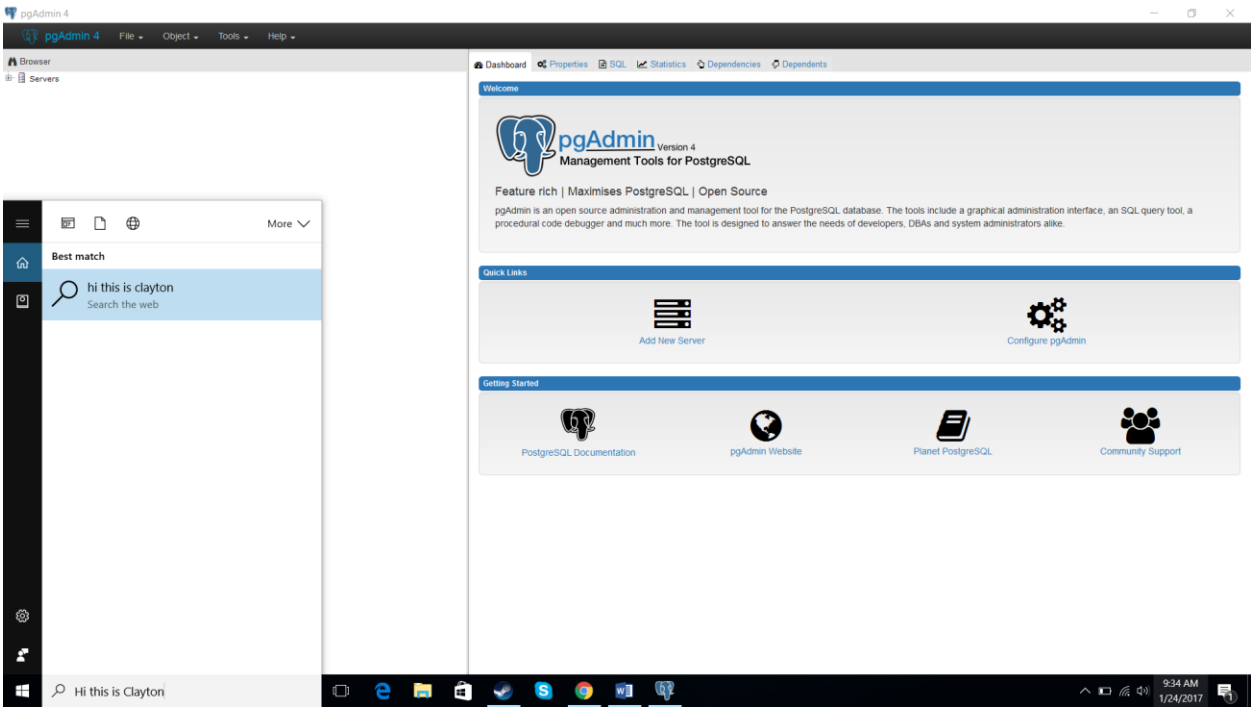
Clayton Szelestey

1/24/17

Lab 1

1.)



2.) Google Earth is a massively popular tool created by google. It allows you to see any place on earth if you have the coordinates or the name of that place. It stores all of these names of places in a database. Without the context that google earth provides the database, the database is useless. The data contained within the database is not useful on its own, it would just be a massive list of names without any meaning or context. The data is turned into information when used in conjunction with google earth. The names of places are given context when you type them into google earth and see where on the globe this place is and see where in relation to other places on earth this place is. The useless data becomes useful information as you can now see how far away a place is relative to your location, or see what a famous city looks like by simply going to through the database and giving context to the data found within.

3.) The hierarchical model was a step in the right direction from the flat file system, as it was able to implement physical data independence, however it still had the problem of duplication. That is, you may need to create multiple instances of an object in order to keep track of everything properly, which can lead to confusion and errors if, for example, one of the objects is manipulated but not the other. The network model solved the duplication problem, but had the issue of needing special cases for objects that were not yet connected to other objects (Law of Least Astonishment). The relational model solved this problem by using connected tables of rows and columns rather than a branching model. Based on this, I do not think XML is a good model for data storage, as it uses a branching model.