Systems and Solving Techniques for Knowledge Representation

– Datalog –

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066 011 Double degree programme Computational Logic
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066 931 Computational Intelligence
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EXERCISES

What you are requested to do

Final grade takes into consideration also class participation, i.e.
showing your solutions to exercizes.

What you are requested to do is:

1. sending by email at mmaratea@dbai.tuwien.ac.at before 24:00 (resp. 12:00) of the day before (resp. same day) if lecture is done in the morning (resp. in the afternoon), your solutions (*dl) you would like to present, and *db files, and

2. coming to the black-board! (if time/space allow :)

Exercise (I)

Given the following relational database schema
(* indicates primary keys):

- *employee*(*code*∗, *name*, *age*, *salary*)
- *supervision*(*boss*∗, *employee*∗)

Write the following in Datalog:

1. find code, name and salary of the employees whose age is more than 30
2. find the code of all boss s.t. at least one of his/her employees earns more than 40
3. find name and age of all boss s.t. at least one of his/her employee earns more than 40
4. for each employee, find all other employees that are higher in the chain of responsability

Given the following relational database schema:

- *film*(*filmCode*∗, *title*, *director*, *year*, *rentCost*)
- *actor*(*actorCode*∗, *surname*, *name*, *sex*, *bornDate*)
- *performance*(*filmCode*∗, *actorCode*∗, *role*∗)

Write the following in Datalog:

1. find the film titles in which Henry Fonda was performer (actor)
2. find the film titles in which the director also was a performer