```
LexicographicOrder (E, C): trait
  % "Dictionary" order on C
  assumes
    Container,
    StrictTotalOrder (<, E)
  includes DerivedOrders (C)
  asserts ∀ c1, c2: C
    c1 < c2 ==
        c2 ≠ empty
          ∧ (c1 = empty
              ∨ (if head(c1) = head(c2)
                  then tail(c1) < tail(c2)
                  else head(c1) < head(c2)))
  implies
    TotalOrder (C)
    converts ≤:C,C→Bool, ≥:C,C→Bool,
      <:C,C→Bool, >:C,C→Bool
```