Qn III (13pt) Suppose we are interested in building a mediator for integrating a bunch of data sources that export information about CS courses. We would like the mediator to be able to provide the information about the course name, the institution at which it is being offered, the term of offering and the average enrollment in the course. We also want to offer information about the instructors that teach these courses, and for each instructor the institution at which the instructor teaches and his/her average teaching evaluation numbers. *(for the following questions, you can either use SQL style syntax or the datalog-style syntax. I will be forgiving of syntax problems).*

[2] Design a mediator schema for this application (note that a scherna may have more than one relation).

[2] Suppose we got a source—called ASU-CS-Underground—-which exports, for a bunch of CS instructors at ASU—-their teaching evaluation numbers. Using LAV approach, write this source as a (materialized) view on the mediator schema.

[2] We have got another source called ASU-CS-S02-Catalog—which exports the set of CS courses being taught in Spring 2003, the instructor who will be teaching them, and the rooms in which the classes will be taught. Write this source too as a materialized view on the mediator schema.
[2] If a student in Arizona has the following question: What are the CS courses being taught next term (S 2003) by instructors whose average evaluations are higher than 4.3. Show this as a query on the mediator schema.

[5] Show—using the bucket algorithm—how the previous query is reformulated as queries on the data sources.

[3] Explain which of the parts above will become unnecessary when the Semantic Web standards are widely accepted, and which will still be needed.