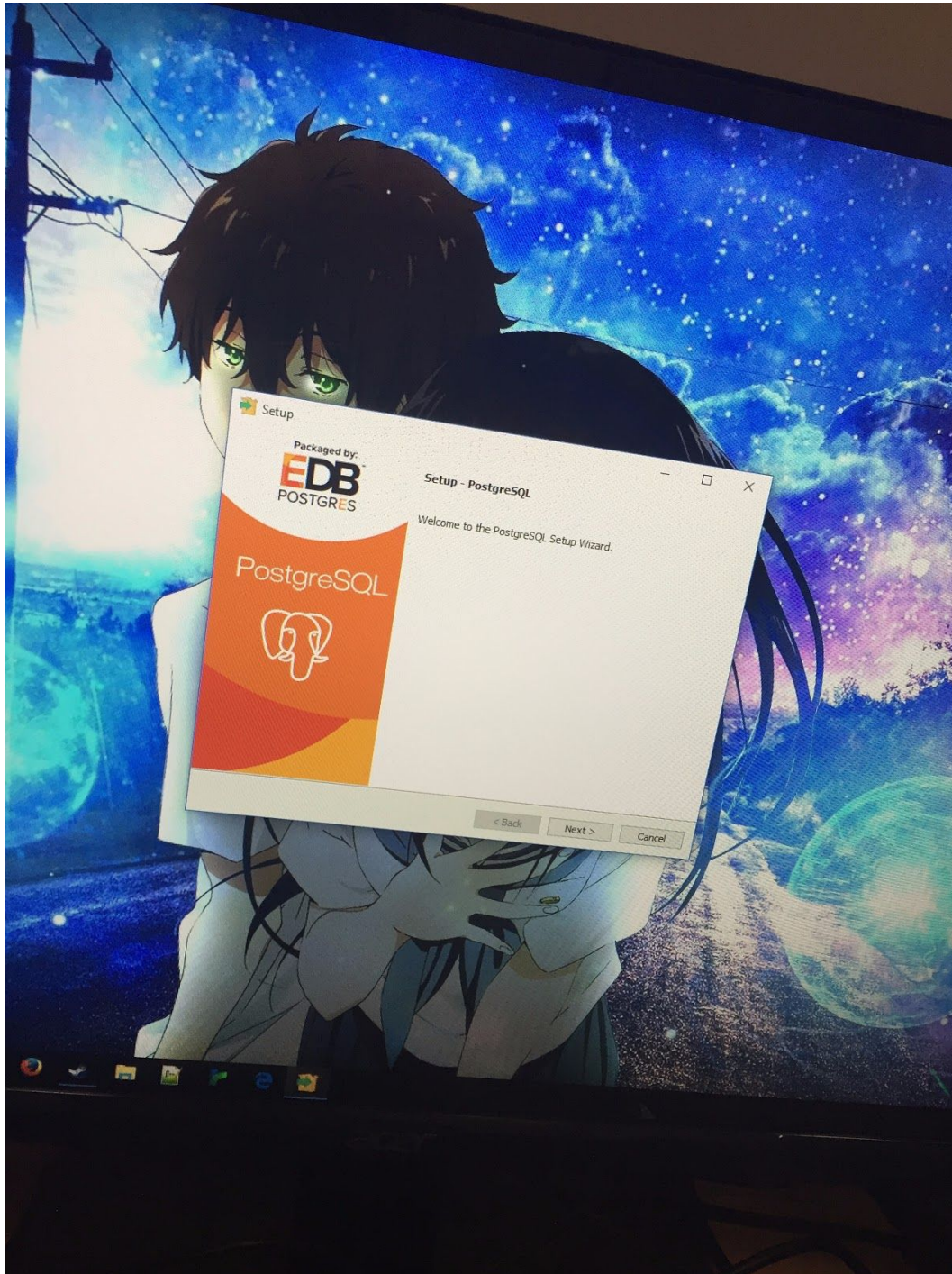
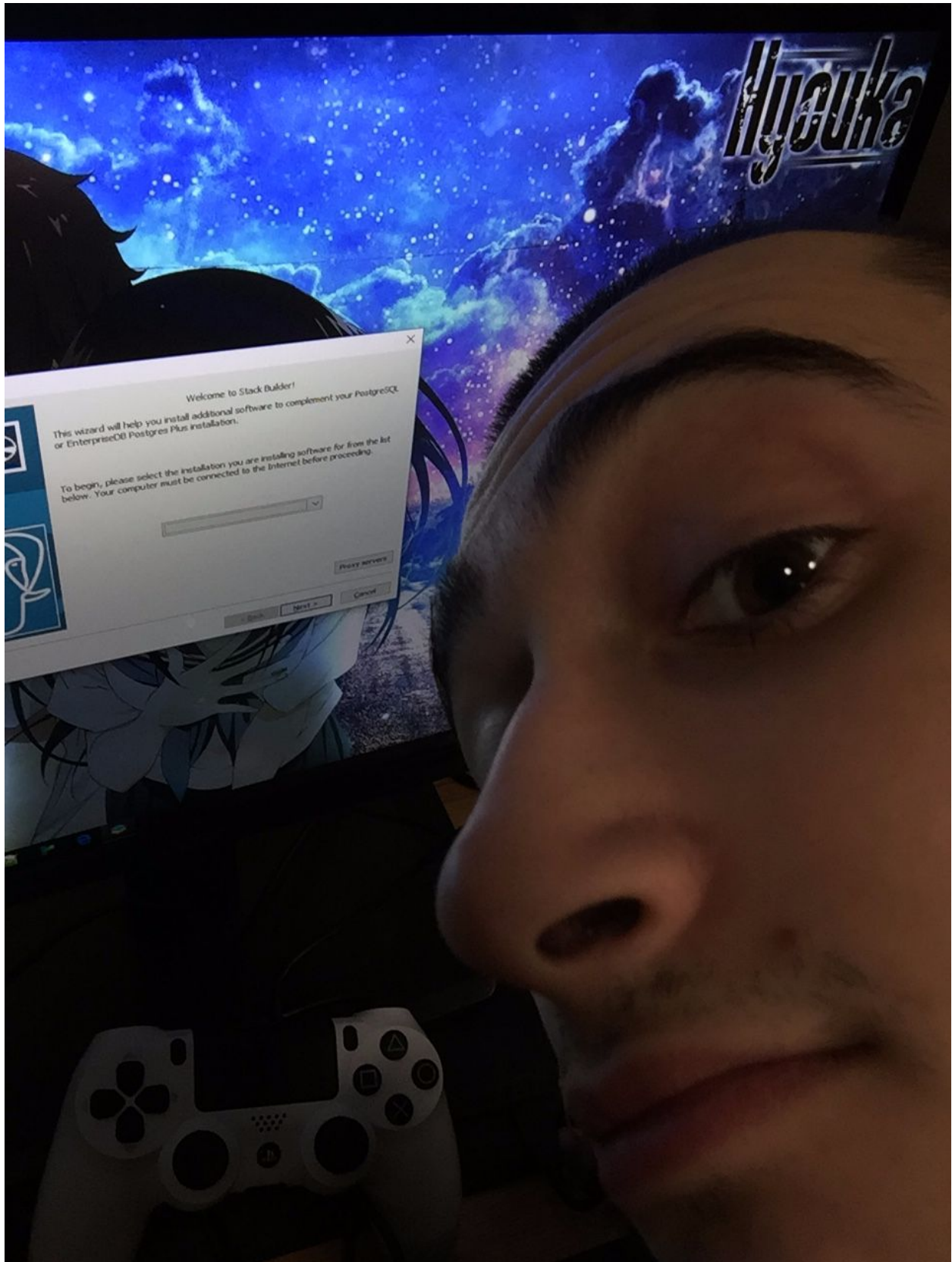
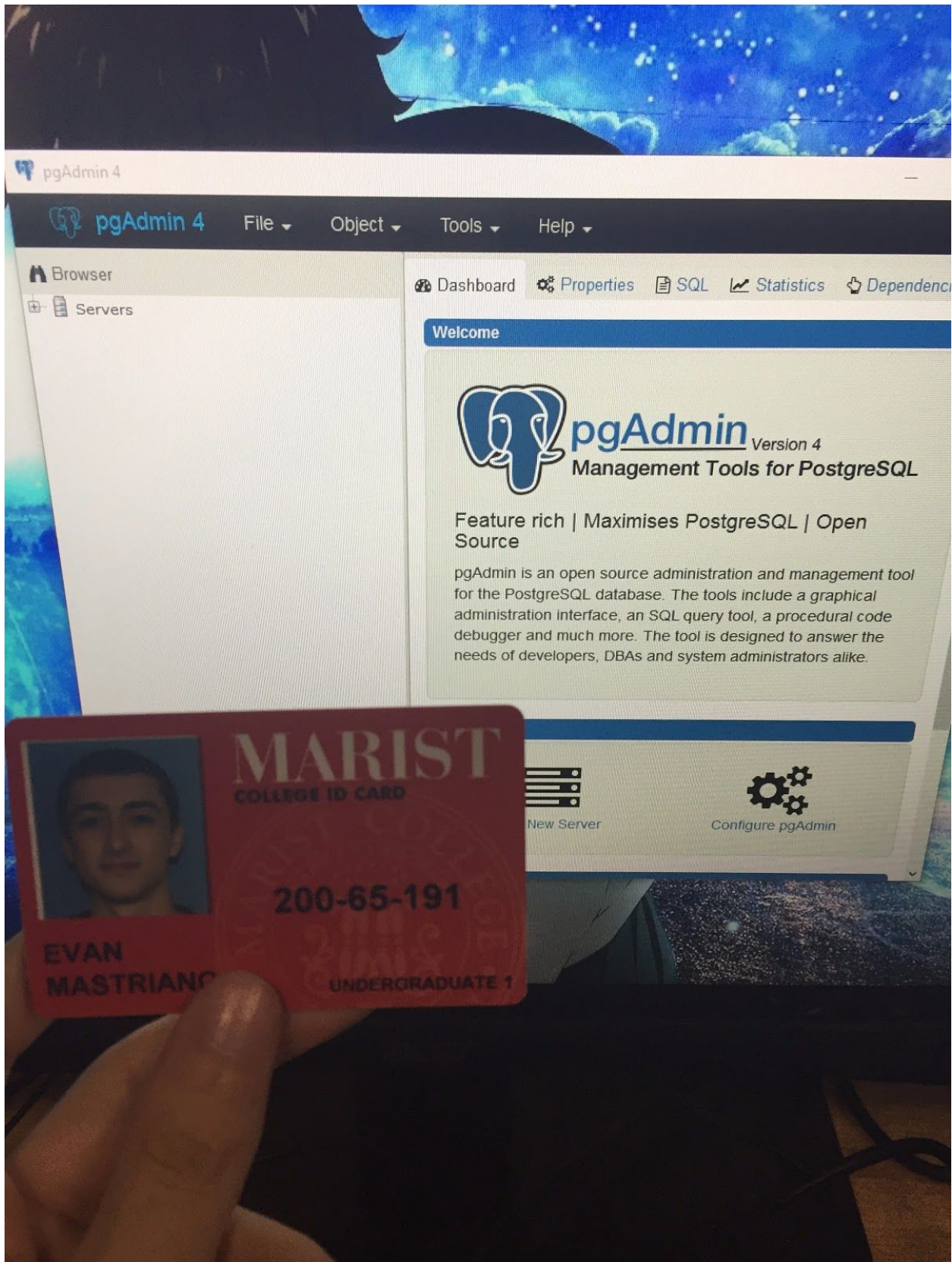


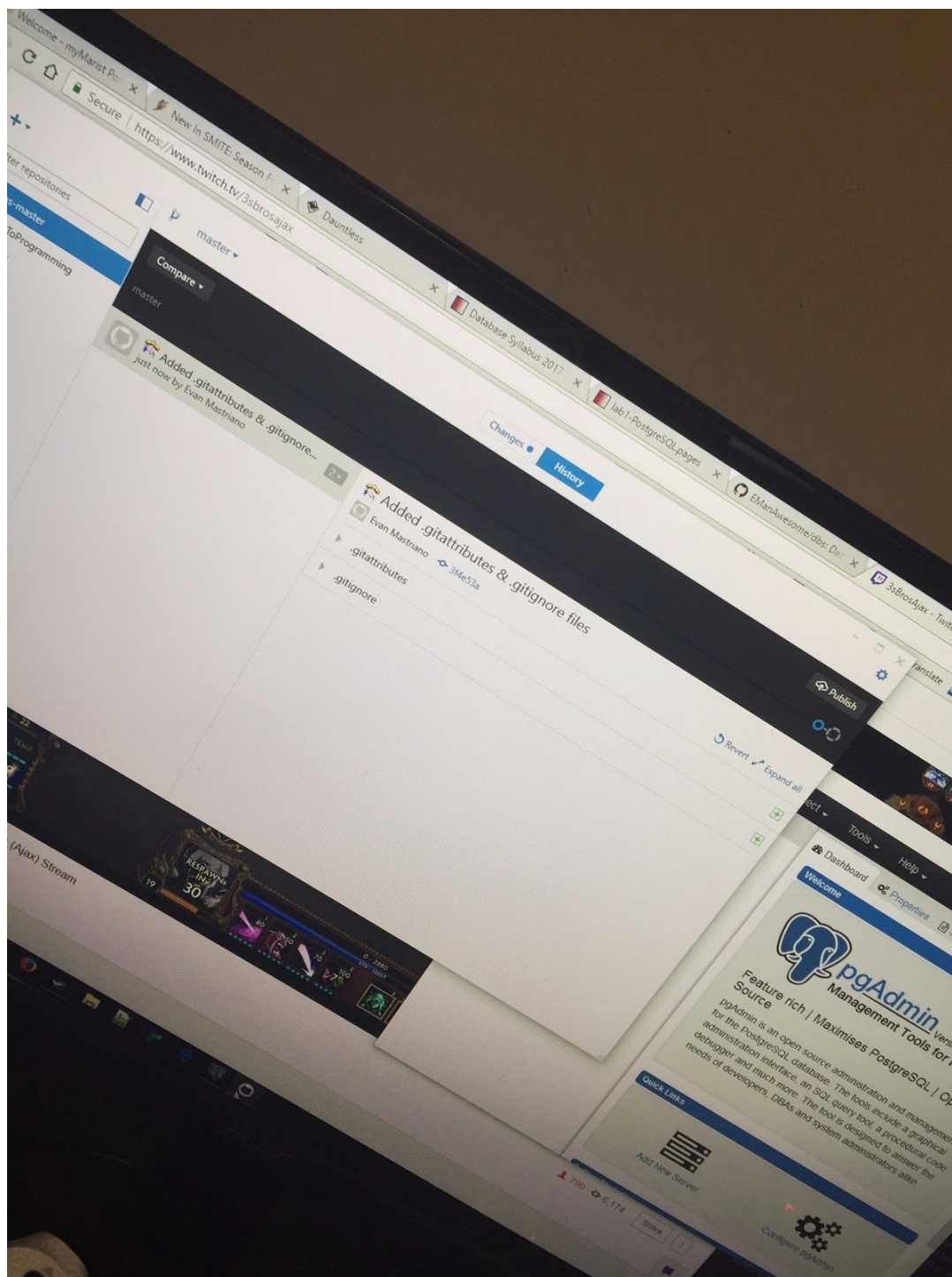
Evan Mastriano
1/24/17
Database Systems CMPT 308

Here is a collection of pictures I took while installing and running PostgreSQL, pgAdmin, and GitHub. Please enjoy!









Part 2: Data v. Information

Databases store bits of junk called data. For example, a bank could have things like “Hulk Hogan,” “011011,” “10000000,” and “1231984” stored in it. Without any context, all this things would be useless and meaningless. The way to make it information is to give it context, resulting in some meaning. So we could say “Hulk Hogan” is the account user, “011011” is the account number, “10000000” is the amount stored, and “1231984” is the date of creation for the account. From there, you would want to specify that “10000000” is an amount in USD and “1231984” is actually 1/23/1984 to clear away as much ambiguity as you can.

Part 3: Data Organizational Models

The hierarchical model was the first data model used to organize data. It featured physical data independence, allowing the database to operate on other systems instead of only on the system it was programmed on. However, it required knowledge of the structure of the database and was not flexible. Keys would follow downwards, like a pyramid. So the main key would branch down into keys it contained and data, and those keys could contain more keys and data. But each key had to include everything it contained, even if that meant duplicating data, which is very bad. This made it hard to work with and easy to create errors, as the data would have to be edited in multiple locations.

The network model is very similar to the hierarchical model. It featured basically the same things, but attempted to combat the data duplication by allowing cycles in the hierarchy. This was easier to work with, but still required knowledge of the structure to be able to add or edit anything in the database.

Knowing all of this, XML results in a fluid and easy to work with model of data storage. Not requiring prior knowledge of the structure allows data to be added into the database whenever necessary and it will be sorted to conform with the prior setup.