

$Compatible(l1, l2) \triangleq$  Are  $l1$  and  $l2$  compatible?

$\vee l1 = l2$  Obviously true

$\vee \text{LET } commonElements \triangleq Range(l1) \cap Range(l2)$

IN  $\forall e1, e2 \in commonElements :$

$\vee e1 = e2$

$\vee FirstIndexOfElement(l1, e1) < FirstIndexOfElement(l1, e2)$

$\equiv FirstIndexOfElement(l2, e1) < FirstIndexOfElement(l2, e2)$