ECS 116
Databases for Non-Majors

Discussion 1
(4/4/24) |Spring '24

Today's Agenda

1. Introduction
2. Quick Course Overview
3. Installing Postgres and DBeaver on your Machine (Refer to the instruction sheet on Canvas)
4. Connecting PSQL and DBeaver
5. Creating and Updating a small database (Download the file from Canvas)
6. Accessing PSQL through the command line

Introduction

Uni of Pune, Bach.Engg. Elec & Comm.	Std. Researcher Collab with MoD, IN	High School Teacher Teach for India	Analyst Short Stint	Dev Couple of Startups	Master's ECE, UC Davis

My name? - Aunsh Bandivadekar

Previously TA'ed?

- DES 135A in Fall
- EDU 122 in Winter
- Now ECS 116
- 3rd department in 3 quarters! (Preferably the final one)

Why this course?

- I currently work on ResilientDb (blockchain fabric), mostly the application layer @ Exploratory Systems Lab (Prof. Sadoghi)
- Focus on Distributed Database Systems, Blockchain and Software

Quick Overview

Setting up

SQL

Complex SQL

Queries and Updates

Dataframes

Benchmarking, Indexing etc.

NoSQL

Hadoop

Partitioning

MongoDB

Tableau (Visualization)

Data Integration

And Much more....

What is PostgreSQL and DBeaver

What is PostgreSQL ?

- PostgreSQL is a powerful, open source object-relational database system that uses and extends the SQL language combined with many features that safely store and scale the most complicated data workloads.

What is DBeaver ?

- DBeaver Community is a free cross-platform database tool for developers, database administrators, analysts, and everyone working with data.

Installing & Using PostgreSQL and DBeaver

Sections I and II are about downloading and installing the software

1. Open the doc and go to the required links
2. Download the packages (dmg or exe)
3. Run the setup wizard
4. Choose all default options

Sections III and IV are about establishing a connection from PSQL to DBeaver (Machine Agnostic)

1. Download the data set (zip) from Canvas and decompress and store it
2. Open a Postgres connection in DBeaver
3. Create a new dB (Simple_Examples), new schema (company)
4. Set the search path for the schema
5. Access the db through command line
6. Try running some simple queries

Installing PostgreSQL and DBeaver

PC:

Go to files ->Installing PostgreSQL and DBeaver on PC-v01.pdf

- Follow the instructions

Mac:

Go to files ->Installing PostgreSQL and DBeaver on Mac-v02.docx

- Follow the instructions

If you have already installed and worked on accessing the Simple_Examples dB then please read -> Ramez Elmasri and Shamkant B. Navathe 7th edition: Fundamentals of Database Systems (2017). Chapter 1, Chapter 5, Section 6.3 and Chapter 6, Section 7.1]

Thank You!

See you next Thursday!