

QUIZ1:

NAME: SOLUTION

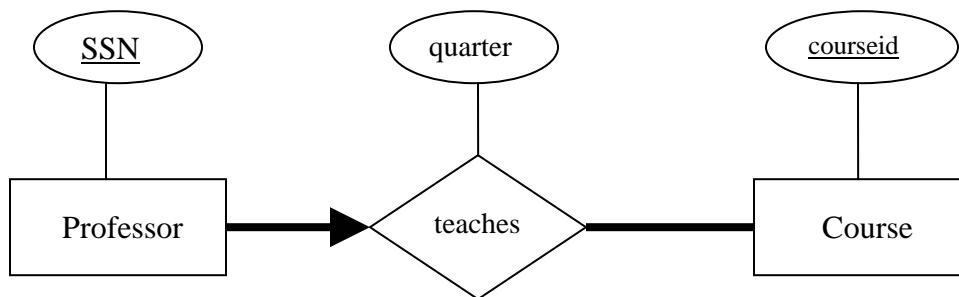
Student ID: _____

Lab Section: _____

1) Draw (neatly) an ER-diagram for the following scenario. Be sure to use the correct graphical tools to indicate strong/weak entities, key constraints (many-to-many, many-to-...), participation constraints (total/partial) etc. If you make any assumptions, clearly state what they are.

A university database contains information about professors (identified by SSN) and courses (identified by courseid). Professors can teach the same course in several quarters, but only the most recent offering needs to be recorded. However, during each quarter, every professor must teach exactly one course (no more, no less), and every course must be taught by some professor. You can assume that there is only one section offering for each course.

Hint: I recommend that *Professor* and *Course* be entities, and that *teaches* be relationship.



2) In class we discussed a simple alternative to databases, keeping all the data in a single text file!
List 3 reasons why this is not a good idea.

Here're some of the reasons:-

- Text file has only 1 view
- Cannot handle complex queries/searches
- No integrity constraints:- domain, participation, & key constraints
- Cannot handle concurrency properly
- No transaction management, no crash recovery
- Not data independence (both logical and physical)
- Application development time may increase
- Data administration is more difficult
- Security issue
- etc.