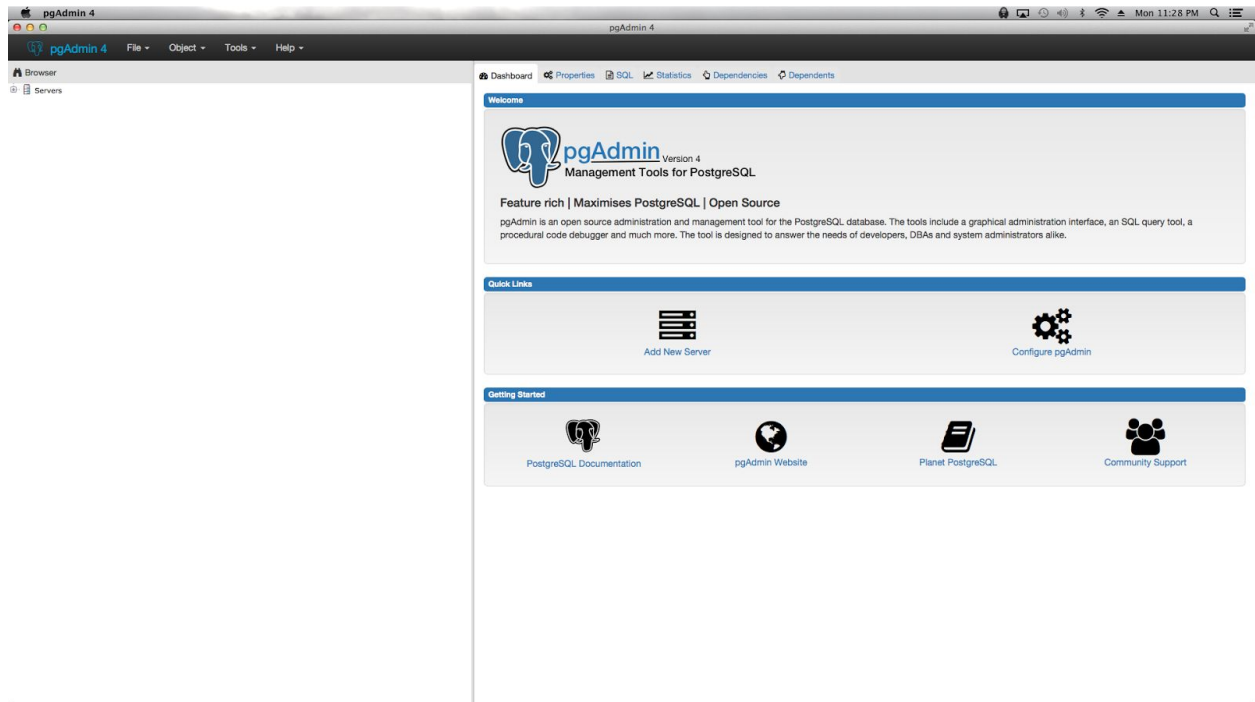


## LAB1

1. Download PostgreSQL from <http://www.postgresql.org> and install it on your computer



## 2) Data Vs Information

Even Though few people use Data and information interchangeably , there is a distinct difference between them. Data refers to the raw ,ambiguous input which when processed gives a meaningful output. While information is a data that has been processed to give meaning to the receiver .

-Data is meaningless without context

Example 1,

Let's take a look at this Data :

1121995

\*Without context the receiver might assume this is a phone number , SSN or a price. (it could be anything)

Information

1/12/1995 is my date of birth

1,121,995 is the salary of an astronaut

Example 2-

Let's take this data

- 1) James white NY 31 50000
- 2) Bob Tiger NJ 23 80000
- 3) Torry smith CA 16 2000

We see from the following database how the raw data is organized to give information to the receiver. The receiver knows which name is the first name, which one is Last name , where the person is from, how old he is and how much his/her salary is in US Dollars.

Last Name	First Name	City	Age	Salary(usd)
james	white	NY	31	50,000
Bob	Tiger	NJ	23	80,000
Torry	smith	CA	16	2,000

### 3)Data Models

Hierarchical model presents data in hierarchical way like a tree parent/child like relationships. In this model the parent can have many children but a child will have only one parent. Connection between a parent and a child is shown using pointers.

Network model presents a objects and and their relationships. This model allows multiple records to be linked to the owner file which makes it more flexible that hierarchical model.

Relational model is organization of a data into collections of two dimensional tables called relations. Each relations have their own head and a body where we put our data using columns and rows. Relational Model also use important keys to create relationship between entities.

Relational model can be used to show one to one , one to many and many to many relationships while Hierarchical model only support one to many relationship.

Hierarchical model takes longer time to search and are very difficult to modify. Network model is also slow, complex and more difficult to maintain . while relational model enables us a more organized model using logical and internal view which make the model easy to modify.