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Lab 1

Short Essay #1: Data vs Information

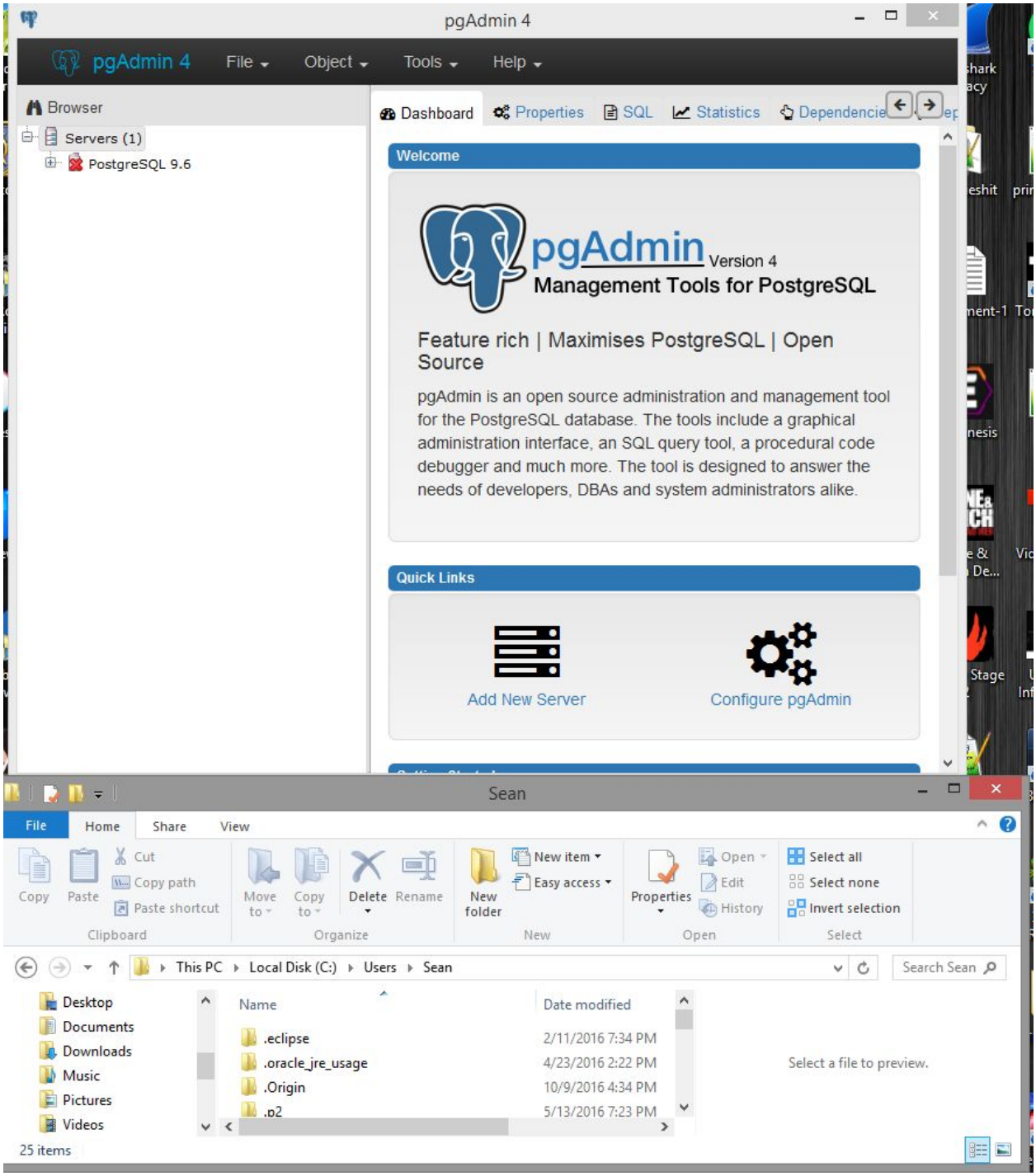
Databases are present in almost every aspect of our lives. Even if you have never directly accessed a database it can be bet on that your personal information is stored across them. A premier example of a database today is the database containing the Census of the United States. Databases play a very important job in today's intellectually inclined society. Data and information are two very different things. Data is a single point that can be recorded from something else. A first name, an age, a temperature at a specific time. It can be a single point of data, 2 points of data, or 2029552524 points of data. But without context the data is useless. Information is the properly formatted and organized collection of data that can be used to extrapolate more ‘information’. Let's go back to the example of the Cenus database. Some data on the oldest living people in the United States could be for example: “89,98,102,78,87”. That data is not very useful to us. However, that data input into the database of the Census can provide us with answers and possibly even questions that we can find useful. With the information that can be extrapolated from a database you can see if people in the United States are dying sooner or later than in past years. You can start to notice trends and begin anticipating trends of the human race. Information is infinitely more valuable than data; but without data, you cannot have information.

Short Essay #2: Data Models

There are a few data models that we have begun learning about. The first of which, and the most basic of which, is the hierarchical model. In this model everything is organized in a sort of tree like structure, going from the top down, starting with 1 thing and branching out into many. It is cumbersome and was quickly replaced by the network model. The network model was the first model that tried to show relations between points in the model beyond the one directional, single relationships of the hierarchical model. They did so by having more than one thing relate to one another in a layout pretty similar to its predecessor. The model that is most used today is the relational model. Through this model we are able to show complex relations between different sets of data and even different sets of information. In the previous models relationships were modeled by a directed arrow. In the relational models there are various sets of symbols that can be used when connecting two things to show how they relate. Considering all of these, I think that XML is a very effective way of modelling data as it

allows for trees to be created but also separate nodes of data. Using XML you can reference and create relations between the separate parts

Lab 1 Screenshot: PgAdmin running on my computer (note users/sean)


pgAdmin 4
pgAdmin 4
File
Object
Tools
Help
Browser
Servers (1)
PostgreSQL 9.6
Dashboard
Properties
SQL
Statistics
Welcome
pgAdmin Version 4
Management Tools for PostgreSQL
Feature rich | Maximises PostgreSQL | Open Source
pgAdmin is an open source administration and management tool for the PostgreSQL database. The tools include a graphical administration interface, an SQL query tool, a procedural code debugger and much more. The tool is designed to answer the needs of developers, DBAs and system administrators alike.
Quick Links
Add New Server
Configure pgAdmin
Sean
File
Home
Share
View
Copy
Paste
Cut
Copy path
Paste shortcut
Clipboard
Move to
Copy to
Delete
Rename
Organize
New folder
New item
Easy access
New
Properties
Open
Edit
History
Open
Select all
Select none
Invert selection
Select
This PC
Local Disk (C:)
Users
Sean
Search Sean
Desktop
Documents
Downloads
Music
Pictures
Videos
Name
Date modified
.eclipse
2/11/2016 7:34 PM
.oracle_jre_usage
4/23/2016 2:22 PM
.Origin
10/9/2016 4:34 PM
.p2
5/13/2016 7:23 PM
Select a file to preview.
25 items