

# **Systems and Solving Techniques for Knowledge Representation – Normal Logic Programs –**

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066 011 Double degree programme Computational Logic  
(Erasmus-Mundus)

066 931 Computational Intelligence

066 937 Software Engineering & Internet Computing  
Institute of Information Systems

# EXERCISES

**Given a propositional formula  $\phi$  in 3 CNF, compute an assignment to variables that satisfies  $\phi$  if it exists.**

Write a logic program  $P(\phi)$  such that answer sets of  $P(\phi)$  correspond to satisfying assignments of  $\phi$

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## **3-colorability problem (see slides of the Introduction).**

Write a related logic program that solves the problem,  
using only normal rules.

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# What you are requested to do

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), at least one solution (`*dl`) of the above problems you would like to present, and `*db` file
- 2 trying your solution(s) using a grounder and a solver.
- 3 coming to the black-board! (if time/space allow :)

# Practice

## Download a (Datalog) implementation

<http://potassco.sourceforge.net/> (**clasp**)

<https://github.com/alviano/wasp> (**wasp**)

## We need also a grounder (**gringo**)

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