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% Homework 1, Problem 1

% --- data
mgr( a, b ).
mgr( b, c ).
mgr( c, d ).

% --- rules
boss( Mgr, Emp ) :- mgr( Mgr, Emp ).
boss( Mgr, Emp ) :- mgr( Mgr, X ), boss( X, Emp ).

% --- usage
% boss( ?Mgr, ?Emp ).

% --- comments
% please read "Some Coding Guidelines for Prolog
% boss achieves the transitive closure of mgr

% --- test
/*
| ?- boss(A,X).

A = a,
X = b ;

A = b,
X = c ;

A = c,
X = d ;

A = a,
X = c ;

A = a,
X = d ;

A = b,
X = d ;

no
*/
```