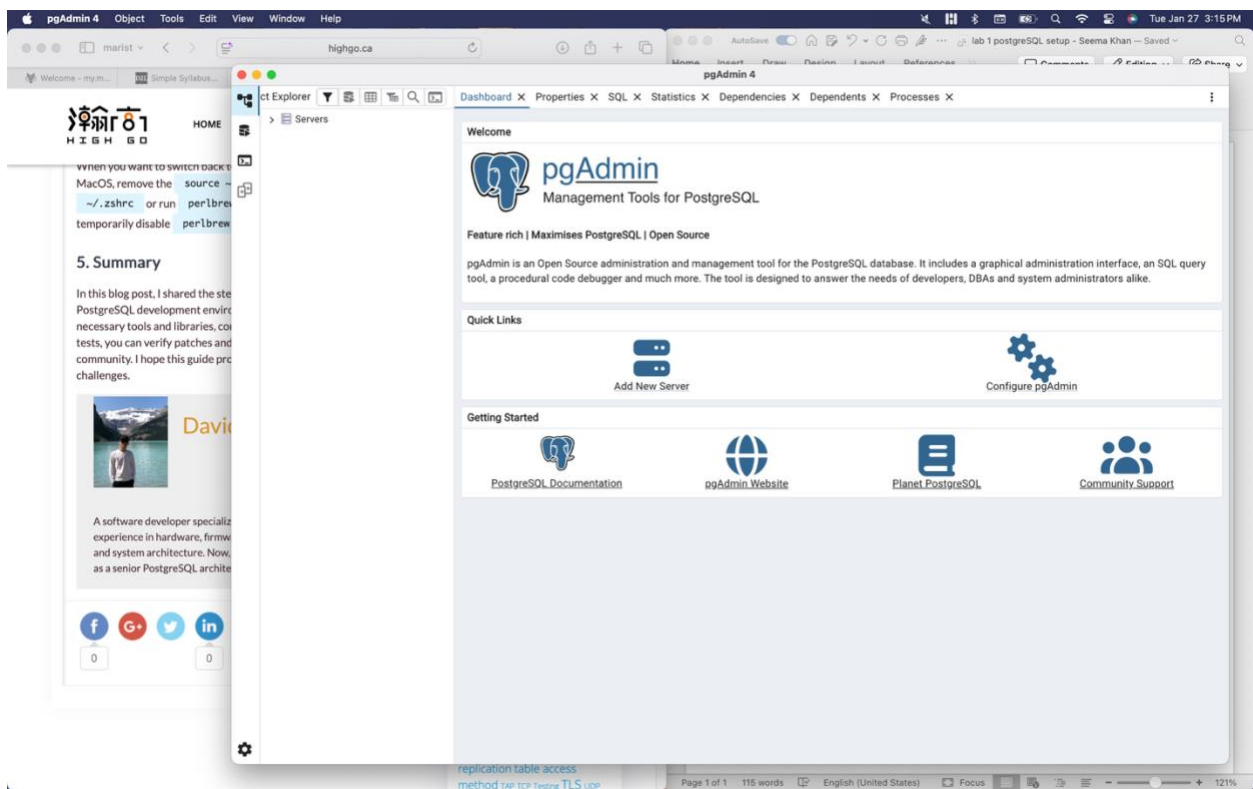Seema Khan

Professor Rivas

Database Management CMPT 308N 112

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Lab 1: PostgreSQL Setup

1. **Short essay: Data vs. Information**

There is a difference between "data" and "information" and it's important to note the difference. Data is a collection of items, facts and words, while information, is a sentence natural language, it usually explains data and data visualization. For instance, in terms of a database, a good example is banking systems. Withing this database, it would consist of a

large amount of data, that allows easy access, the option to edit and add, search, as well as security. To add, one of the important things about a database is the ability to organize it to one's discretion – one can customize the table to whatever is needed. For instance, customer name, account number, transactions, account type, etc. On the other hand, information is when the data is processed. An example of this with the banking systems would be a customer spending amount.
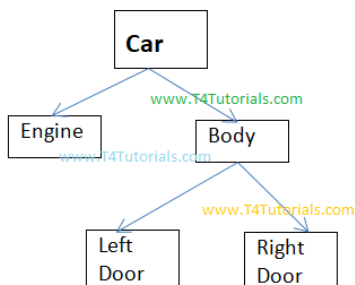
This example is common as many people utilize banking systems:

Data: - $20.00

Information: Seema spend $20.00 at CVS on February 2nd from account 12345.

2. **Short essay: Data Models**

The hierarchical model is a way to organize data, it is typically described as a tree like structure. Referencing the image on the left provided by "T4Tutorials," the car in this case would be the parent function, while the engine and body are the children function. The shortcoming of the hierarchical model consists of:

- "limited,
- lacks flexibility,
- struggles with complex – large data " (stated from Google AI)

The network pre-relational data models have multiple parent functions. The short coming of the network pre-relational data models consists of:

- " limited flexibility,
- Data redundancy & integrity,
- Complex maintenance,
- Limited query" (stated from Google AI)

XML is useful for data transport and in terms of flexibility. However, for data storage a relational model would be best, since it can handle large datasets, allow for more structuring and querying.