Database Lab

Nguyễn Thị Oanh

Department of Computer Science

School of Information and Communication Technology

oanhnt@soict.hust.edu.vn

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About the course

- IT3290 - Database Lab
- Number of credits: 2(0-0-4-4)
- Class code: 139352 / 139353
- Class: Việt Nhật K66-2-S / Việt Nhật K66-3-C

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

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Main content

- Introducing postgresql and basic tools
- Practicing on PostgreSQL using psql, pgAdmin
  - Creating database, tables, constraints
  - Backup, Restore DBs
  - Roles and previleges
  - 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

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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

- Lastest version : 15.2 (14.7, 14.2, 13.6, 11.2, 10.7, 9.x, …)
  - https://www.postgresql.org/docs/current/index.html
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- Some books are available (but not for the latest version):
  - PostgreSQL 8 for Windows   (*)
  - Beginning Databases with PostgreSQL From Novice to Professional, Second Edition