

Exercises for the Course
Logic Programming Engineering

(Author Dr. W. Nauber)

Dr P. Bruscoli, Peter Steinke, Amin Timany

Practical Session 9

Optimizing a solution using cuts

Exercise 9.0

Continue your solutions of exercise 8.

Exercise 9.1

Optimize your solution of exercise 4.1 using a cut and additional tricks. Use the trace command to count the numbers of Calls and Redos before and after optimization. As running examples use

a)

`sum_sublist([2, 1, 3, 4], 5, L).`

b)

`sum_sublist([2, 3, 4, 1, 5], 6, L).`

c)

`sum_sublist([1, 1, 2, 3, 4, 1, 5], 8, L).`

Exercise 9.2

Write a predicate `powerset(L, PS)` which for a given list L of elements outputs a list PS of the subsets of L (the powerset).

e.g.: `powerset([a, b, c], PS).` gives $PS = [[a, b, c], [b, c], [a, c], [c], [a, b], [b], [a], []]$