The following Prolog clauses define the procedures named `perm` and `select`. The goal `perm(X,Y)` succeeds for the list X, instantiating Y to a permutation of list X. Successive backtrackings will enumerate each possible permutation. For example, evaluating the goal `perm([a,b,c],Q)` will instantiate Q successively on each backtracking to: [a,b,c]; [a,c,b]; [b,a,c]; [b,c,a]; [c,a,b]; [c,b,a].

```
sel(H,[H|T],T).
sel(H,[N|T],[N|L]) :- sel(H,T,L).

perm(X,[H|T]) :- sel(H,X,Z), perm(Z,T).
perm([],[]).
```