A list is bitonic if it is monotonic up to some index, and antimonotonic after that. For example, \([1; 3; 4; 5; 6; 4; 3]\) is bitonic. Express formally that \(L\) is bitonic.

\[
\exists n: 0,..\#L+1 \cdot (\forall i, j: 0,..n \cdot i\leq j \Rightarrow L\ i \leq L\ j) \land (\forall i, j: n,..\#L \cdot i\leq j \Rightarrow L\ i \geq L\ j)
\]

This allows the monotonic and antimonotonic parts to be empty. I am not sure if that's what the question meant. If the two parts have to be nonempty, then

\[
\exists n: 1,..\#L \cdot (\forall i, j: 0,..n \cdot i\leq j \Rightarrow L\ i \leq L\ j) \land (\forall i, j: n,..\#L \cdot i\leq j \Rightarrow L\ i \geq L\ j)
\]