blup(L, E, R) :- append(L1, [E|L2], L), append(L1, L2, R).

?- blup([1,2], E, R).

?- append(L1, [E|L2], [1,2]), append(L1, L2, R).

?- append([1], [2], [1,2]), append([1], [], R). {L1 = [1], L2 = []}

?- append([1|L1'], [E|L2], [1,2]), append(L1,L2,R). {}

?- append([], [1,2], [1,2]), append([], [2], R). {L1 = [], L2 = [2]}

?- append([1], [], [1]). {L1 = [1], L2 = [], R = [1]}

?- append([], [2], [2]). {L1 = [], L2 = [2], R = [2]}

?- []. {L1 = [1], L2 = [], R = [1]}

?- []. {L1 = [], L2 = [2], R = [2]}
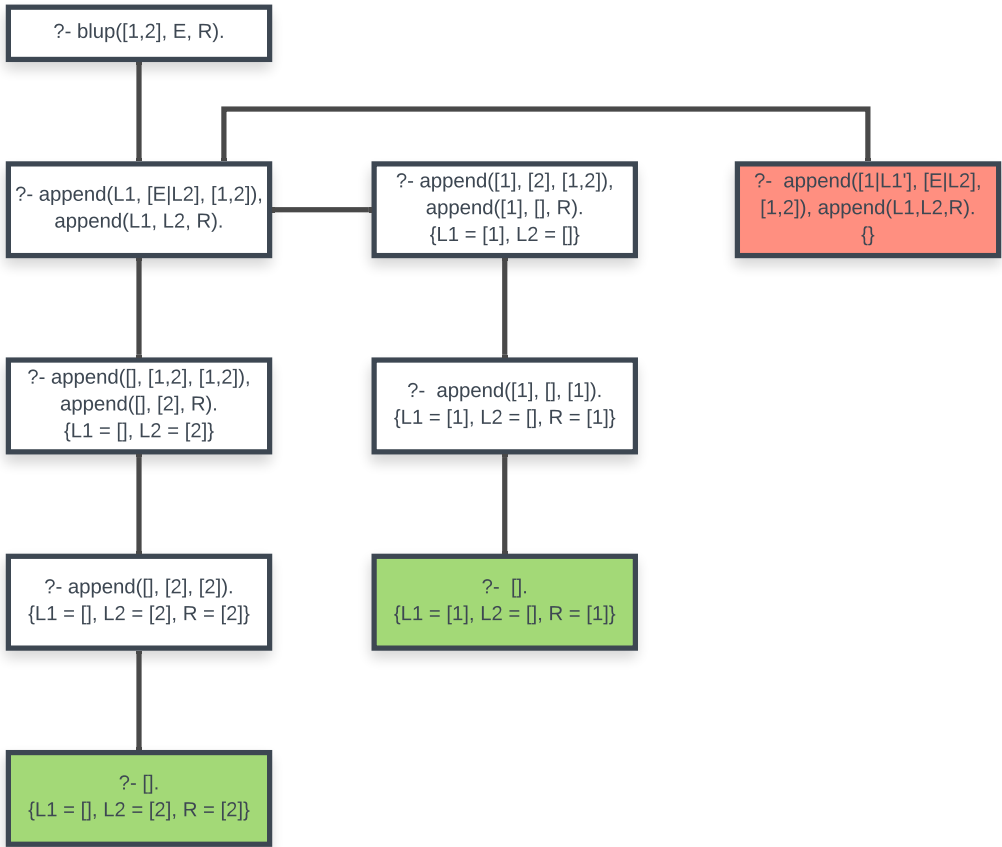
blup - alternative Definition (= blup2)

?- blup2([1,2], E, R). {}

?- blup3([2], R). {L1' = [2], E = 1}

?- blup2([2], E, R'). {L1' = [2]}

?- blup2([2], 2, []). {L1' = [2], E = 2, R' = []}

?- blup3([], R'). {L1' = [2], E = 1, L1'' = []}

?- blup2([], E, R''). {L1'' = []}

?- []. {L1' = [2], E = 2, R' = [], R = [1]}

?- blup3([], []). {L1' = [2],E = 1, L1'' = [], R' = []}

? - []. {L1' = [2], E = 1, L1'' = [], R' = [], R = 2}