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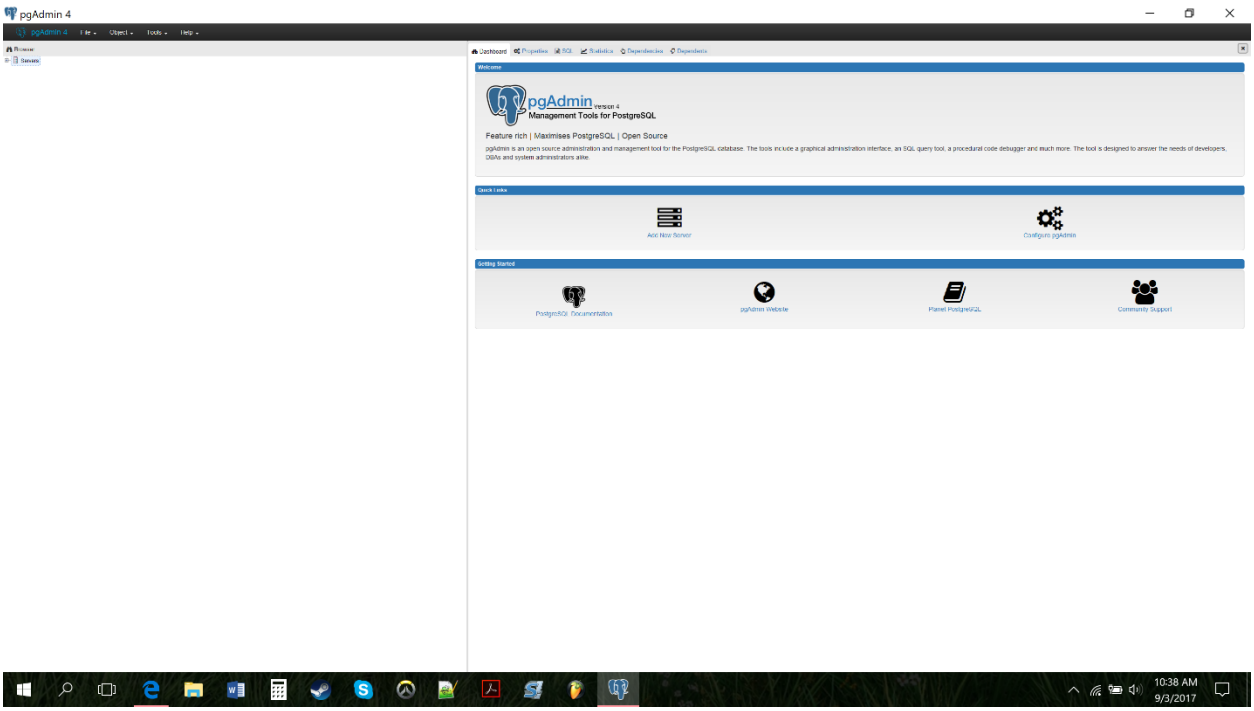
Database Systems Lab 1

1.



2. One of the largest and most-well known databases in use today is that of Facebook's massive database of user profiles. Common elements of data stored within this database include many names, numbers, addresses and other personal information. While a name like "John Smith" may seem to be informative, there are hundreds of "John Smiths" in Facebook's databases. A phone number of 555-555-5555 or an address of 123 Sunshine Rd also share this problem. It is only once pieces of data are given context that they are able to become information. Thus, if these data points are combined into a single profile, Facebook will likely be able to find a user named John Smith who lives at 123 Sunshine Rd who's phone number is 555-555-5555.

3. Hierarchical data models function similar to trees, where data sets descend and branch off one another with increasing specificity. Network pre-relational data models are very similar to hierarchical models except with the addition of having multiple descending data sets connect with one another. By contrast, a relational database model allows for a series of interconnected tables which enables a high amount of specificity and detail for individual data sets. XML has potential for a data storage model, as XML is already a well-defined language that can be implemented and edited within existing database systems without major issues.