

CS301/AI301

Tutorial 3

August 22, 2025

Academic System Schema

- Student (StudentID, name, *dept_name*)
- Takes (StudentID, Course_id, Section_id, semester, year, grade)
- Course (CourseID, title, *dept_name*, credits)
- Section (Course_id, Section_id, semester, year, classroom)
- Teaches (Ins_id, Course_id, Section_id, semester, year)
- Department (dept_name)
- Instructor (InsID, *dept_name*)

Intermediate SQL Queries

- Q1. Semester/year pairs with more than 5 sections.
- Q2. Students who took 2 or more courses in the same semester.
- Q3. Courses taken by students from at least two departments.
- Q4. Students who only took courses from their own department.
- Q5. Students who scored 'A' in all their courses.
- Q6. Instructors and number of departments they have taught for.
- Q7. View: Student and total courses taken.
- Q8. Students and instructors who taught them.
- Q9. All students and courses (include students with no courses).
- Q10. Find students who have taken all courses in their department.
- Q11. Students with maximum number of courses.
- Q12. Instructors who only taught students from their own department.
- Q13. Find classrooms used by multiple departments.
- Q14. Students who never scored below their department average.
- Q15. Students always studied alone in sections.