

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



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Evaluation

- Progress Evaluation
 - Assignment: 10%
 - Test: 2 x 10%
- Project: 70%



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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/>



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A comparison

	PostgreSQL	MySQL	MariaDB	SQL Server	Oracle
Licensing	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



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