Project – DB Lab

Final Project – Requirements

- Working in group of 3 students
- Topic proposal: defined by members ➔ validated by professor
  - Choose a topic
  - Describe the application that you would to build with all necessary functionalities and data
  - Define functionalities + others requirements
- Design database
- Write SQL statements and analyse them (at least 30)
- Database Management System (DBMS): postgresql
- Small program (optional): programming language: no limit (java, c#, php, …)
- Project presentation: 16th of the semester or exam date
- **All members** must
  - work together
  - participate to the presentation section, QA section

Expected Results

- **Report (PDF file)** composes of **:**
  - Description in details the selected subject + Determining necessary functionalities
  - ***Database design: ER schema + descriptions of all tables and their relationships***
  - ***SQL statements*** corresponding for each functionality + requirements, analyse SQL statements. Each student has at least 10 requirements: with different SQL statements + performance analysis
  - Installed functionalities: not all functionalities are required, ***but some should be implemented***
  - Difficulties in carrying out the project ? And solutions?
  - Evaluation about the final results: avantages/ disadvantages
  - ***Tasks of each member***
- **Small program (optional but recommended):**
  - Source code
  - it need Installation guide / Usage guide: Decription in details how to install and how to use your product

Project Evaluation

- Evaluated in group and also individually
- Description + DB design
- SQL statements:
  - Quality and quantity
  - Different solutions + performance analysis
- Final program (bonus)
  - Quality:
    - Functionalities: complete, correct,
    - User interface: easy to use (user-friendly interface)
  - Demo: demo scenario should be prepared
- Presentation quality
- Report quality

Topic proposal

- Each group proposes a topic (for example: human resources management, football club management, hotel management, …)
- Topic proposal must be described in details:
  - 1-2 pages
  - Description: objectives, usage scenario, functionalities, data and all requirements or relationships between data.
  - Database design (1st version)
    - ER schema (entities and relationships)
    - ER schema → Relational Model (tables, keys)
  - Group members:
    - List of all members: fullname, classe, email
    - Leader

Topic: examples

- Information Management Systems:
  - Normal user: information query / retrieval
  - Administrator: update database, update data (create/drop, insert, update…)
- Library management (users: lecturer, staff)
- Learning management system (users: students, teacher, staff,…)
- Sales management system (selling online/offline, selling books, selling supplies ...)
- Management system for fitness club / English Teaching Center, …

Topic proposal - Plan

- Group assignment:
  - choose your partners: **18/10/2021**
  - Team leader
- Topic proposal: 1er version:
  - Before **25/10/2021 (on MS Teams)**
  - Your proposal must contain : group members, topic description. If you have done the ER schema and the DB, do not hesitate to add on.
  - File name: **leader name_topic.pdf** (Ex.: ***cuongth_hotelManagment.pdf)***
- Discussion about the topic and 1st version of DB design
  - **25/10 (on Teams)**

Programming language/ Interface

- No limit: Pascal, C, **C#, Java**, **PHP**…
- Interface:
  - GUI (Graphical User Interface): menu, button, tab…
  - Console: command-line interface; menu: list of functionalities => users choose by typing option listed on the menu