Database Lab

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Goals

- Providing practical skills implement and exploit database systems with a relational database management system (RDBMS) supporting SQL language
- Teamwork, critical thinking, presentation (writing and oral)

using PostgreSQL (recommended) or any other RDBMS

Evaluation

- Progress Evaluation
  - Assignment: 10%
  - Test (2): 30%
- Project: 60%

Documents

- Link to the class on Teams (materials, assignment submission, online discussion,…)

- Other resources:
  - PostgreSQL: http://www.postgresql.org
  - Tools & documents: https://www.enterprisedb.com/
  - Dataset: https://github.com/morenoh149/postgresDBSamples
  - https://linux.dell.com/dvdstore/

A comparison

	PostgreSQL	MySQL	MariaDB	SQL Server	Oracle
Liecensing	Open-source	GNU Generally Public License	GNU Generally Public License	Proprietary	Proprietary
Data Structure	Object-relational. SQL	SQL	SQL	T-SQL	Multi-model, SQL
Other data structure	NoSQL	N/A	SQL, NoSQL	SQL, NoSQL	SQL
Scalability	Vertical	Vertical complex	Vertical	Vertical complex	Vertical
Data Type					
Transaction					

https://www.digitalocean.com/community/tutorials/sqlite-vs-mysql-vs-postgresql-a-comparison-of-relational-database-management-systems
https://en.wikipedia.org/wiki/Comparison_of_relational_database_management_systems
https://www.altexsoft.com/blog/business/comparing-database-management-systems-mysql-postgresql-mssql-server-mongodb-elasticsearch-and-others/

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Practical work

- Install DBMS -PostgreSQL
- HR Database
  - Create DB
  - Describe HR's Schema
- Dellstore Database
  - Import Dellstore Database
  - Describing Dellstore Database Schema

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Import Database

• In command line mode

psql -h hostname -d databasename -U username -f file.sql

• In pgAdmin
  • Query tool (window)
  • Import tool