```
quicksort([X|Xs],Ys) :-
  partition(Xs,X,Left,Right),
  quicksort(Left,Ls),
  quicksort(Right,Rs),
  append(Ls,[X|Rs],Ys).

quicksort([],[]).

partition([X|Xs],Y,[X|Ls],Rs) :-
  X =< Y, *partition(Xs,Y,Ls,Rs),!.)

partition([X|Xs],Y,Ls,[X|Rs]) :-
  X > Y, *partition(Xs,Y,Ls,Rs),!.)

partition([],Y,[],[]).

append([],Ys,Ys).
append([X|Xs],Ys,[X|Zs]) :- append(Xs,Ys,Zs).
```