Exercises 4 – SQL

Bases de Dados, FCT-NOVA

Ano letivo 2015/16

Execute an SQL command over the university database used in the labs, for each of the following queries:

1. What are the names and ages of students?

2. What is the average age of all studentes?

3. How many students are there in the database?

4. In how many different cities do students live?

5. How many male and female students are there in the database?

6. How many students are for each age?

7. Which cities have at least 2 students?

8. What is the name of the oldest student?

9. In which programme ("curso") is each student enrolled in?

10. Which persons are both students and professors?

11. In which courses ("cadeiras") is, or was, student 1 enrolled in?

12. What are the average marks of each student?

13. What are the names of students whose average is greater than 12?

14. What are the students enrolled in at least one course of the Departamento de Informática?

15. What are the students not from the Eng. Informática programme that are enrolled in courses of the Departamento de Informática, and which are those courses?

16. Check whether there are students enrolled in courses that are not offered to her programme.

17. List the various categories of professors.

18. What are the categories that have no professor?

19. Show the marks of all students in each course of the Departamento de Informática in 2014 (with name of the course, evaluation date, number of student, and mark).

20. What are the possible heterosexual pairs of between students of the same course?

21. And homosexual pairs?

22. Which course have direct precedence to Bases de Dados in the Eng. Informática programme?

23. And in the Eng. Electrotécnica programme?

24. What (names of) courses have precedence over which course (names), in the Eng. Informática programme?

25. What are the names of the courses that have precedence over the courses that have direct precedence over Base de Dados, in the Eng. Informática programme?

26. In the Eng. Informática programme, for how many courses codes does each course give precedence to?

27. The same as the previous query, but now showing the courses name.

28. What are the names of the students that did not follow at least one precedence, and in which courses?

29. What are the names of persons (professors and students) in the database?

30. What are the names of professors that are also students (now using the "intersect" operator)?

31. What are the numbers and names of students that have not yet been approved in any course?

32. Which courses are common to the Eng. Informática and the Eng. Electrotécnica programmes?

33. What are the students whose first course in which they enrolled in was Bases de Dados? And in Introdução à Programação?

34. What were the first students enrolling in Bases de Dados?

35. What students ever enrolled in courses offered to the Matemática programme?

36. And what are the students that never enrolled in courses offered to the Matemática programme?

37. What was the first course in which each student enrolled in?

38. Repeat query 30, now not using the "intersect" operator.

39. What are the professors with a salary smaller than the salary of at least one professor of the Dep. Matemática?

40. What are the professors with a salary smaller than the salary of all professors of the Dep. Matemática?

41. Which students have more enrolments than any student of Eng. Electrotécnica?

42. Which students are enrolled in all the courses of the 7th semestre of their programme?

43. Which students have been approved in all the courses of the 1st semestre of their programme?

44. Which students have been approved in all the courses of their programme?