eo([], F, L)

eo([], L, L).

eo([H1|T1], [H2|T2], [H1,H2|T]) :- eo(T1, T2, T)

Query: eo([1,2,3,4,5], [A, B, C], L).

H1 = 1 H2 = A

T1 = [2,3,4,5] T2 = [B,C] L = [1,A|T]

First call true.

~~second call: eo([2,3,4,5], [B,C], T)~~

second call: ([2,3,4,5], [b,C], T)

H1 = 2 H2 = B T = [2,B|T]

T1 = [3,4,5] T2 = C

second call true.

recursive third call: → ~~eo([3,4,5], [C], T)~~

eo([4,5], [], L) → FALSE

eo([3], [4,5], L) → FALSE

Then → eo([3,4,5], [C], T)

H1 = 3 H2 = C T = [3,C|T]

T1 = [4,5] T2 = []

true.

recursive third call: ~~eo~~

eo([4,5], [], T)

First case is true so T = [4,5]

FINAL is

L = [1, a, 2, b, 3, C, 4, 5].