Serie 4
Anfragen an XML und Suchmaschinen

K. Benecke

1. Restructure the following three 3.NF- relations to a "hierarchical 3.NF-structure" only by using comma and stroke operation:
Given:
MAINDEPT: M(MDNO, MMGR)
DEPT: M(DNO, DNAME, MGR, MDNO)
EMP: M(ENO, NAME, FIRSTNAME, LOC, DNO)
wanted:
M(MDNO, MMGR, M(DNO, DNAME, MGR, M(ENO, NAME, FIRSTNAME, LOC)))

2. Sort the EMP-file of exercise 1 efficiently by a gib-aus-mit-construct by NAME and FIRSTNAME.

3. Are the following both definitions for :::-selection always equivalent?
a) n::: cond is defined by a sequence of selections:
   n_1:: cond
   n_2:: cond
   ...
   n_k:: cond
Here is n_1 = n and {n_1, n_2,..., n_k} specify all proper collection symbols, which contain *n*. Is the order of the application of the conditions important?
b) n::: cond is defined by a sequence of selections in the following order:
   n:: cond
   n_2:: M(n) != Empty
   n_3:: M(n_2) != Empty
   ...
   n_k:: M(n_{k-1}) != Empty
Here {n_1, n_2,..., n_k} specify all proper collection symbols, which contain *n*. Further all the predecessors {n_1,..., n_{i-1}} of n_i are deeper then n_i.