

The hunt for FAFD Fun Facts

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

COURSE (CourseId, 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