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

  partition(Xs,X,Littles,Bigs),

  quicksort(Littles,Ls),

  quicksort(Bigs,Bs),

  append(Ls,[X|Bs],Ys).

quicksort([],[]).

partition([X|Xs],Y,[X|Ls],Bs) :-

  X =< Y, partition(Xs,Y,Ls,Bs).

partition([X|Xs],Y,Ls,[X|Bs]) :-

  X >  Y, partition(Xs,Y,Ls,Bs).

partition([],\_,[],[]).