



Practice



Given a designed database that contains the following tables. The description in detail is found in [Database description Final edudb v2.doc](#) file.

- student(**student id**, first_name, last_name, dob, gender, address, note, *class_id*)
- subject(**subject id**, name, credit, percentage_final_exam)
- lecturer(**lecturer id**, first_name, last_name, dob, gender, address, email)
- teaching(**subject id, lecturer id**)
- grade(**code**, fromScore, toScore)
- clazz(**clazz id**, name, lecturer_id, monitor_id)
- enrollment(**student id, subject id, semester**, midterm_score, final_score)





Create and import database:


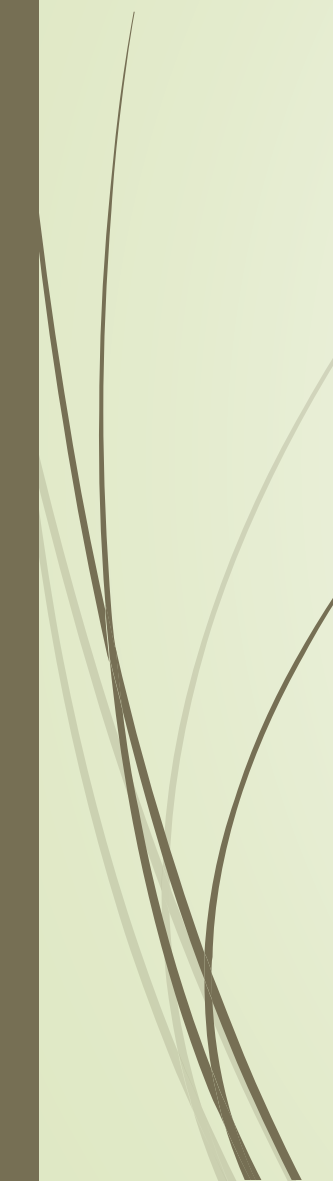
1) Option 1: Using pgadmin 4

- Connect to server
- Create a new database name: edudb
- Change connexion to edudb database
- Open Query Tool
- Open EducationDB_v2.sql file and run

2) Option 2: Using psql

- Connect to database server with super user: `psql -h localhost postgres postgres`
- Create a new database name 'edudb' : `create database edudb;`
- Connect to the new database: `\c edudb`
- Run pre-defined commands (creating table, constraints and insert data) from sql file:
`\i path_to_file_EducationDB_v2.sql`

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1. List of subjects whose credits number is 5 or above.
 2. List of students in the class named "CNTT 2 K58".
 3. List of students in classes whose name contains "CNTT"
 4. Give a list of students who enrolled in both "Lập trình Java" (Java Programming) and "Lập trình nhúng" (Embedded Programming).
 5. Give a list of students who enrolled in "Lập trình Java" (Java Programming) or "Lập trình hướng đối tượng" (Object-oriented Programming).
 6. Which subject has never been registered by any student.
 7. List of subjects (subject name and credit number corresponding) that student "Nguyễn Hoài An" have enrolled in the semester '20162'.
 8. Give a list of students who learned the subject 'CSDL' in the second half of 2016 (it means semesters = '20162'): student id, student name, midterm score, final exam score and subject score. Subject score is determined by the weighted average of midterm score and final exam score : $\text{subject score} = \text{midterm score} * (1 - \text{percentage_final_exam}/100) + \text{final score} * \text{percentage_final_exam}/100$.
 9. Give ID of students who enrolled in subject whose id is '09', in the semester '20161' but failed. Note: the course is failed if midterm score or final exam score is below 3 ; or subject score is below 4.

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10. List of students who obtained the highest score in subject whose id is '21', in the semester '20161'.
 11. Students aged 25 and above. Given information: student name, age
 12. Students were born in June 1999.
 13. List of subjects which have at least 2 lecturers in charge?
 14. List of subjects which have less than 2 lecturers in charge?
 15. Give number of subjects that each lecturer can teach. List must contain: lecturer id, lecturer's fullname, number of subjects.
 16. List of subjects which have less than 5 students enrolled in the semester '20172'.
 17. Display class name and number of students corresponding in each class. Sort the result in descending order by the number of students.
 18. List of all students with their class name, monitor name and form teacher name.