

Database Systems Laboratory Work

Part 1.

Relation A:

- 1) {EmpID}; {SSN}, {Email}, {EmpID, Name}, {SSN, Department}, {Email, Phone}.

There are many more (any superset of a key is also a superkey).

- 2) Candidate keys: {EmpID}, {SSN}, {Email}
- 3) EmpID, because it's stable, can't change in real life as SSN or Email.
- 4) Yes, they can (a shared office phone). But, phone isn't a reliable unique key.

Relation B:

- 1) Student ID;
CourseCode;
Section;
Semester;
Year,

2) Student ID - identifies the student
Course Code - identifies the course.
Section - identify different sections of the same
course in the same semester.

Year - Semester → In one year there are many
semesters. The same course can happen more
than once in the same year.

Year - because semesters repeat every year.

3) There are no other simple candidate keys that
can identify a registration.

Task 1.a.

- Student - Student ID (Pk)
Advisor ID, Major (fk)
- Professor - Prof ID (Pk)
Department (fk)

- Course - Course ID (Pk)
Department Code (fk)

- Department - Dept Chair
- Enrollment - fSL composite key.

Stu