

# Homework for the Artificial Intelligence lab #5 (28.03 - 01.03)

Alex Muscar

April 10, 2011

**Note:** The homework is due Wednesday 13.04

1. Write a predicate `liniarize(+ListOfLists, -List)`, where `ListOfLists` is a list of lists and `List` is a liniarized version of the input list.  
Example: `liniarize([1, 2, [3, 4], [5, [6, 7], [[8], 9]]], L)` will give `L = [1, 2, 3, 4, 5, 6, 7, 8, 9]`.
2. Write a predicate `invert+List, -InvertedList` which inverts a list.  
Example: `invert([1, 2, 3], L)` will give `L = [3, 2, 1]`.
3. Write a predicate `subst(+Old, +New, +List, -Result)` which substitutes all occurrences of `Old` in list `List` with `New`.  
Example: `subst(a, x, [a, [b,a,] c], L)` will give `L = [x, [b, x], c]`.
4. Write a predicate `rot(+Dir, +Count, +List, -Result)` which rotates the list `List` by `Count` positions in the direction `Dir` (`left` or `right`).  
Example: `rot(left, 2, [1, 2, 3, 4, 5], L)` will give `L = [3, 4, 5, 1, 2]`.