The hunt for FAFD Fun Facts

STUDENT (SId, Name, Birthdate, City, Sex)

COURSE (Courseld, Title, Credits, Year, Professor) Year is 1 for exams of the 1st year, 2 for exams of the 2nd year...

EXAM (SId, CId, Date, Grade)

As in the Italian grading system, Grade is between 18 and 30 Also note that, with this primary key, only passed exams are reported

Why colors?? BLACK: Can be done with just joins, aggregates and grouping

ORANGE: Can be done with joins, aggregates, and possibly nested queries

RED: Requires advanced use of nested queries and/or views

Extract in SQL:

- 1. Id of the students who got at least one 30
- 2. Id, Name and City of origin of the students who got at least one 30
- 3. The birthdate of the youngest student
- 4. The GPA of the student with ID = 107
- 5. The GPA of each course
- 6. The number of Credits acquired by each student 6bis: Also including students with ZERO credits...
- 7. The (weighted) GPA of each student
- 8. Students who passed at least 2 exams [a. just the Id b. also the Name]
- 9. Students who passed less than 5 exams [a. just the Id b. also the Name]
- 10. Students who passed exactly 4 exams [a. just the Id b. also the Name]
- 11. For each student, the number of passed exams (including those with 0 exams!)
- 12. Students with a (weighted) GPA that is above 24.5
- 13. The "regular" students, i.e., those with a delta of maximum 3 points between their worst and best grade
- 14. The (weighted) GPA of each student who passed at least 5 exams (statistically meaningful)
- 15. The (weighted) GPA for each year of each student who passed at least 5 exams overall (not 5 exams per year)
- 16. Students who never got more than 21
- 17. Id and name of the students who passed exams for a total amount of at least 20 credits and never got a grade below 28
- 18. Students who got the same grade in two or more exams
- 19. Students who never got the same grade twice
- 20. Students who always got the very same grade in all their exams
- 21. The name of the youngest student
- 22. Students who got all possible distinct grades
- 23. Students who never passed any exam
- 24. Students who never got an 18
- 25. Code and Title of the courses with the minimum number of credits
- 26. Code and Title of the courses of the first year with the minimum number of credits
- 27. Code and Title of the courses with the minimum number of credits of each year
- 28. Id and Name of the students who passed more exams from the second year than exams from the first year
- 29. The student(s) with best weighted GPA
- 30. The course with the worst GPA
- 31. Students with a GPA that is at least 2 points above the overall college GPA
- 32. For each student, their best year in terms of GPA
- 33. The most "regular" students, i.e., those with the minimum delta between their worst and best grade
- 34. Students with a weighted GPA that is above the "average weighted GPA" of all the students
- 35. Students who got all their grades in strictly non-decreasing order over time