

Database Lab

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About the course

- IT3290 - Database Lab
- Number of credits: 2(0-0-4-4)
- Class code: 126877
- Class: VN K64-2-S

Goals

- Providing practical skills to implement and exploit database systems with a relational database management system (RDBMS) supporting SQL language
- Using PostgreSQL, open-source DBMS
- Working in groups

Main content

- Introducing postgresql and basic tools
- Practicing on PostgreSQL using psql, pgAdmin
 - Creating database, tables, constraints
 - Backup, Restore DBs
 - Roles and privileges
 - SQL statements: basic and advanced
 - Functions, Triggers, Views
 - Indexing, query plan and SQL performance
- Project:
 - Writing a business process description for an application
 - Designing database for this app
 - Exploiting the database
 - Writing SQL statements and analyzing their performance

Evaluation

- Continuous Assessment: 30%
- Project: 70%
 - Group of 3: working in groups but individual assessment
 - Report (project description, DB design, functionalities, ...)
 - Statements
 - Implementation: optional but recommended
 - Presentation

(More details: later)

Documents

- Slides: MS Teams
- Latest version : 13 (11.2, 10.7, 9.x, ...)
 - <https://www.postgresql.org/docs/13/index.html>
 - <http://www.postgresql.org/docs/>
- Some books are available (but not for the latest version):
 - PostgreSQL 8 for Windows (*)
 - Beginning Databases with PostgreSQL From Novice to Professional, Second Edition
 - <https://www.postgresql.org/docs/>

