Exercise 4:

max\_element([X], X).

max\_element([Head | Tail], Max) :- max\_element(Tail, MaxTail),

(Head > MaxTail -> Max = Head ; Max = MaxTail).

Exercise 6:

factorial(0, 1). factorial(N, Result) :-

N > 0,

N1 is N - 1,

factorial(N1, R), Result is N \* R.

Exercise 7: fibonacci(0, 0).

fibonacci(1, 1).

fibonacci(N, Result) :- N > 1,

N1 is N - 1, N2 is N - 2,

fibonacci(N1, X), fibonacci(N2, Y), Result is X + Y.

Exercise 8:

reverse\_list([],[]).

reverse\_list([Head|Tail], Reversed):- reverse\_list(Tail,ReversedTail), append(ReversedTail,[Head], Reversed).