Define a partial order \( \ll \) on pairs of integers as follows:

\[ [a; b] \ll [c; d] \iff a < c \land b < d \]

Given \( n: \text{nat}+1 \) and \( L: [n*\text{int}; \text{int}] \) write a program to find the index of a minimal item in \( L \). That is, find \( j: 0..#L \) such that \( \neg \exists i: Li \ll Lj \). The execution time should be \( n \).