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Today: Relational model (contd.). § 2.*. Next class: Catch-up, review. §§ 1.*,2.*.

Reminders: Quiz 01 soon. Newsgroup. Syllabus. Reading.

1. List the members of your group below. Underline your name.

2. Consider a database with relations Students(id, name, year), Courses(id, title, ta), and Enrolls(student, course, credits). A tuple $(i, n, y) \in$ Students denotes a student with student-identifier i, name n, and year y. A tuple $(i, t, a) \in$ Courses denotes a course with course-identifier i, title t, and whose teaching assistant's student-identifier is a. A tuple $(s, c, r) \in$ Enrolls denotes the enrollment of the student with identifier s in the class with identifier c, for r credits.

We say student t is a TA of student s, for r credits, if s is enrolled for r credits in a course whose TA is t. We say a TA t is responsible for r credits if r is the sum of credits of all student enrollments in all courses whose TA is t.

Write an extended algebra query for the names and IDs of the TAs who are the TAs of the maximum number of students for r credits, for each distinct value of r occurring in the database.

3.	Prove or disprove: Bag intersection may be expressed using bag union and difference.
4	Provide formal definitions of each of the bag algebra operators: selection, projection, cross product, union, difference.
5.	Provide expressions for the minimum and maximum cardinalities of the result of each of the operators of Question 4 as a function of the cardinalities of its operands. Justify
	your answers.