Tema 9

**Exercitiul 2**

palindrom(Lista) :-

invers(Lista, Lista).

invers([], []).

invers([X|Xs], Ys) :-

invers(Xs, Zs),

append(Zs, [X], Ys).

**Exercitiul 3**

max([], A) :- A = [].

max([H|T], M) :- maxAcc(T, H, M).

maxAcc([], A, A).

maxAcc([H|T], A, M) :-

H > A,

maxAcc(T, H, M);

H =< A,

maxAcc(T, A, M).

**Exercitiul 4**

shift\_stg([],[]).

shift\_stg([H|T], L):-

append(T,[H],L).

**Exercitiul 5**

shift\_dr([],[]).

shift\_dr(L, [H|T]):-

append(T,[H],L).

**Exercitiul 6**

factorial(N, Result) :-

factorial\_acc(N, 1, Result).

factorial\_acc(0, Acc, Acc).

factorial\_acc(N, Acc, Result) :-

N > 0,

NextN is N - 1,

NextAcc is Acc \* N,

factorial\_acc(NextN, NextAcc, Result).

**Exercitiul 9**

suma\_si\_sumaPatrate([], 0, 0).

suma\_si\_sumaPatrate([H|T], Sum, Sp):-

suma\_si\_sumaPatrate(T, Sum1, Sp1),

Sum is H+Sum1,

Sp is Sp1+H\*H.

**Exercitiul 10**

prefix([], \_).

prefix([X|Xs], [X|Ys]) :-

prefix(Xs, Ys).

**Exercitiul 17**

de\_2\_ori\_mai\_lung([],[]).

de\_2\_ori\_mai\_lung([\_|L1], [\_,\_|L2]):-

de\_2\_ori\_mai\_lung(L1,L2).

**Exercitiul 18**

fib(1, 1) :- !.

fib(2, 1) :- !.

fib(N, F) :-

N > 2,

N1 is N - 1,

N2 is N - 2,

fib(N1, F1),

fib(N2, F2),

F is F1 + F2.

**Exercitiul 23**

sterge\_primul(\_, [], []).

sterge\_primul(X, [X|T], T).

sterge\_primul(X, [H|T], [H|R]):-

sterge\_primul(X,T,R).